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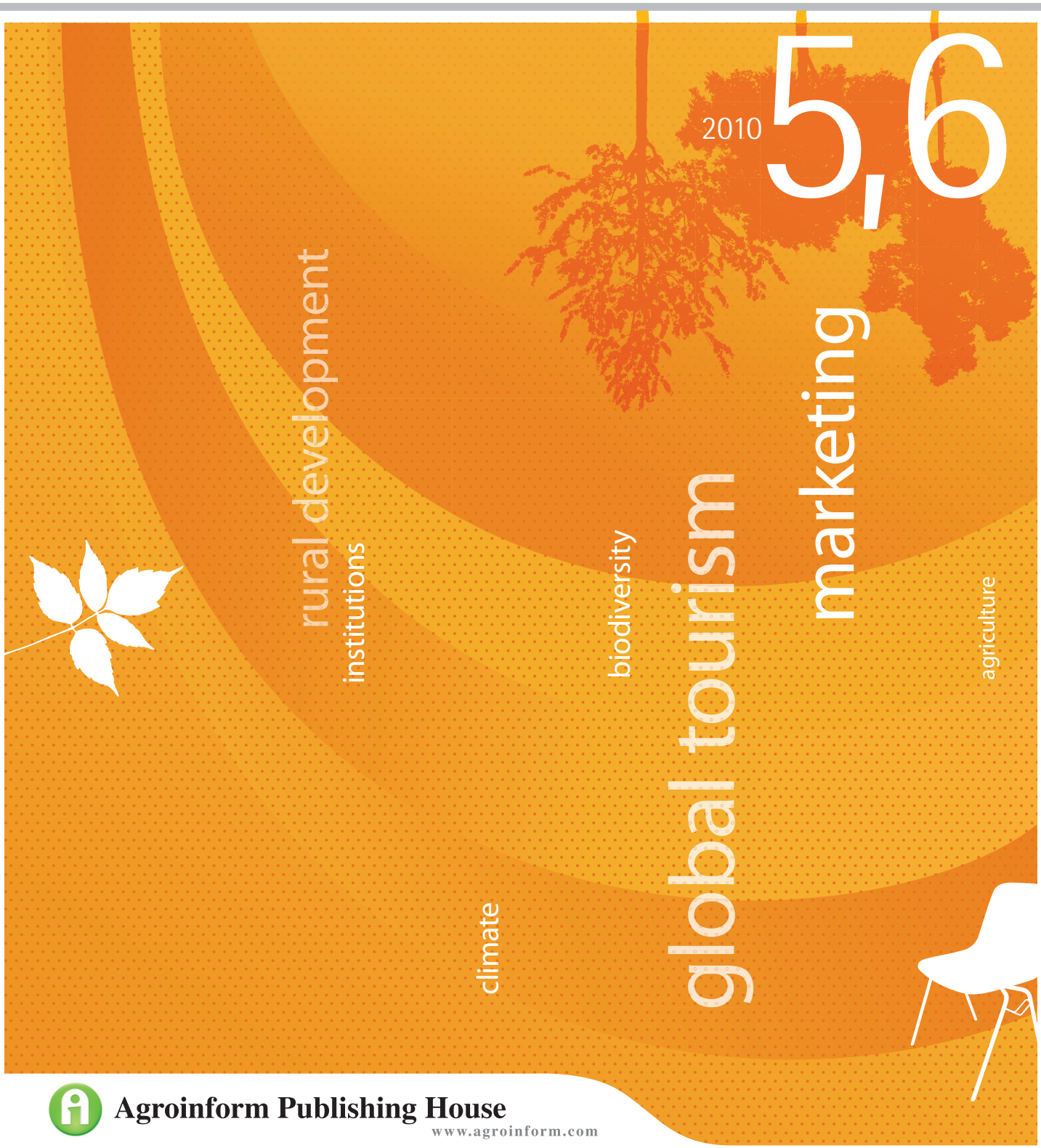

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SUSTAINABLE INITIATIVES IN MARGINAL RURAL AREAS OF SERBIA: A CASE STUDY OF DIMITROVGRAD MUNICIPALITY

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Abstract: This paper is based on a 2009 case study research on the role and impacts of rural initiatives in Dimitrovgrad, South-eastern Serbia region. This area is of interest, because of local efforts to conserve autochthonous livestock breeds, and the work of smallholders and independent professionals involved farming and rural tourism activities. The research used participant visits to initiative places, drawing on farm visits, meetings with stakeholders and analysis of secondary information. The study highlights that local organizations are running without link to initiatives. Although, Serbia country has well structured rural developments programs, those still are harmonising. Thus, through Actor-Network approach is suggested which turn around a farm manager. This may represent to all stakeholders with initiatives (on-farm and non-farm). Besides, local food products issues from initiatives may reconnect providers and consumers, revaluing local food products. However, is necessary the institutional and organizational involvement to encourage the initiatives. Furthermore, to promote touristic places, by an integrated rural tourism approach it may involve all stakeholders to promote local products and issues from initiatives. Indirectly it may create local employs.

Key words: rural initiatives, local agrobiodiversity, sustainability, South-Eastern Serbia

1. Introduction

European countries have improved rural infrastructures and supported the abilities of villagers in remote and marginal rural areas, through adequate development policies. In countries with few smallholding areas, other alternatives to improve these situations have been developed over time. Initiatives become sustainable activities and possible door for developing remote area, using animal and plant local genetic resources and innovation activities (*Mühlinghaus and Wälty,* 2001; *Milone*, 2009). Countries in transition are starting from the bottom, as it is the case of Serbia, which remained with the harmonization of their development policies addressed to improve slightly the vulnerable and remote rural areas (*Bogdanov,* 2006, 2007).

However, endogenous development takes into account a sustainable way of development by improving and creating rural innovations based on local resources (*Kucerova,* 2002; *Remmers,* 1996, 2006). Main actors involve local population and use of natural resources, promotion of rural areas and traditional activities through rural tourism (agro-tourism and eco-tourism). Employing local livestock in agriculture often valorises the territory and maintain the landscapes, meanwhile provides sustainability and liveability of smallholders in remote areas, including the system of an ecological, economic and social viewpoint, as well as rural villages have bred rare farm animals (*Anderson,* 2003; *Köhler-Rollefson,* 2007). Hence, in Serbia; several projects started for enhancing sustainability of smallholders and improve rural improve rural household welfare in mountainous areas, carrying out projects focused on recovering and revalorizing autochthonous livestock breeds and rebuilding places to develop rural tourism (*Marczin* et al., 2007; *Stojanovic,* 2008; *Saxena & Ilbery,* 2008).

Although, rural development policies in Serbia have some constraints to support initiatives; local stakeholders and projects have started developing initiatives in South-eastern Serbia Region. Those set up around local resources. It arouses the attention in make out how local actors and external agents achieve agrobiodiversity and rural tourism projects. However, forms of local stakeholders' participation and other means have not been considered. This paper will focus on the nature on initiatives and rural tourism as means to develop and become successful maintenance of rural life style. The objectives of this paper are twofold; to note how do rural initiatives contribute to preserving local agrobiodiversity in marginal villages; second, to consider how local entrepreneurs may be sustainable organized. Next section of the paper outlines some theoretical frameworks which help to understand the background of rural initiatives in South-eastern Serbia. The results and discussions are covered by fourth section where are presented by a framework upon initiatives and development relations, and also an Actor-Network approach surrounding initiatives is proposed. Finally, the paper ends with conclusions in the fifth section.

2. Rurality and initiatives in South-eastern Serbia

Serbia's rural areas are featured of traditional farming, and 55% population live in rural area. Often, there is a low and uncertain governmental support and a low productivity

comprised by smallholder (3.5 ha). Hence, rural areas were considered as a problem and not as a resource. Moreover, former policies focused to support larger farmers and improving agricultural infrastructures; while that, smallholders had lacking technical and financial support. Additional, other problems have been the reversible migration from villages to cities. Therefore, economic structure in Serbia still depends on the primary sector and exploitation of natural resources. Chiefly, local projects are supported by local and external agencies through development projects (*Bogdanov,* 2008; S.O.R.S, 2008).

Rural initiatives are no registered as initiatives and/or activities in Serbian statistics accounts. Nevertheless, innovative activities exist according to a pilot survey (INOV), a study that compiled and drew most intensive innovation trend in organization of enterprises (57.34% enterprises), and marketing sector showed slowest (28.81% enterprises). Innovation of products/services and processes are almost the same 47.09% and 46.81 respectively. Over 100 totals of enterprises, solely comprises 7.2% of enterprises in agriculture, mining and quarrying sector exist (OSRS, 2008b).

Furthermore, former policies improved SMEs through establishing of producers associations and improvement of infrastructures. During the 1970s period the rural life had several changes, centralizing the development in cities and towns. It has modified completely the traditional style of rural areas. Despite de fact that rural development policies were established and led to support marginal and poorly rural areas, they were not adequate. Serbia has designed strategic policies to reduce main problems related to rural areas such as poverty, infrastructural means and business initiatives (*Bogdanov; Djordjevic-Milosevic,* 2008). Nevertheless, it is still harmonising between local stakeholders from different sectors.

2.1 Initiatives in Dimitrovgrad marginal rural areas

Rural households in Serbia South-eastern region are considered vulnerable and make up 25% of the rural poverty, mainly due to geographic location, social isolation, lack of access to communication and services (Ersado, 2006; Bogdanov; Djordjevic-Milosevic, 2008). In Dimitrovgrad, few years ago local projects are carrying out to develop and improve rural infrastructures and offer places for rural tourism activities. Moreover, rural initiatives entail on-farm activities (conserving indigenous farm animals) and non-farm activities (rebuilding, renovating old housing, and rural tourism). Official documents and the socio-economic statistics still describe the territory of Dimitrovgrad as rural marginal area. A "rural marginal area" is defined to areas with less population than 100 inhabitants, regional intense depopulation process, higher ageing level, lack of infrastructures, and higher unemployment rate. (OECD, 1994; SORS, 2008a). During sixties, the villages were characterized by sheep breeding and traditional home-made sheep cheese. In spite of these negative trends, the countryside still preserves high and wealthy agro-biodiversity, local heritage and local traditions.

2.2 Rural Development, integrated territorial agri-food approach and sustainable rural tourism

Rural development terms are seen as implementation of political, economic and social project lead for a collective vision and future of rural regions. It involves the creation of new products, services and development of new markets. Seeing a new resurgence of interest in 'more natural' or 'more local' issue, particularly from territory, it is based on local food product. This implies a management of local resources beneath sustainable advantage patterns, and also takes economic aspects into account. It appears redefined as a model of identities, strategies, practices, interrelations and networks. (*Marsden* et al., 2000; *van der Ploeg* et al., 2000; *Yves,* 2005).

Sustainable rural development, suggest the need to regard the prevailing (and potentially new) condition which can be taken into emerging, social-scientific and political-economic relationships (*Marsden,* 2006; *Sonino* et al., 2008; *Tovey* et al., 2009). It conveys a conceptualization of social nature and rural development abroad some obstacles as the social construction of feature and the assumption of natural trend. Regarding upon last standpoint it suggest the ANT (Actor-Network-Theory approach) which includes interrelations between human-nature interactions (*Callon,* 1999; *Murdoch,* 2000).

Concerning exogenous and endogenous processes Murdoch's (2000) draws upon networks and based on rural development issue; he claims two network models. i) Vertical networks that emerge linked to rural areas into agro-food sector and ANT. ii) Horizontal network which denote forms linked to rural spaces and non agricultural processes of economic change; it aim to integrate rural areas into the national and international economy.

Using local resources as means to enhance environmental sustainability of marginal areas, there is an approach on re-valuing foods. Particularly, by taking local food products from rural territories linked to networks. Wiskerke (2009) suggests the place as a resource to promote integrated territorial agro-food. This focus addresses on the multitude of social, economic and ecologic problems. Besides, he also argues ways of organization through Short Food Supply Chains. This means a reconnection consumers and local food producers.

Keeping alternatives of progress for marginal areas, tourism development appears which integrates sustainable local actors, formal and informal networks. Integrated rural tourism encourages environmental, economic, and socio-cultural sustainability in tourism, as well as encourages local people (*Cawley & Gillmor,* 2008; *Saxena & Ilbery,* 2010).

3. Material and methods

This study is based upon three initiatives, which achieve in Dimitrovgrad municipality. Case studies were hereby chosen as a research method, because these can to address

the research question in a contemporary situation where there is no or very little control on the behavioural events (*Ying,* 2003). The fieldwork has been led upon summer 2009 in northern and southern villages of Dimitrovgrad Municipality (Gornji Krivodol, Smilovci, Prtopopinci and Zvonce). The case study compiles two methodology follows by a) visits done to the farm activities involved in rural on-farm and non-farm initiatives, b) participant observations and informal meetings with stakeholders (interviews). In addition, walk around initiative places were realised, as well as a deep analysis of secondary information was done. Further, a framework is developed upon different relations set up on rural initiatives. Throughout, actor-network approach as a strategy of stakeholder association and likely dynamics is proposed as well. The main aim of the case study research was to catch on the dynamics of specific initiatives. Next, the cases also aimed to strengthen and deepen the understanding of themes regarding local resources and products developed by entrepreneurs. Hence, following section outlines the situation of three cases, which are part of rural initiatives.

3.1 Farm Company in Gornji Krivodol and Smilovci Villages

Smallholders and independent stakeholders of Dimitrovgrad countryside become the main actors of the rural initiatives in 2002. At the beginning a local NGO promoted the preserving of local animal breeds merely as a disinterest act for keeping Serbian traditional heritage in agriculture without a marketable purpose. This local NGO and Serbian Ministry of Agriculture (MAWFM) started first. Animals belonging to Balkan livestock breeds (donkeys, cattle, goat and sheep) have been identified by an agrobiodiversity conservation group.

To become sustainable, the agrobiodiversity conservation project, it is invested by two Belgrade private investors since 2008, who were interested in small farm breeding of threatened local animal breeds in a traditional way. After meetings with farmers from the local NGO in Dimitrovgrad, the investors decided to buy two middle sized farms in Smilovci and Gornji Krivodol villages (Stara Planina Mountain area – northern of Dimitrovgrad).

The local NGO activists and their partners from other municipalities of Dimitrovgrad, Pirot, Babusnica, Trgoviste, Bosilegrad and Bujanovac discovered many animals planned to be sold for slaughtering. However, the foreign investors acquired these animals and they were transported in farms in Gornji Krivodol and Smilovci villages. Nowadays, this project supported by investors on conserving local breeds is considered the most important initiative in Dimitrovgrad countryside as well as in Central Serbia in the field of agrobiodiversity conservation.

3.2 Farm in Prtopopinci Village

The initiative started in 2003, and had since beginning external cooperation combined with local projects, now remains by own funds. Currently it follows with the same perspectives as the conserving of autochthonous livestock breeds; particularly the local sheep, Alpino and Balkan goat breeds.

Moreover, one of the assets and products that are offered by this farm comprise the home-made cheeses. Nowadays, they are produced using artisanal techniques (e.g. cheeses of goat and sheep milk). Every year the owner takes participation in local and international events related on Balkan animal breeds. And also, the owner is a specialist in "traditional home-made cheese" and musician, attending in these events he was awarded and recognized due to his participation and the quality of his products.

Activities and services offered by this farm comprise the possibility to stay and to know the traditional South-East farming and rural life style. Furthermore, traditional music is performed by the owner of this farm as well as local heritage is represented through rare breeds. Local infrastructure is not adequate and still uses old housing like farmyard. However, while local products are made by traditional techniques and no certified organic production based on local breeds is elaborated in small scale.

3.3 SPA Hostel in Zvonce Village

SPA Hostel activity started with own funds and initiative, in order to produce additional income. It display to the people in Dimitrovgrad that is able make a livelihood out of rural tourism and produce local products promoting local potentialities and resources (landscape, river and preserved nature areas). Before, to start, the owner worked in Bosnia and Herzegovina. Thus, the initiative became after his experience with tourism activities in that country. Therefore, he decided begin with own means to renovate and rebuild his house combining with local features.

Since Dimitrovgrad is a border town between Serbia and Bulgaria, it presents manifold opportunities and possibilities for visitors and voyagers. Moreover, the owner is a teacher of a High School in Dimitrovgrad town. He is engaged recovering traditional and local heritage knowledge visiting other villages. Researches on ancient history and cultural heritage of Dimitrovgrad are done for him and are spelled in books. Throughout, working in the classroom he knows on the affection of students.

This initiative embarked on focusing upon local resources around Greben Mountain through hiking and staying in the SPA Hostel. Despite, the existence of alternatives to promote rural areas through tourism initiatives in Serbia, nonetheless, it needs procedures in order to get support and still are in process of harmonising with local actors.

4. Results and Discussions

4.1 Organizations involved on rural initiatives in Dimitrovgrad

There are a number of government, non-governmental organization and academic institutions supporting to

initiatives involved through local development project. Their services included advisory and financial. Besides, some of these organizations are assisting in rural development projects in Dimitrovgrad. These are shown in *table 1* and *figure 1*.

Table 1. Organizations involved through support to initiatives since beginning and nowadays in Dimitrovgrad marginal villages'

Name of Organization	Status	Location	Main roles
MAWMF	Public	Belgrade, Dimitrovgrad	Engaged since 2002 through REC project. Preservation local farm animal breeds.
SIDA	Private	Sweden	Financial and technical support.
Academics and Universities	Public Research	Nish Belgrade Dimitrovgrad	Drafting local strategies.
Municipality of Dimitrovgrad	Public	Dimitrovgrad	Supporting and coordinating the improvement of local infrastructures.
Local NGO	Private	Dimitrovgrad	Monitoring and establishing of local agrobiodiversity. Rural Development projects, agriculture and organic farming.
SAVE Foundation	Private	Belgium	Technical cooperation. Advices on conserving indigenous plant and animal breeds.

Source: Own table.

The Ministry of Agriculture, Water Management and Forestry (MAWMF), is engaged since 2002 with REC Project on preserving local animal diversity around the Stara Planina Mountain Area. Through the Department of Genetic Resources, this sector focus on a strategy of conservation taking more cares upon sustainability of on-farm autochthonous livestock breeds. In addition, is engaged in provide technical advices to rural areas on farming, and animal breeding.

SIDA (Swedish International Development Authority) has been supporting through the project Reka Mleka, encouraging to dairy sector and improvement farmer skills

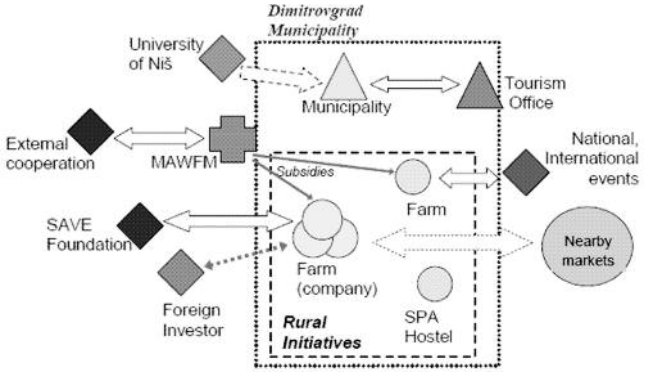

Figure 1. Organizations involved through rural initiatives in marginal villages of Dimitrovgrad Municipality (Source: Own Figure)

by technical assistance. Principal aims of SIDA were financial support addressed to local development projects.

Academics and universities are also player in the local development and design of strategies to develop Dimitrovgrad. Often professors from Nish University are invited to City Hall in Dimitrovgrad town for drawing the development strategy. Regularly, every year the City Hall organizes meetings, further local stakeholders are invited.

The municipality of Dimitrovgrad is involved through local support and coordinating the improvement of local infrastructures in the town, and rural development projects. Some members of municipality council are starting with rural initiatives. The municipality coordinates between local actors and organizations.

The local NGO is engaged since 2002, beginning with the establishment of Agrobiodiversity project and monitoring of autochthonous animal breeds. This NGO has participated actively in projects of Rural Development, Agriculture and Organic Farming through advices to smallholders in villages carried out in Dimitrovgrad.

SAVE Foundation (Safeguard for Agricultural Varieties in Europe), this organization coordinates with BIOVERSITY in activities focused in conserving indigenous livestock breeds and plants distributed in Europe. Their aim is provide assistance and technical advices on native plant and animal preservation and avoid the disappearing local agro-biodiversity.

4.2 Local projects encouraging development in marginal rural areas and partly supporting initiatives

Rural development projects involved strengthening of smallholder skills on cattle management, rural tourism development, recovering autochthonous livestock breeds, local and traditional heritage. At the moment, local projects achieve supporting initiatives involved to local agrobiodiversity conservation partly coordinating with MAWMF *(Table 2)*.

Table 2. Projects achieved and/or going in rural areas of Dimitrovgrad municipality around initiatives

Name of Project	Location	Date of Execution
West Stara Planina Project	Pirot District, Dimitrovgrad municipality Serbian and Bulgarian border municipalities surrounding SPMA	Was designed through two periods 2000 – 2006 (first) and 2006 – at present (the project is called Euro Region Project)
Reka Mleka	20 municipalities (Central and Southern of Serbia)	2003 – 2006 2006 – 2008
IACP Project	Stara Planina Mountain Area	In execution Project financed by REC.

Source: Own table.

West Stara Planina project was created in a stable partnership and institutions to support transboundary cooperation in the development of the region and empower

local stakeholders and improve their welfare through supporting local tourism and agriculture initiatives. 11 pilot municipalities in the region were taken into account. This project was designed for two phases. Firstly, was carried out in 2000 and 2006. A second phase started and is more focused like Euroregion project involving Serbian and Bulgarian municipalities around Stara Planina Mountain area.

Reka Mleka project has been a project supported by SIDA. The main aim was encouraging to dairy sector and improvement of farmer skills by technical assistance. The project was led in two phases 2003–2006 and 2006–2008. Hence, 20 municipalities in Serbia were taken into account, further; improve abilities and strength technical knowledge to national and regional level was done.

IACP, current project is carried out through development of rural tourism in the Stara Planina Mountain area (through rural and conventional tourism) especially winter tourism. This project is financed by REC (Regional Environmental Centre). Besides, its role is support to initiatives around the area, as well as rebuilding rural tourism infrastructures (old housing restoration, etc.).

4.3 Actors'-Network development surrounding initiatives

Rural initiatives presented in this paper as cases make up role on endogenous development, actually focuses on-farm activities and non-farm activities. Over last years, projects for improving steadily rural household welfare in Pirot District have been carried out, particularly in municipalities around the Stara Planina Mountain area. What is more, agricultural initiatives are strengthening social networks by smallholder farms through innovative activities (i.e. networks created in local fairs, sharing of local knowledge).

The particular Farm (company project, *Figure 1*) sustained by private investor, local projects and technological assistance from an international network; still is better organising to reach local and organic animal products to the nearest markets. Particularly, this economical support is led for agrobiodiversity activities and rural tourism. Besides, the initiatives in Smilovci and Gornji Krivodol (company project) want to reach the local products to nearest local markets through strong alliances with specific retailers of typical products. Due to this short background, they tried to find strategically alliances and get more contacts, particularly promoting products in restaurants, and special markets based on products indigenous livestock breeds. At the moment, the farm company started to promote their products through short food exhibition in restaurants of Belgrade.

The initiative in Prtopopinci has demonstrated that participating in local fairs can to promote their local products and build networks. Indeed, the entrepreneur of SPA hostel believes, that may develop more tourism infrastructures, and so, attract more visitors. This would provide alternatives source of incomes and foster to young entrepreneurs take more interest in local means and products.

This scenario illustrate that, local organizations i.e. Tourism office, Local government (i.e. municipality) and external agents (University of Niš) are achieving activities without links over initiatives (Figure 1). Instead, its support is more addressed to planning and organizing municipal strategies. Although, Serbia has created interesting and well designed rural development strategies; most of these strategies were formulated by top-down overview. And for the stakeholders getting economical support from government should be by local projects. Nevertheless, other stakeholder working with initiatives reach a financial support still is inadequate due to procedures.

4.4 Sustainable initiatives through fostering re-connect territorial agro-food and rural tourism

To this aim, according to suggestions from local stakeholders, farmers and representatives of municipality; they have suggested the establishment of a manager and/or consortium (i.e. an agent that might act for other stakeholders that were not considered in this case study). This manager should organise to the previous stakeholder and initiatives of being part to the existing network. In this case the established network would comprise by Farm Company (i.e. for setting up a strong network).

These factors have been the basis to suggest possible relations involving more stakeholders *(Figure 2)*. Because, would not only are implied with local agrobiodiversity as well rural tourism and organic farming in less proportion. Hence, through this hypothetical case fostering to *'Farm Company – FC', it* might to the local producers *(Figure 2)*.

This manager (FC) may involve more stakeholders and necessarily, it should organize and involve with the municipality to create a local retailer in Dimitrovgrad town. A vertical network fits through a possible short supply food chain, may be structured connecting between local producer and consumers (*Murdoch; Marsden,* 2000). The institutional support is necessary for strengthening this network, thought, and at the moment still is matching regional and local strategies; as well social network may be more encouraged and should change steadily the attitude of farmers. These synergies may more promote local products issues from autochthonous agrobiodiversity, crafts and rural tourism products.

Local products are embedded to the place. Seeing the potential of smallholder making local products and how they are promoted steadily through local events (Regional Fair of Balkan Agrobiodiversity and Rural Heritage). The features meet the conditions to encourage re-connect consumers and food producers/providers, since local products take into account the environmental conditions, artisanal techniques, which are still elaborated (*Wiskerke,* 2009). Tourism office has started supporting and involving to the young in local activities. It as well should foster to municipality in provide an advice centre for them and local entrepreneurs should remain involving in local jobs (tourism, local livestock breeds, crafts).

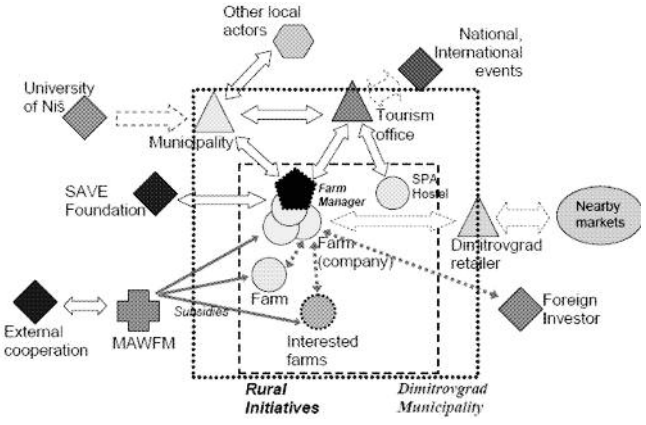

Figure 3. Suggested framework, whether Farm Company become manager for the farmers from marginal villages in Dimitrovgrad
(Source: Own Figure)

However, is necessary the active involvement of local agencies, mainly for being sustainable projects and imply more local and external organizations. Particularly promote them through rural tourism activities (e.g. local tourism, agro-tourism, ecotourism), as well as institutional support (*Murdoch,* 2000; *Marsden,* 2006). This framework outlines more commitment of local actors and organizations focusing initiatives and rural tourism. Through an integrated tourism, on-farm and non-farm initiatives may be more linked, maintaining the economic and socio-cultural features of the localities take place (*Cawley & Gillmor,* 2008; *Saxena & Ilbery,* 2010). Nevertheless, here it may run, whether municipality, tourism office and farm manager become a coordination. It shall provide more promotion on rural tourism, rural life, traditional crafts and traditions for the visitors and/or tourists. Furthermore, social network may be strengthened, mainly to the stakeholders encouraging their social networks (*Vergunst* et al., 2009).

5. Conclusions

This paper set out to investigate the efforts made for smallholders and organizations to become sustainable and promote products through initiatives in Dimitrovgrad municipality.

While there is sound strategically to preserve local agrobiodiversity and promote steadily local food products, these appear important issues concerning to development of marginal rural areas in Dimitrovgrad. The cases taken into account are involved through local projects, foreign investors, local organizations and own funds, and also being part of international networks, which provides technical assistance. However, exogenous support may still be necessary to sustain the main manager and should engage to coordinate between local actors, local agencies, intermediate institutions and external agents (horizontal network).

Nevertheless, it should not be focus on this group, and also it should organize the other stakeholders that are pursuing with initiatives or want to start. There are further means of support to keep local livestock through subsidies provided from Agricultural Ministry. Thereby, seen in other villages, there are smallholder interested to access this subvention, hence they necessarily should meet the procedures to reach it.

Horizontal and vertical networking and embeddedness upon initiatives were proposed as being conductive to maximize resource use and achieving the basic purpose to reconnect local food products to nearly markets. Examples of successful horizontal embedded networking were identified, as was vertical networking to attract tourists. Deficiencies in local networking served, however, to inhibit development in more remote areas. Re-valuing local food taking local resources turn around on a likely integrated territorial agro-food. Regarding environmental sustainability, the farms may be strengthened their networks inside of initiatives.

Farmers that live in these areas still manage by organic farming on a small scale and through rural initiatives. The importance of agrobiodiversity should stimulate the government to coordinate and improve rural strategies by promoting better integration between institutional and local stakeholders. In addition, the government should run awareness-making campaigns to convince entrepreneurs that protecting and enhancing agrobiodiversity is feasible and relevant for future viable agricultural production in those areas.

Rural tourism should be advocate both by official bodies as well as by individual farmers. Elderly people retiring and leaving the productive economy altogether, it is evident that for rural areas to retain their economic vitality it is important for alternative income source to be created therein. Promoting an Integrated sustainable rural tourism it will increase possible source of enhanced employment, expansion of high quality handicraft production.

Although, there are adequate rural tourism infrastructure (at the present occupancy rates are relatively low, which majority of transits). Seeing the expansion of established initiatives, and present potential in villages could be the expansion of handicrafts and specialist in high-quality food issue from indigenous livestock. All of which could provide direct employments possibilities for people living in rural areas. Nevertheless, there are main factors can limit the direct benefit, like small size of country, enabling to visitors to stay there. Besides, few of the facilities available in rural areas are below the quality expected by most international tourist, thus restricting their desire to visit them. One of the strategies to improve initiatives may be through development of website. Despite of locating in marginal villages, these tools can help to attract visitors. In addition may provide information to external visitors, seeing now a globalized world. Through this mean should display the products offered by farms as well the local products. Several experiences using these means have been successful promoting local products.

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References

Bogdanov, N. (2007): Mala ruralna domaćinstava u srbiji i ruralna nepoljoprivredna ekonomija. UNDP, Srbija (United Nations Development Programme). Beograd, Srbija.

Bogdanov, N., Bozic, D., Yavuz, F., Gul, A., Wibberley, J., Turner, M. (2006): Agro economic policy analysis of the new member states, the candidate stats ant eh countries of the western Balkan. CEEC AGRI POLICY. Institute of Agricultural Economics. Faculty of Agriculture, University of Belgrade. Belgrade, Serbia. 26p.

Brunori, G., Cerruti, R., Medeot, S., Rossi, A. (2008): Looking for alternatives: the construction of the organic beef chain in Mugello, Tuscany. Int. J. Agricultural Resources, Governance and Ecology 7(1/2): 126–143.

Callon, M. (1999): Actor-network theory – the market test. Pp.181-195. In: Actor Network Theory and after. Law, J. & Hassard, J. (Eds.). Blackwell Publishers, Cowley Road, Oxford, UK.

Cawley, M. & Gillmor, D.A. (2008): Integrated Rural Tourism: concepts and practice. Annals of Tourism Research 35 (2): 316–337.

Djordjevic-Milosevic, S. (2008): Monitoring the Mediterranean strategy for sustainable development (MSSD): Agricultural and rural development in Republic of Serbia. Plan Bleu, Centre d'Activités Régionales. Belgrade, Serbia. 126p.

Köhler-Rollefson, I. (2007): Endogenous versus Globalized: An alternative vision of livestock development for the poor. Discussion paper. League for Pastoral Peoples and Endogenous Livestock Development. Over-Ramstadt, Germany. 20p.

Kucerova, E. (2002): Active social policy as a chance for endogenous rural development. Agricultural Economics 48 (12): 554–558.

Marczin, O., Đorđević Milošević, S., Ivanov, S. (2007): Smernice za Razvoj održive poljoprivrede na području Stare Planine. Republika Srbija. Regional Environmental Center, Serbia. Swiss Agency for Development and Cooperation, SDC.

Marsden, T., Banks, J., Bristow, G. (2000): Food supply chain approaches: exploring their role in rural development. Sociologia Ruralis 40(4): 424–438.

Marsden, T. (2006): The road towards sustainable rural development: issues of theory, policy and practice in a European Context. Pp. 201-212. In: Cloke, P., Marsden, T. & Mooney, P.H. (Eds.) Handbook of Rural Studies. SAGE Publications Ltd. London EC 1Y 1SP.

Milone, P. (2009): Agriculture in Transition: A neo-institutional analysis. Royal Van Gorcum. Assen, The Netherlands.

Mühlinghaus, S. & Wälty, S. (2001): Endogenous development in Swiss mountain communities: Local initiatives in Urnasch and Schamserberg. Mountain Research and Development 21(3): 236–242.

Murdoch, J. (2000): Networks – a new paradigm of rural development? Journal of Rural Studies. 16: 407–419.

O.E.C.D. (1994): Creating rural indicators for shaping territorial policy. Paris, France.

Remmers, G.A. (1996): Hitting a moving target: Endogenous development in marginal European Areas. Gatekeeper Series No. 63. IIED (International Institute for Environmental and Development). Sustainable Agriculture and Rural Livelihoods Programme. London, UK. 17p.

Remmers, G.A. (2006): A European Network for Endogenous Development? Food for reflection and an invitation to build it. Moving Worldviews: Reshaping sciences, policies and practice for endogenous sustainable development

Saxena, G. & Ilbery, B. (2010): Developing integrated rural tourism: actor practices in the English/Welsh border. Journal of Rural Studies, in press.

S.O.R.S. (2008a): Statistical Yearbook Serbia, 2008. S.O.R.S. (Statistical Office of the Republic of Serbia). Belgrade, Serbia. Viewed 16 August, 2009. Available http://webrzs.stat.gov.rs/axd//en/god.htm

S.O.R.S. (2008b): Innovation activities in enterprises in the Republic of Serbia, 2004–2006. Communication, S.O.R.S. (Statistical Office of the Republic of Serbia). 2008. Viewed 16 August, 2009. Available <http://webrzs.stat.gov.rs/axd//en/god.htm>

Sonino, R., Kanemasu, Y., Marsden, T. (2008): Sustainability and Rural Development. pp. 29–52. *In:* Unfolding Webs: The dynamics of regional rural development. J.D. van der Ploeg, T. Marsden (Eds.). Royal Van Gorcum, Assen, The Netherlands.

Subic, J., Vasiljevic, Z., Cvijanovic, D. (2009): Strategic planning in the function of sustainable agricultural and rural development in Republic of Serbia. 1005-1012p. In: 4th Aspects and Visions of Applied Economics and Informatics, March 26–26, 2009, Debrecen, Hungary.

Stojanovic, S. (2008): Use of Farm Animal Genetic Resources in Serbia in Rural Tourism. In: DAGEN-SAVE Conference Kozard, Hungary, 12–14 June, 2008. DAGENE: Regional Partner in the European SAVE Network: International Association for the Conservation of Animal Breeds in the Danubian Region. Topic: Use of rare breeds and plants for genuine food in rural tourism. Viewed: 25 Sept, 2009, Available <http://www.save-foundation.net/Conferences/Kozard/Stojanovi_Serbia_Kozard.pdf>

Tovey, H., Bruckmeier, K., Mooney, R. (2009): Innovation in rural development and rural sustainable development. pp. 243–266. In: Bruckmeier, K. & Tovey, H. (Eds.) Rural Sustainable Development in the Knowledge Society. Ashgate Publishing Ltd. Surrey, England.

Van der Ploeg, J.D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., Roest, K.D., Sevilla-Guzmán, E., Ventura, F. (2000): Rural Development: from practices and policies towards theory. Sociologia Ruralis 40(4): 391–408

Vergunst, J., Árnason, A., Macintyre, R. & Nighitingale, A. (2009): Using Environment resources: networks in food and landscape. Pp. 143–169. In: Árnason, A., Shucksmith, M. & Vergunst, J. (Eds.). Comparing Rural Development continuity and change in the countryside of Western Europe. Ashgate Publishing Limited. Surrey GU9 PT, England.

Wiskerke, H. (2009): An integrated and territorial perspective on food studies, governance and planning. Slides In: feeding the city. Wageningen University – Rural Sociology Group.

Ying, R. (2003): Case Study Research: Design and Methods, SAGE Publications Inc, California, USA.

GLOBALISATION OF COMMERCIAL THEME PARKS Case: the Walt Disney Company

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Abstract: In this contribution we focus on the globalisation of commercial theme parks with Walt Disney Company as the best known case study. After definitions and historical background of theme parks, we analyse the visitors key factors. For the Walt Disney Cie we start with some historical facts, we set up a SWOT-analysis and focus then on Euro Disneyland Paris, the biggest theme park of Europe.

Key words: Theme Parks, Walt Disney Company, Euro Disneyland

1. Introduction

The Economics Research Associates (ERA) defines a theme park as "A gated attraction that contains rides and/or shows in a themed environment, offers a pay-one-price ticket for its guests and attracts at least 500,000 annual visits" (*ERA, 2007*).

A more detailed description for theme parks is given by Philip L.Pearce (in *Jafar Jafari, 2000, p.124–5*): "Theme parks are capital intensive, highly developed, self-contained recreational spaces which invariably charge admission. The entertainment, rides, speciality foods and park buildings are usually organised around themes or unifying ideas such as a specific period in history or a particular geographic region. These themes are crucial to the operation of the parks as they create a feeling of involvement in a setting which is in stark contrast to daily life. A distinction can be drawn between the commercial theme parks, which are well describes by the theming and entertainment elements mentioned, and outdoor museums or historic theme parks, which may be less commercial in emphasis and have goals in heritage preservation and public education".

Theme park is the basic term for a compilation of rides and other amusement attractions pull together for the purpose of entertaining a group of people. The theme park is more complex than a simple city park or recreational area. This park is a type of amusement park, built around one or more topics (i.e. American Far West theme or Pirates of the Carribean).Theme parks developed in Europe from leisure gardens. The oldest amusement park of the world (since 1583) is "Bakken" at Klampenborg (north of Copenhagen) which is still in operation. In the USA, world fairs and expos induced a real expansion of the amusement park business. (www.weitzlux.com)

A theme park includes a combination of attractions which can be classified into several categories: thrill rides, roller coasters, family rides, water attractions or (indoor) dark rides. Major part of theme parks' revenue comes from entrance fees. Standard admission for a pay-one-price park is (normally) more than $30 with discounts for children and senior residents. Most theme parks also charge for car parking and ticket prices do not include food, which can be very costly. Almost all amusement parks operate using one of two admission principles: Pay as you go (= pay for rides individually) or Pay one price (= one big admission charge, for (almost) all of the attractions).

1.1 History of theme parks

The Feast of St.Bartholomew (since 1133 yearly hold in England), is the father for amusement and theme parks. Theme parks became popular at the beginning of the Industrial Revolution, such as the Vauxhall Gardens (1661) in London, or Prater (1766) in Vienna.

Another type of fair is the World Exhibition or Expo. World Expos started in 1851 with the Crystal Palace in London's Hyde Park. The World's Columbian Exposition in 1893 in Chicago is an early pioneer of the modern theme park and introduced the Ferris Wheel. *(P. De Groote, 2006, p.38–39)*.

In 1894, Paul Boynton Water Chutes opened the world's first new amusement park and charged entrance for the rides. In 1895, he also built a park at Coney Island (New York), which is still very popular. By the early 1900s, there were hundreds of theme parks worldwide, and it was the period of the "golden age" until the late 1920s, mainly due to the increase of income and the decrease of labour time. In the 1930s during the Great Depression and World War II the decline of the theme parks was a fact. After the WWII the influence of television was negative and families visited theme parks seldom. (*www.ultimaterollercoaster.com*). The historical overview and location of the main European theme parks is showed in *figure 1*. The pioneers are situated in the period before 1955.

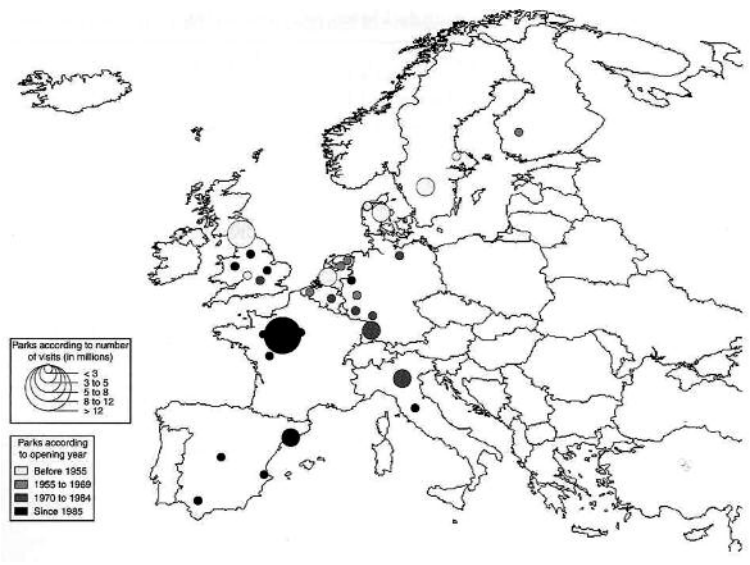


Figure 1: History and location of the main theme parks in Europe
Source: Clave A., 2007, p. 68

Universal Studios illustrates the progress of an attraction (= originally train ride tour of the studios in Hollywood) into a complete theme park. In 1990, Universal Studios Florida in Orlando was opened. Universal Studios is now the second-largest theme park group in the world, only competed in size with Disney itself. During the 1970s, the theme park business initiated to mature as a mixture of refreshed traditional amusement parks and new projects financed by bigger firms emerged. Most of today's major theme parks were built in the 1970s and belongs now to some major globalised groups *(table 1)*, with Walt Disney *(table 2)* in the USA as the biggest, and for Europe: Merlin Entertainments (GB), Euro Disney SCA (F), Parques Reunidos (E) and Compagnie des Alpes (Grevin)(F).

Table 1. Top 10 Amusement/Theme Park Groups worldwide (2007)

Rank	Theme Park Attraction Chain	2007 Attendance (millions)
1	WALT DISNEY ATTRACTIONS	116.5
2	MERLIN ENTERTAINMENT GROUP	32.1
3	UNIVERSAL STUDIOS RECREATION GROUP	26.4
4	SIX FLAGS INC.	24.9
5	BUSCH ENTERTAINMENT	22.3
6	CEDAR FAIR ENTERTAINMENT COMPANY	22.1
7	PARQUES REUNIDOS	12.0
8	COMPAGNIE DES ALPES (GREVIN)	9.6
9	HERSCHEND FAMILY ENTERTAINMENT	8.9
10	EVERLAND	8.6

Source: TEA/ERA, 2008, Theme Park Attraction Attendance Report 2007., p.VI

Table 2. Theme parks of the Walt Disney Group (2006)

1. WALT DISNEY ATTRACTIONS
Estimated 2006 Attendance: 112.5 million

- BLIZZARD BEACH at Walt Disney World, Lake Buena Vista, Florida
- DISNEY-MGM STUDIOS at Walt Disney World, Lake Buena Vista, Florida
- DISNEY'S ANIMAL KINGDOM at Walt Disney World, Lake Buena Vista, Florida
- DISNEY'S CALIFORNIA ADVENTURE, Anaheim, California
- DISNEYLAND, Anaheim, California
- DISNEYLAND PARIS, Marne-La-Vallee, France
- WALT DISNEY STUDIOS PARK, Marne-La-Vallee, France
- EPCOT at Walt Disney World, Lake Buena Vista, Florida
- MAGIC KINGDOM at Walt Disney World, Lake Buena Vista, Florida
- HONG KONG DISNEYLAND, Hong Kong, China
- TOKYO DISNEYLAND, Tokyo, Japan
- TOKYO DISNEY SEA, Tokyo, Japan
- TYPHOON LAGOON at Walt Disney World, Lake Buena Vista, Florida

Source: ERA, 2007, p. 10

1.2 Visitors key factors

Products, experiences, and people are the lifeblood of the theme parks. Managers must take into consideration a lot of influencing factors. The origins of the International Association of Amusement Parks and Attractions (IAAPA, *www.iaapa.org)* goes back to 1918, as a USA association (formerly the National Association of Amusement Parks). Now it is the world's premier amusement association with headquarters in Alexandria (USA) and the European one in Brussels.

Based on the survey of May 2007 (www.iaapa.org) we see that adults with higher incomes *(figure 2)* are more visiting theme parks. An yearly average of 80% adults would visit a park again in the next year. Repeat visitors are of significant importance for the continuous success of theme parks. For the adults, spending time *(figure 3)* with family and friends was their preferred characteristic of a visit theme park (43%). Second were rides (24%), shows (9%), games (5%),

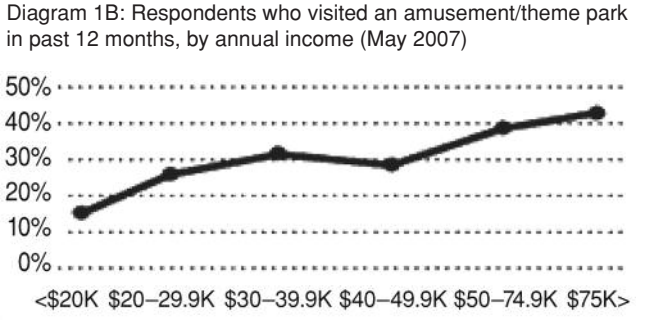


Figure 2. Relationship between visitors of a theme park and income (May 2007)
Source: www.iaapa.org

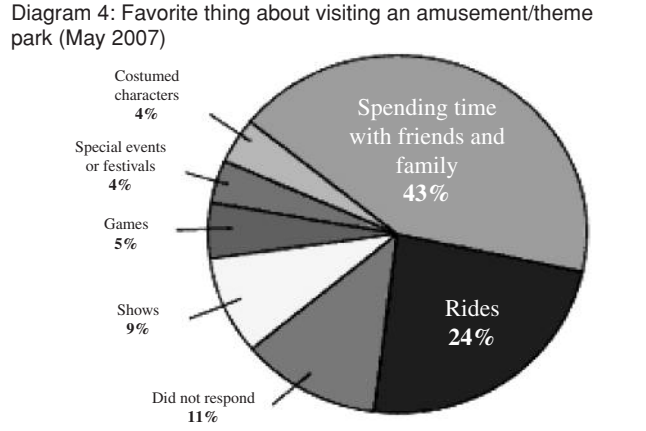


Figure 3. Activities of visitors in a theme park
Source: www.iaapa.org

and both costumed characters and special events (4%). The percentage of adult whose last theme park journey *(figure 4)* contained an overnight stay has risen slightly during 2005-07 to an average of 33%.

Diagram 5A: Respondents who last amusement/theme park visit included an avernight stay, by age

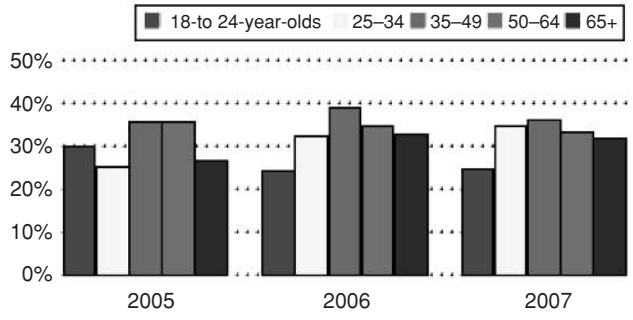


Figure 4. Relationship visitors of theme parks and overnight stays
Source: www.iaapa.org

Table 3 shows the total attendance for the world's Top 25 theme parks in 2007. Disney's Magic Kingdom in Orlando was the most world's popular theme park with 17,060,000 guests. Eight of the top 10 parks across the globe were Disney parks. The Latin America market is less expanded compared to North America and Europe because of a difference in income levels. Asia is experiencing stronger expansion, mainly spectacular in China where the middle class is increasing rapidly. Some major attraction plans are in the channel with the region including a Universal Studios theme park in Singapore in 2010. European parks are being well sustained and reloaded by ongoing private investment. *(www.themeit.com/attendance_report2007.pdf)*

Table 3. Top 20 Theme parks worldwide (2007)

Rank	Park and Location	2007 Attendance
1	MAGIC KINGDOM at Walt Disney World, Lake Buena Vista, FL, USA	17,060,000
2	DISNEYLAND, Anaheim, CA, USA	14,870,000
3	TOKYO DISNEYLAND, Tokyo, Japan	13,906,000
4	TOKYO DISNEYSEA, Tokyo, Japan	12,413,000
5	DISNEYLAND PARIS, Marne-La-Vallee, France	12,000,000
6	EPCOT at Walt Disney World, Lake Buena Vista, FL, USA	10,930,000
7	DISNEY'S HOLLYWOOD STUDIOS at Walt Disney World, Lake Buena V	9,510,000
8	DISNEY'S ANIMAL KINGDOM at Walt Disney World, Lake Buena Vista, FL	9,490,000
9	UNIVERSAL STUDIOS JAPAN, Osaka, Japan	8,713,000
10	EVERLAND, Kyonggi-Do, South Korea	7,200,000
11	UNIVERSAL STUDIOS at Universal Orlando, Orlando, FL	6,200,000
12	SEAWORLD FLORIDA, Orlando, FL, USA	5,800,000
13	DISNEY'S CALIFORNIA ADVENTURE, Anaheim, CA, USA	5,680,000
14	PLEASURE BEACH, Blackpool, UK	5,500,000
15	ISLANDS OF ADVENTURE at Universal Orlando, Orlando, FL, USA	5,430,000
16	OCEAN PARK, Hong Kong, China	4,920,000
17	HAKKEIJIMA SEA PARADISE, Yokohama, Japan *	4,770,000
18	UNIVERSAL STUDIOS HOLLYWOOD, Universal City, CA, USA	4,700,000
19	BUSCH GARDENS TAMPA BAY, Tampa Bay, FL, USA	4,400,000
20	SEAWORLD CALIFORNIA, San Diego, CA, USA	4,260,000
21	HONG KONG DISNEYLAND, Hong Kong, SAR, China	4,150,000
22	TIVOLI GARDENS, Copenhagen, Denmark	4,110,000
23	EUROPA-PARK, Rust, Germany	4,000,000
24	NAGASHIMA SPA LAND, Kuwana, Japan	3,910,000
25	PORT AVENTURA, Salou, Spain	3,700,000

Note: Percent changes for 2007 for certain parks (noted by *) are based on adjusted/updated figures for 2006, thus not directly comparable to published TEA-ERA list for 2006/05

Source: TEA/ERA, 2008, Theme Park Attraction Attendance Report 2007, p.VII

The 2007 total attendance for the Top 20 theme parks in Europe *(table 4)* was 60.9 million, standing for a growth rate of 3% compared to 2006 (cf. 2.6% for Nort America). *Table 5 shows* the evolution of number of visitors in the European theme parks (1995–2007). European theme parks have a process for expanding the season that has little to do with including infrastructure, such as the Christmas market. Tivoli has been the top player in Europe in successfully expanding its season – with a new Halloween celebration in October. Both events extensively increased the park's attendance and incomes. In general, the European theme parks are relatively stagnant compared to the United States or Asia. The Top 20 have not changed greatly. Geography and strong national character are major aspects. Each country has one big park and one lead market. Apart from Disney, European theme parks are local ones. *(www.themeit.com/attendance_report 2007.pdf)*

Table 4. Top 20 European theme parks (2007)(+ change over 2006 in%)

Rank	Park and Location	2007 Attendance	% Change
1	DISNEYLAND PARIS, Marne-La-Vallee, France	12,000,000	13.1%
2	PLEASURE BEACH, Blackpool, UK	5,500,000	-8.3%
3	TIVOLI GARDENS, Copenhagen, Denmark [1]	4,110,000	-6.5%
4	EUROPA PARK, Rust, Germany	4,000,000	1.3%
5	PORT AVENTURA, Salou, Spain [2]	3,700,000	5.7%
6	DE EFTELING, Kaatsheuvel, Netherlands	3,200,000	0.0%
7	GARDALAND, Castelnuovo del Garda, Italy	3,100,000	0.0%
8	LISEBERG, Gothenburg, Sweden [1]	3,050,000	3.4%
9	BAKKEN, Copenhagen, Denmark	2,700,000	0.0%
10	WALT DISNEY STUDIOS, Marne-La-Vallee, France	2,500,000	13.6%
11	ALTON TOWERS, Staffordshire, UK	2,400,000	0.0%
12	PHANTASIALAND, Bruhl, Germany	1,900,000	0.0%
13	THORPE PARK, Surrey, UK	1,700,000	0.0%
14	MIRABILANDIA, Savio, Italy	1,700,000	0.0%
15	LEGOLAND WINDSOR, Windsor, UK	1,650,000	11.5%
16	PARC ASTERIX, Plailly, France	1,620,000	-4.7%
17	LEGOLAND BILLUND, Billund, Denmark	1,610,000	10.3%
18	FUTUROSCOPE, Poitiers, France	1,600,000	6.7%
19	PARQUE DE ATRACCIONES, Madrid, Spain	1,500,000	0.0%
20	HEIDE PARK, Soltau, Germany	1,400,000	16.7%

Note: + indicates a tie.
[1] Attendance for Tivoli and Liseberg includes Christmas market operations
[2] Attendance for Port Aventura is for theme park only (excl. waterpark - separate ticket)

Source: TEA/ERA, Theme Park Attraction Attendance Report, p.XI

2. The Walt Disney Company

The Walt Disney Company works as a diversified amusement company worldwide. The corporation's Media Networks sector contains networks of Internet, mobile operations, radio and television. The Walt Disney Company's Parks and Resorts sector holds and controls the Walt Disney

Table 5. Evolution of number of visitors (in million) in the European theme parks (1995–2007)

Parknaam	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Disneyland Resort Paris	10.7	11.7	12.6	12.5	12.5	12.0	12.2	10.3	10.2	10.2	10.2	10.6	12.0
2. Blackpool Pleasure Beach	7.2	7.5	7.8	6.6	6.9	6.8	6.5	6.4	6.2	6.2	6.0	6.0	5.5
3. Tivoli Gardens	2.4	3.1	3.2	2.8	3.1	3.9	3.9	3.8	3.3	4.2	4.1	4.4	4.1
4. Europa Park	2.5	2.5	2.7	2.7	3.0	3.0	3.1	3.3	3.3	33	3.9	4.0	4.0
5. Port Aventura	2.7	3.0	3.0	2.7	3.0	3.1	3.3	3.3	3.1	3.1	3.3	3.5	3.7
6. Efteling	2.7	3.0	3.0	2.7	3.0	2.9	3.1	3.O	3.2	3.2	3.3	3.2	3.2
7. Liseberg	2.2	2.4	2.5	2.5	2.6	3.0	3.1	3.1	2.8	3.0	3.1	3.0	3.1
8. Gardaland	2.5	2.4	2.7	2.7	2.8	2.9	2.9	2.9	3.0	3.1	3.1	3.1	3.1
9. Bakken	2.4	2.1	2.1	2.0	2.3	2.5	2.5	2.8	2.7	2.5	2.6	2.7	2.7
10. Alton Towers *	2.7	2.7	2.7	2.5	2.8	2.4	2.3	2.5	2.5	2.4	2.4	2.4	2.4

* Since 2007 Walt Disney Studios (Marne-La-Vallée) is number 10 with 2.5 million visitors. Alton Towers is number 11.
Source: P. De Groote, based on TEA/ERA reports

World Resort that contains theme parks, hotels, dining, entertainment and sports complex, conference centers, water parks and other leisure facilities. It also manages Disney Cruise Line (cf. the Disney Magic was the first ship, 1998), Disneyland Resort Paris (1992), and Hong Kong Disneyland (2005) and Tokyo Disney Resort (1983). The corporation's Studio Entertainment sector produces, purchases, and allocates animated action pictures, musical recordings, home entertainment, video-on-demand, pay television, and free television markets. Disney Company distributes its products (i.e. books and magazines, computer software and video games) through Disney Stores (esp. in North America and Europe) and www. DisneyShopping.com.

2.1 History of the company

Walt Disney, and his legacy, especially given that he was born on 5 December 1901, just as the 20th century was beginning while it would be several decades before he would have a significant impact on the world, his contribution would eventually have a lasting impression in the hearts and minds of millions. The Walt Disney Company started on 16 October 1923 in Burbank as the Disney Brothers Cartoon Studio, a joint venture of Walt Disney and his brother, Roy. In 1926 the company had created two movies and bought a studio in Hollywood, California. Difficulties in distribution rights nearly went down Walt and his company, but the design of Mickey Mouse (1928) and Donald Duck saved a dropping boat. The ensuring years would bring with them merchandise licensing, full-length animated features like Snow White and the Seven Dwarfs (1937) and Pinocchio, television programs (like The Mickey Mouse Club since 1955), live-action movies, and, of course, one of Walt's most ambitions projects, a theme park called Disneyland. *(D. Smith, S. Clark, p.21–27)*

In 1955 opened the first Disney theme park, Disneyland in Anaheim. Disney maintained its rise in popularity, and

Table 6. Comparison of World's Disneyland Resorts

Walt Disney World Resort	Disneyland Resort	Tokyo Disney Resort	Disneyland Resort Paris	Hong Kong Disneyland Resort
Location Orlando, Florida, USA	**Location** Anaheim, California, Orange County, USA	**Location** Urayasu, Chiba, Japan	**Location** Marne-la-Vallée, Paris, France	**Location** Penny's Bay, Lantau Island, China Hong Kong
Opening Day Magic Kingdom Park October 1, 1971 Epcot October 1, 1982 Disney-MGM Studios May 1, 1989 Disney's Animal Kingdom: April 22, 1998 Water Park River Country: 1976 Disney's Typhoon Lagoon: June 1, 1989 Disney's Blizzard Beach: April 1, 1995	**Opening Day** Disneyland July 17, 1955 Disney's California Adventure Park February 8, 2001	**Opening Day** Tokyo Disneyland April 15, 1983 Tokyo DisneySea September 4, 2001	**Opening Day** Disneyland Park April 12, 1992 Walt Disney Studios Park March 16, 2002 Disney Village: 1992	**Opening Day** Hong Kong Disneyland September 12, 2005
Resort Facilities Theme Parks: 4 Water Park: 3 **Other Major Facilities:** Downtown Disney - Florida Disney Hotel: 22	**Resort Facilities** Theme Parks: 2 **Other Major Facilities:** Downtown Disney - California Disney Hotel: 3	**Resort Facilities** Theme Parks: 2 **Other Major Facilities:** Ikspiari Disney Hotel: 7	**Resort Facilities** Theme Parks: 2 **Other Major Facilities:** Disney Village Golf Disneyland Disney Hotel: 7	**Resort Facilities** Theme Parks: 1 **Other Major Facilities:** Park Promenade Inspiration Lake and Recreation Center Disneyland Resort Pier Disney Hotel: 2
Area Total Resort Area: 27,001 acres Epcot: 300 acres Disney-MGM Studios: 135 acres Disney's Animal Kingdom: 500 acres Magic Kingdom Park 107 acres	**Area** Total Resort Area: 512 acres Disney's California Adventure Park: 54 acres Disneyland 163 acres (Original Area: 84 acres)	**Area** Total Resort Area: 494 acres Tokyo DisneySea: 121 acres Tokyo Disneyland 126 acres	**Area** Total Resort Area: 4,800 acres Walt Disney Studios Park: 126 acres Disneyland Park 141 acres	**Area** Total Resort Area: 311 acres Hong Kong Disneyland 99 acres (Developed Area: 37 acres)

Source: www.skyscrapers.c

stayed alive even after the death of its founder in 1966. His brother Roy took over control at that time, and then was succeeded by a management team in 1971. In 1983, Disney went international with the opening of Tokyo Disneyland. *(www.disneyworldtrivia.com)*

In the past few decades, Disney has went into a wider market, starting The Disney Channel on cable and creating subdivisions like Touchstone Pictures to make films other than the usual family-oriented fare, achieving a firmer balance on a broader series. In the 1970s and 1980s, the company experienced from takeover efforts, but got well thanks to successful team, leading Disney to continue its tradition of brilliance into a new century.

Walt Disney is now an expanded entertainment company, working in 4 business segments: media networks, studio entertainment, parks & resorts, and customer products. The company got recently increasing net profits (esp. in 2007–8). *Table 6* compares Disneyland Resorts in the USA, Paris, Hong Kong and Japan.

2.2 SWOT Analysis

The Disney Company *(table 7)* faces domestic weaknesses and strengths, which can to a certain level be controlled. The outside forces like opportunity and threats are more complex to manage, and Disney has to adopt and take advantage to those forces.

Disney's major **strength** is in its resources, practice in the entertainment business and its low-cost strategy. Moreover, the company evidently has expanded a very strong and well known brand name over 80 years. The company has also been able to spread its operations and products to evade against declining transactions in product lines. In recent years it has redirected into Film, Home Video, products, Radio and Television and in Theme Parks. It has also successfully worldwide diversified its business from USA to Japan and Europe. The main strengths in domestic resources refer to human resources and financial solidity. Employees in the Disney studios appear to be very innovative and in recent years they have created several productions. A corporation without new inspirations has a trouble in today's aggressive business environment. The low-cost company's strategy is an advantage for them. The company can manage costs, and still make quality goods and services. Financial risks have been reduced by sharing initial investment costs with the highest number of outside participants.

Disney's main **weaknesses** are: very large work force, frequent change in top-management, and high operating costs. The corporation mainly manages in the USA and has worldwide 137,000 employers in 2008 (cf. 60,000 in 1991). This fact shows potential communication difficulties, and a high administration level within the Disney Company. By expanding into more sectors and niches, the company's work force will rise even bigger, and the managerial structure has to be able to hold a growth of the work force. The fact that the company very often changes its corporate officers makes the company structure even more complex. There are many positive things that come with changes, but modification is also connected with struggle, and big expenditures. Great operating costs are typically direct results of a large work force and a big number of fixed assets. For example, ticket prices should not be able to go above 33$ for entry to Disney's theme park. Visitors are not prepared to spend more money than that. As a result, operating costs should be strongly observed to match the price that customers are willing to pay for the goods and services offered.

External **opportunities** must be recognised, examined, and responded to in a very early phase. The Disney Company is facing numerous external opportunities like positive government attitudes towards its operations, barriers of entry, large group of loyal visitors and the entertainment industry itself. Official and governmental forces are usually recognised as being negative external features to a company. Paradoxically, in Disney's case, the French government donated significantly in the Euro Disney plan with over USD 1.2 billion, built transport facilities, and gave Disney tax relief's on expenditure of goods sold accounts. Also, since the difficulties of entry into the greatly specialised business in which Disney is operating, competition will find it complicated to infiltrate the company's highly

Table 7. SWOT Analysis of Walt Disney Company

Strengths	**Weaknesses**
• Experience in the entertainment business (over 80 years), • Tourist attraction, • Strong reputation and brand name, • Wide company's product range- different types of attractions and products, • Disney's attractions adjusted to changes in visitor's preferences, • Familiarity, • Financial stability, • Qualified and educated employees,	• Large work force, • Many changes in top-management, • High operating costs, • Different culture, • High price for tickets, • Design duplication, • Cultural imperialism, • Visitor Spending – European visitors not spend as much as American visitors,
Opportunities	**Threats**
• Highly diversified product and service, • Positive government attitudes, • Barriers of entry, • Large group of loyal clients, • Expansion on foreign markets,	• Over saturated markets, • Increasing number of serious and actively operating competitors, which address their offer to the same segment of clients (e.g. Six Flags) • Bigger elasticity of competitors in adapting to particular segment of clients thanks to the smaller volume of sales, • Increasingly competitors offer, which is perceived by clients and retailers as a wider and better available,

Source: own research

diversified product and service mix. In addition, huge initial capital investments are needed to come into the business.

Main **threats** to the Disney Company are over saturated markets and foreign competition. As the supply of services and products in the entertainment business was starting to saturate the markets, competition is more powerful, and the most dominant companies survived. Some of its functions, such as the Network-television division may not be able to handle the force from the Cable-giants like Turner Broadcasting Systems (TBS).

3. Euro Disney Resort in Paris

The **Euro Disney SCA** Group's major action is the operation of the Disney Resort in Paris *(figure 5)*. It was built in the New Town Marne-La-Vallée (32 km east of Paris) by 1,700 companies and 10,000 workers from 2 August 1988 until the official opening on 12 April 1992. The features contain the Disney land Paris Theme Park, several theme hotels, symposium facilities, the Disney Village amusement center including 15 cinemas, 3D adventure screens and golf lessons. The Group also controls the real estate growth and expansion of the related infrastructure of the assets; they possesses Disneyland Park, Hotel Disneyland, Walt Disney Studios Park and Ranch Davy Crockett. (*www.eurodisney.com)*

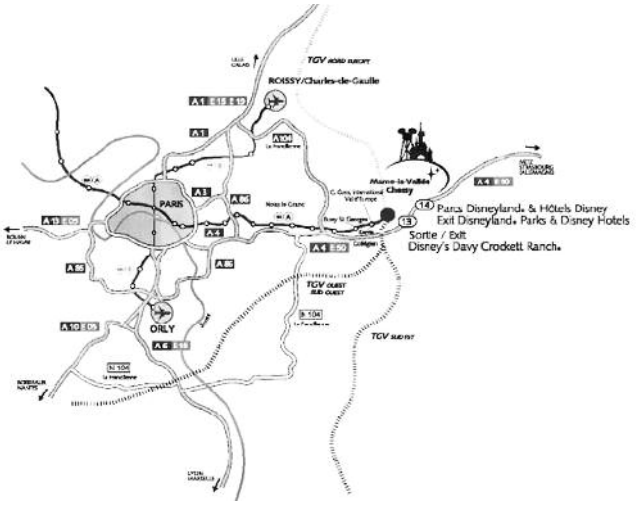


Figure 5. Location of Euro Disneyland Resort in Marne-la-Vallée
Source: www.eurodisney.com

3.1 Historical background

The plan of a European amusement resort and park complex had been developing within Disney since the early 1980s. In 1981, the company began a worldwide bidding procedure for situating Euro Disney, originally involving Germany, Spain, France and others. With continued success of the three existing parks, the promise of a new European Union was too much to resist. The most important detail was the location. The choice was to be made between Spain and France. Despite worse weather conditions and less generous offer from France, in 1985 the decision has been made. Two years later, Michael Eisner and Jacques Chirac, signed a contract for the building of a Disney theme park at Marne-La-Vallée with Robert Fitzpatrick as the president of Euro Disneyland. Next to the proximity of Paris (one of the world's tourism capitals) the central location with large potential visitors from Germany and Great Britain (cf. The Chunnel) was another decision reason.

Despite over 7 years of planning and doing research, Euro Disney quickly developed in one of the most costly mistakes in company history. In the first 2 years of operation, Euro Disney lost close to 1.03 billion $. They were close to go bankrupt. Initial failure can be connected with the? European Recession. Just as Euro Disney opened, Europe was in the middle of an economic slump. Disney felt that they could overcome this issue; however, Europeans had little spending power at that time (1992-4) and the decline in France's GDP resulted in a decrease of disposable income among the French population. Many other European countries were experiencing similar problems.

Furthermore Disney didn't expect the huge cultural differences between the Americans and the Europeans. The whole resort was planed along the identical principles as the original Disneyland in the USA. When they were opening the Disneyland in Tokyo, Japanese people were saying that they don't want being Japanese, but they came there to see America and for Disney. They wanted to know America. Disney thought that the Europeans would react in the same way. But they didn't. There were many differences in which French couldn't agree. Consequently, Euro Disney was not accepted between the European societies. The problem was also with the marketing policy. Euro Disney was promoted wrongly to the consumers. The resort was advertised in the American-style of "bigness and extravagance". Instead, Euro Disney should have concentrated on the emotional aspect, marketing that visitors would have a unique, unusual experience they would not forget. (*www.eurodisney.com)*

3.2 Financial problems

Many additional domestic and external factors gave the opening failure of Euro Disney. Contact gaps, increasing interest rates, decrease in the real estate market, operational mistakes, and high labor costs all gave the 1 billion $ total loss in 1992 and 1993. Fortunately for Disney, many of these issues were accurate. By 1995, Euro Disney was able to make a profit of 15.6 million $. Euro Disney SCA. is a Société en Commandite par Actions. Under French regulation, this structure establishes an obvious characteristic between the Gérant who is responsible for working the Company and the management board, which administers the management of the Company.

Disney Company is Euro Disney's largest shareholder *(figure 6),* with 39,8% of its stock. 10% of shares belong to Prince Alwaleed (Nephew of Saudi King Abdullah, world's wealthiest Muslim businessman, Saudi Arabia) and his family. Other shareholders possess 50,2% of its stocks. Since 1 November 2005, Euro Disney SCA share are only issued on the Paris Stock Exchange. *(www.eurodisney.com)*

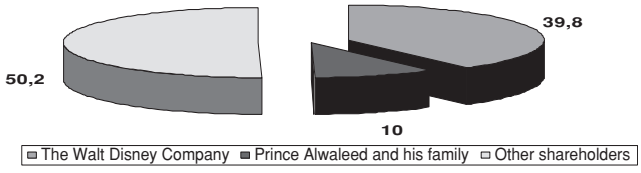


Figure 6. Euro Disney – shareholder's structure
Source:www.eurodisney.com

Euro Disney Paris is one of Europe's top family vacation purposes. In 2004 park's attendance *(figure 7)* was equal to 12, 4 millions of visitors. But in 2005 this number decreased slightly by 12,3 million (1%). During 2006, the company continued its development strategy planned to attract and keep theme parks' tourists and hotel guests, and started to see some first profits. Theme Parks attendance for fiscal year 2006 increased to 12,8 million. Euro Disney Paris has 49,000 direct and indirect jobs, including more than 13,000 employed at the Resort itself.

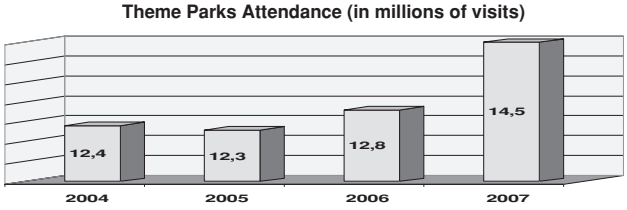


Figure 7. Theme Parks Attendance
Source: own calculation based on eurodisney.com

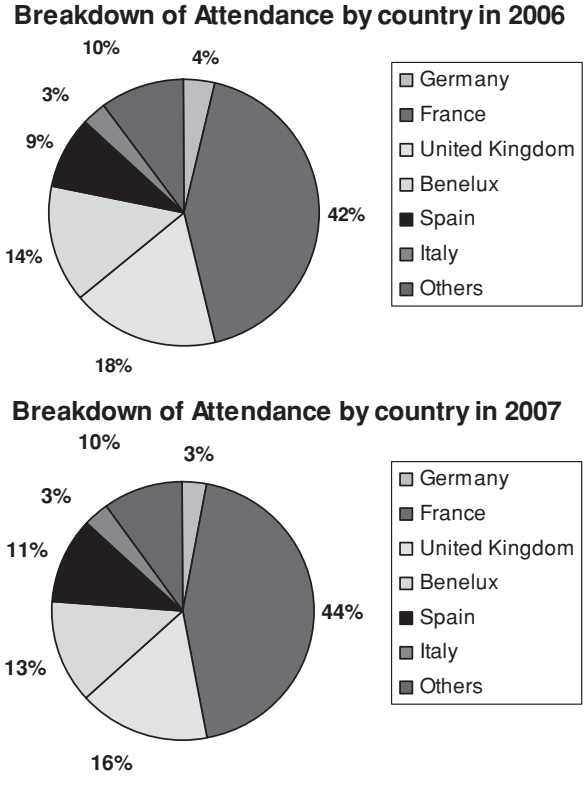


Figure 8. Breakdown of Attendance by country
Source: own calculation based on eurodisney.comOnderkant formulier

In 2007 and 2008 records of 14.5 and 15.3 million of visitors were registered, and so it is the top-visited tourist attraction/destination of Europe. The increase in theme parks attendance primarily reflects growth in the French, Spanish and United Kingdom markets *(figure 8).* Euro Disney's strong figures were credited to increased guest expenditure and theme park attendance, partly balanced by upper operating costs. Increased visitor spending was due to higher expenditures for food, beverage and merchandise, higher average ticket prices and higher average daily room rates. In 2007 spending per guest was equal to €45 and spending per room €197,9 *(figure 9).*

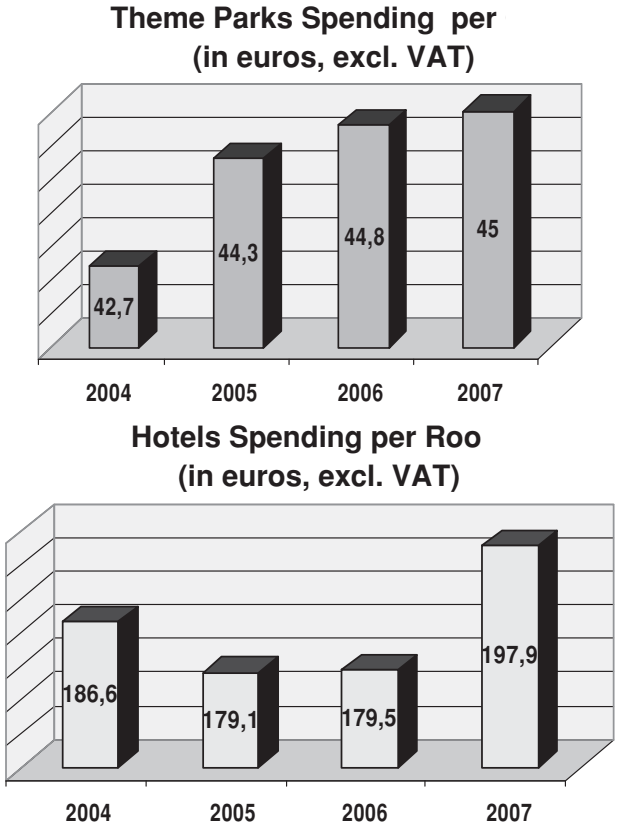


Figure 9. Theme Parks Spending per Guest
Source: own calculation based on eurodisney.com

During 2007, the company celebrated the Resort's 15th anniversary, though continuing with its expansion strategy designed to increase both visitor volume and spending at the Resort by attractive products and services to best meet the visitors' needs and to take benefit of what management believes are significant opportunities to attract and keep visitors. The hotel occupancy rate improved by 5,8%, compared to fiscal year 2006 to 89,3% in 2007 which was the result from an incremental 123,000 room nights compared to previous year 2006. This raise was also driven by more guests visiting from Spain, United Kingdom and France.

3.3 Future and Conclusion

As Disney walks into the new millennium, it is impossible to predict all changes and advances that will

occur within the Company. While there are many plans for particular films, theme parks, attractions, television series, and other projects. No one can forecast precisely what the 21st C has in store for Disney, but one thing is sure: the Company is leading to meet the next hundred years by continuing and increasing upon its presence in all current areas of effort while reaching into some that have not yet even been considered.

Certainly, through the past 100 years several generations have been touched by Disney's characteristic brand of original magic world. Some may believes that the Disney Company has done all there is to do, but Walt's never-ending creative vision lives on within the animators, actors, imaginers, musicians, and other people world wide who are responsible for concreting the road to Disney's future. Just by looking at the plans stated for the first few years of this new millennium, one can see that the future at Disney is both exciting and filled with a character of fantastic originality. As Walt marked, "I only hope that we never lose sight of one thing- that it was all started by a mouse".

The Walt Disney Resort has come an extensive way from marshland to vacationland. Through some land purchases in the last twenty years, it now covers 30,500 acres. Its initial number of Cast Members has grown from 5,500 to 36,000. Attractions, Resorts, and even added theme parks are in expansion for years to come. The Vacation Kingdom of the World has considered and informed people young and old from all over the world (Tombs Dominic & Quinn Brian, 2005, p.255). Nowhere else on the globe can one meet a snow skiing alligator or robot transport pilots fly a magical pirate boat above the clouds, or ride a real vapor train through the Old West or discover a haunted hotel or stylish greenhouses, where growing systems platform the future of our planet's food supply. It promises every tourist that anything can really happen when they desire to be a star. And it is the realized vision of one man who believed that anyone can achieve what they set their brain to: Walt Disney.

References

Books & Guides:

Clave A. (2007): The global theme park industry, CABI, Oxfordshire, 459 p.

De Groote P. (1999): Panorama op Toerisme, Garant, Leuven/Apeldoorn, 343 p.

De Groote P. (2006): België en Wereldtentoonstellingen: Quo Vadis?, FOD Economie, Brussel, 44 p.

Dunlop Beth (1996): Building a dream. The art of Disney architecture", Harry N. Abrams Inc., New York, 208 p.

Jafari J. (2000): Encyclopedia of Tourism, Routledge, London/New York, 683 p.

Knowles T., Diamantis D. & El-Mourhabi J.B (2004(2): The Globalization of Tourism & Hospitality, Thomson, London, 321 p.

Lanquar R.(1991): Les parcs de Loisirs, PUF, Paris, 127 p.

Lanquar R.(1992): L'empire Disney, PUF, Paris, 127 p.

Littaye A. & Ghez D.(2002): Disneyland Paris. De l'esquisse à la création, Nouveau Millenaire Editions, Paris, 320 p.

Metz, T (2002): Pret! Leisure en landschap, NAi Uitgevers, Rotterdam, 288 p.

Smith D. & Clark S. (2002(2): Disney. The first 100 years, Disney Editions, New York, 214 p.

THEA/ERA (2008): Theme Park Attraction Attendance Report 2007, Burbank, 16 p. (yearly edition)

Tombs D. & Quinn B. (2005): Columbus tourist attractions & events of the world", UP Group, Lithuania, -p.

Van Willigen R. (1999): Mouse Entertainment. De geschiedenis van Walt Disney & Company, Uitgeverij Sun/Kritak, Nijmegen/Leuven, 195 p.

Websites:

– http://corporate.disney.go.com/investors/index.html
– http://library.thinkquest.org/CR0210243/amusement%20park%20history/amusementparkhistory.htm
– http://www.disneyworldtrivia.com/trivia/wdwhistory.php
– http://www.eurodisney.com/
– http://www.iaapa.org/
– http://www.islandnet.com/~kpolsson/disnehis/index.htm
– http://www.thefreedictionary.com/water+park
– http://www.themeit.com/attendance_report2006.pdf
– http://www.themeparkcity.com/itps/L_APhistory.htm
– http://www.ultimaterollercoaster.com/
– http://www.weitzlux.com/themeamusementparksattorney/history_4650.html
– http://www.skyscrapers.cn

CORPORATE BRANDING EFFECTS ON CONSUMER PURCHASE PREFERENCES IN SERBIAN TELECOM MARKET

Gajo Vanka

Abstract: This research is carried out to know the role of corporate branding in mobile phone network along with different influencing factors involved in the purchase of mobile telephone connections. This paper discusses corporate branding from consumer's point of view that how much they value it and what type of role it has.This is a quantitative study. A questionnaire is used in order to investigate corporate branding and other influencing factors involved in purchase decision of the customers. Population selected for this study are Belgrade University students which is the most of Serbian youth segment and is a valuable source that gives precise information with high probability about market preferences according to the Research of Serbian republic statistical office. Primary data are obtained by collecting data from questionnaire and interview, while the secondary data are collected from various reliable sources. Primary data provide reliable content in accordance with a secondary data obtained by Serbian republic statistical office and with a Research of competitor and consumer preferences insight provided by Telenor Company. The analysis of the data has been performed in accordance with the chosen theories and summarized in a table, which serves as a tool for deriving reliable and relevant conclusions. The sample size was determined by conducting a primary study and defining the variance of primary sample and the intended number of samples was selected carefully and randomly from the population. Then the validity and reliability of the questionnaire was determined. The used questionnaire in this research consisted of 7 common, and 30 specialized questions which were supporting the hypotheses of the research. Data was analyzed using the frequency percent techniques, and in the chapter related to the deductive statistics, one-sample t test was used to analyze and approve/disapprove the questions supporting the research hypotheses. The analysis of this study reveals different set of results while making comparison between literature and empirical. It investigates the relative importance of the corporate branding to the customers in mobile phone telecommunication industry while making purchase decision. The findings of this study provided useful information which is helpful not only for the students but also for the brand managers of mobile telecom operators that how they can improve their company's strategic position for longer period of time through corporate branding to trigger more customers and for a good brand.

Key words: Corporate branding, Services & Quality, Loyalty & Trust, Price, Switching and Mobile Network service providers

1 Introduction

In mobile telecommunication, purchase settings are continuous and different than the purchase settings of retails stores etc (*Ranaweera & Prabhu,* 2003). In this industry most of the customers maintain long term relationships with the operators (*Ranaweera & Prabhu,* 2003). Where factors like trust, image, and satisfaction are not easy to measure. But also factors like switching are easy to measure because in this industry switching is more than simply walking to another Store. Because it requires considerable time and effort due to the presence of switching barriers and switching decision is made after considerable thought. And most importantly this sector provides an environment of high automation which makes the customers *Think Twice* before leaving (*Ranaweera & Prabhu,* 2003). The linkage between core values and corporate brand is described by a firms brand equity and competitive position (*Ozer,* 2004). A customer has brand building in his mind through the process of controlled and uncontrolled communication (*Ozer,* 2004). Today, for every firm a critical question for its success is that how it can maintain its current customers and how it can make them loyal to the brands. Loyal customers pay important role in building businesses by making different moves like buying more, by paying premium prices and most importantly providing companies different sets of new customers by positive word of mouth (*Ganesh* et. al. referred in *Aydin* and *Ozer,* 2004). In fact telecommunication companies lose their customer quite regularly. So it's very challenging task for the mobile phone operators to retain existing customers as well as bringing new customers towards their brands and creating loyalty in them. It happens in almost every industry but especially in telecommunication services, it is said that when customers are connected to a particular service provider or operator then their long term relationship with the operator is of great importance for the success of the company in the competitive market (*Gerpott* et. al. 2001 referred in *Aydin* and *Ozer* 2004). Another factor which is very important in telecommunication industry is price. Price is a very sensitive issue in this industry, which is very dynamic factor in this industry; customers are very price sensitive in this industry. *Kay,* (2006) argues that brand meanings are incorporated into the lives of consumers so brands are social or cultural property rather than company property.

This study involves different sections to find out the result of the research. Analysis is one of them with high importance, as it comprise of a comparison between primary data and secondary data. Major problem during the purchase of a particular mobile phone connection is discussed mainly in relation with corporate branding and with other factors as well. The purpose is to analyze the role of corporate branding and to know about influencing factors during purchase of a mobile phone connection.

2 Objective

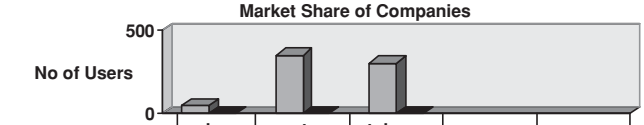
It is seen the most of the companies in mobile phone telecommunication promote more their corporate name than the product/service they offer to the customers. The purpose of this study is to analyze the role of corporate branding in mobile telecommunication industry. What are reasons that make customers purchase mobile phone connection of any particular company. Either it is because of corporate brand or it is because of the service, loyalty, price or any other reason. This research will examine that in mobile phone telecommunication either corporate brand is sufficient for a long term customer base, and that brand association or there are any other factor for long time survival of the company. As product/service brands are not long term brands as compared to corporate brand in mobile phone telecommunication so focus will be to know about corporate brand and its presence in the consumer's mind. Corporate brand has more dominant reflection in mind of mobile phone consumers and which has long lasting association with consumers. This research is carried out to find out the approximate solution of identified problem with the help of literature and Questionnaire.

3 Methodology

This is a quantitative study. A questionnaire is used in order to investigate corporate branding and other influencing factors involved in purchase decision of the customers. Population selected for this study is Belgrade University students which is the most of Serbian youth segment who are studying here, and is a valuable source that gives precise information with high probability about market preferences according to the Research of Serbian republic statistical office. Primary data are obtained by collecting data from questionnaire and interview, while the secondary data are collected from various reliable sources. Primary data provide reliable content in accordance with a secondary data obtained by Serbian republic statistical office and with a Research of competitor and consumer preferences insight provided by Telenor Company. The analysis of the data has been performed in accordance with the chosen theories and summarized in a table, which serves as a tool for deriving reliable and relevant conclusions. The sample size was determined by conducting a primary study and defining the variance of primary sample and the intended number of samples was selected carefully and randomly from the population. Then the validity and reliability of the questionnaire was determined. The used questionnaire in this research consisted of 7 common, and 30 specialized questions which were supporting the hypotheses of the research. Data was analyzed using the frequency percent techniques, and in the chapter related to the deductive statistics, one-sample t test was used to analyze and approve/disapprove the questions supporting the research hypotheses.

4 Data Collection & Results

Students of Belgrade University were the target population. Questionnaire started with a basic question that either he/she is a student of Belgrade University or not with age and gender information. The total sample population was students of Belgrade University. Out of 702 students, 372 (53%) were female while 330 (47%) were male. Ratio of female and male is almost equal to avoid biasness. According to research topic students were asked that do they have a mobile phone connection and used three main service providers as reference. All 702 students had mobile phone connections. Question; "Which service provider's connection do you have?" The students had three different choices to select a brand. If anyone was not using anyone of the three brands then he/she could mention it in Others category. The result for this is shown in the following figure.



	vip	mts	telenor		
Users	49	351	302		
Percentage Share	7%	50%	43%		

Question: "Why did you choose the above company (Brand)?" To check the response of students as they are customers of service provider, the question had four options to answer. Options are company name (brand), Service & quality (S&Q), loyalty & Trust (L&T) and finally The Price (P). 9% selected company name (Brand), 20% selected S&Q, 10.4% selected L & T, 54% selected price, 1.4% selected L&T+P, 4% selected S&Q+P, and 0.3% selected B+P as a influencing factor for their selection of mobile phone connection. The highest influencing factor for their purchase is price then S&Q, L&T and Brand respectively. The results for this questionare shown in the following figure.

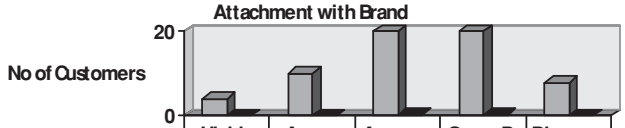
	B	S& Q	L& T	P	L& T+P	S& Q+P	B+P
No of customers	62	142	74	382	10	30	2
Perentage Value	9%	20%	10,40%	54%	1,40%	4,20%	0,30%

4.1 Brand

This section will show different results obtained for corporate brand mentioned as company name (Brand) in the questionnaire. There were 62 respondents who selected brand as influencing factor, which is 9% of total sample population.

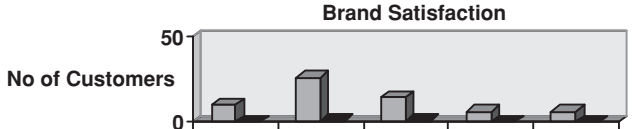
Question: "*Do you have any emotional attachment with your chosen brand?"* This question is put in the sub questionnaire of the brand. In order to know about those respondents who had brand as influencing factor for their purchase. The data is gathered for their emotional attachment with the brand. Different results were obtained.

6% of 62 were highly agree, 16% were agree, 32% responded as average and somewhat disagree and 13% as Disagree that they have emotional attachment with the brand. The results are shown graphically in the figure below.



	Highly	Agree	Average	Some.D	Disagree
No of Customers	4	10	20	20	8
Percentage value	6%	16%	32%	32%	13%

Question: "*Are you satisfied with your chosen brand?"* This question is also contained in the sub questionnaire of Brand. Purpose of this question was to know about the satisfaction level of the respondents who selected Brand as an influencing factor for their purchase. Different set of responses were obtained for this question with 16% of 62 as highly satisfied, 42% as satisfied, 23% as average and 10% as somewhat dissatisfied and dissatisfied. The results are shown graphically in the following figure.

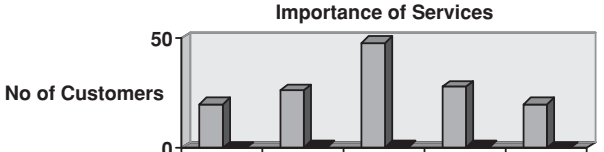


	Highly	Satisfied	Average	Somewh	Dissatisfi
No of Customer	10	26	14	6	6
Percentage Value	16%	42,00%	23%	10%	10%

4.2 Service & Quality

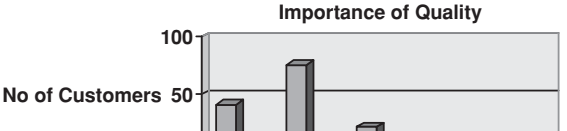
In this part results obtained for service & quality will be explained. There were 142 respondents who selected service & quality as a major factor for their purchase decision. It is 20% of the total sample.

To check the importance of services from those respondents who chose services & quality as their influencing factor for purchase, a question was asked: "*Do you chose this connection only due to services offered?"* 14% respondents of 142 replied that services are highly important that they chose this connection only due to services offered while 16% answer that services are important for their purchase and 34% answered for average which is highest percentage. 20% answered for less important while 14% said that only services are not important for their purchase. The results are shown in following graph.



	Highly	Importa	Average	Less	Not
No of Customers	20	26	48	28	20
Percentage Value	14%	18%	34%	20%	14%

Respondents were also asked about the quality of the brand which they are using in order to investigate the importance of quality associated with that particular brand. They were asked that "*How do you see the quality of this brand?"* . Different results were obtained from this research, 30% of 142 respondents, who selected service and quality as an influencing factor, replied as very good while 54% replied as good. 15% said that it was average. Only 2 respondents said that it was bad. The results are shown in the graph below.



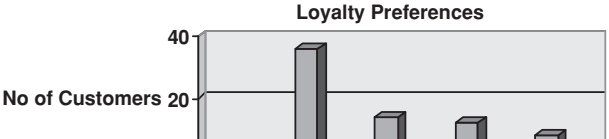
	Very	good	Averag	bad	Very
No of Customers	42	76	22	2	0
Percentage Value	30%	54%	15%	1%	0%

4.3 Loyalty and Trust:

As mentioned earlier that the research questionnaire is comprised of four parts. Loyalty and trust is one of them. The questionnaire has different questions to check the loyalty and trust of those respondents who chose their mobile phone connection because they are loyal to the company as well as have trust on it. 10.4% of the total sample selected loyalty and trust as a reason for their purchase.

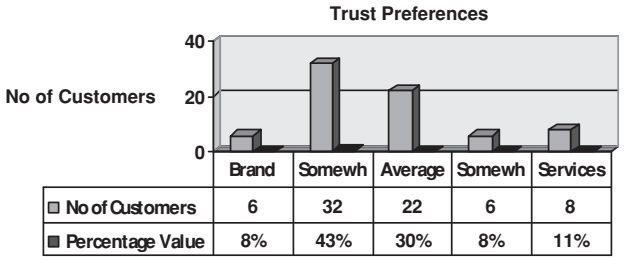
To know the loyalty preferences of the customers either they are loyal to company (brand) or services; this question was asked: "*Does this loyalty with company (brand) or with services?"*

5% respondents of 74 said that they chose this brand because they are loyal to this company (brand). 49% were of the view that they chose this brand because they are

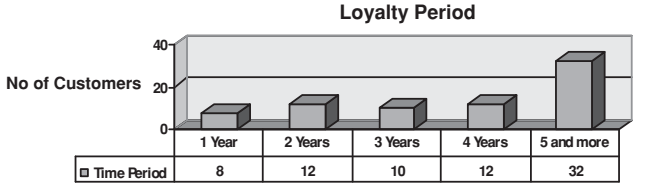


	Brand	Somewh	Average	Somewh	Services
No of Customers	4	36	14	12	8
Percentage Value	5%	49%	19%	16%	11%

service package that you have?" 8% respondents answered for brand as a trust factor while 43% said somewhat brand. 30% said that their trust in on brand as well as on service package. 8% and 11% replied as somewhat service and services respectively. Results are presented graphically below.



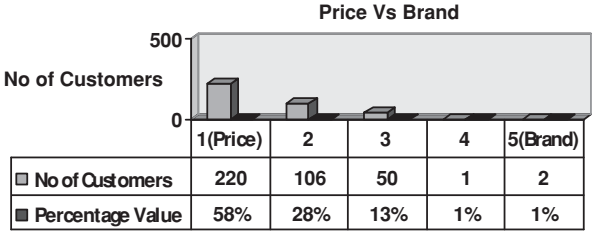
In order to investigate about loyalty and trust of the respondents, a very basic question was asked from the respondents: "*For how long you are using this brand?"* This question revealed data which show respondents as being loyal to the brand. As it is shown in the following graph that the 16 respondents out of 74 are using their brand for 5 or more years, 6 are using for 4 years, 5 for 3 years and 6 for 2 years. Data is shown graphically in the below figure.



4.4 Price

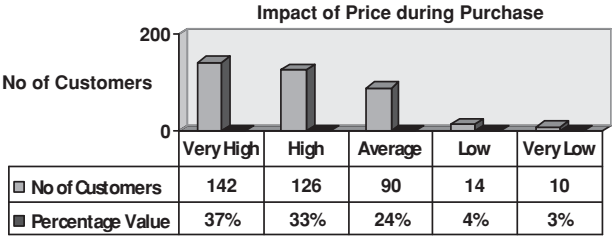
Fourth part of the questionnaire deals with price as a reason for the purchase of the mobile phone connection and also is very important. This part has three different graphical presentations in which relationship of price is discussed with different other factors. This part is 54% of the total sample population, which makes it biggest in all four main categories.

To examine the relationship between price and company (brand), respondents were asked that: "*Do you prefer price or company name (brand)?"* In reply to this question different set of results obtained. It shows quite strange result that 58% respondents said that they prefer price most and only 1% said that they prefer brand to price. 19% said that they prefer price as well as brand while making a purchase decision. 28% were not sure about it but they were more inclined toward price. Following graph shows the results.

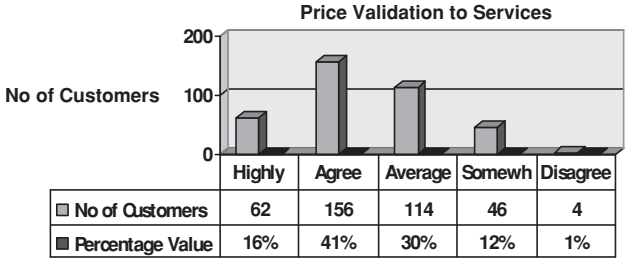


"How high was the impact of price towards your purchase decision?" was the question asked to know about impact of price on purchase, whether it was high or low.

During research it is found that 37% respondents out of 382 replied that the impact of price was very high on their purchase, 33% said that it was high. The impact of price was average for 24% of the respondents. 4% and 3% believed that it is low and very low respectively. The graph below shows the result for this question.



To check the utility of customer which he/she is receiving in the shape of services in accordance with the price, the following question was asked: "*Do you think price paid is justifiable to services?"* 16% respondents of 382 were highly agree, 41% were agree, 30% average, 12% were somewhat disagree and 1% were disagree that services of their chosen brand are good enough with the price of that services. Below the data is presented graphically.



4.5 Switching

Switching is discussed in all four main parts of the questionnaire. In order to know about the switching different set of questions were asked. To investigate past and expected switching whether a customer is switched due to brand or service & quality and will switch due to less price or due to any change in loyalty and trust, for this motive;

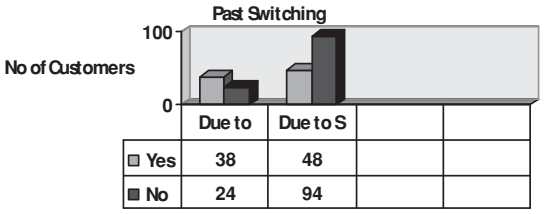
Past switching is discussed in relation with brand and also with service & quality while Expected switching is discussed in relation with price and also with loyalty and trust.

4.51 Past switching

To explore how many respondents switched due to brand two questions were added into questionnaire asking them "*Was it your first choice or you switched from any other brand?"* and "*Switched due to brand or any other reason ?"* 38 out of 62 switched and all switched due to brand.

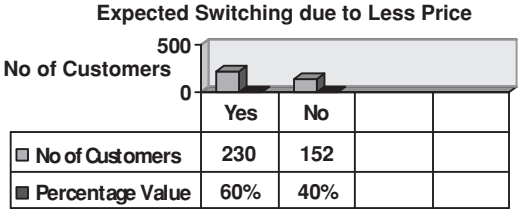
To investigate switching in service & quality, respondents were asked that „ *Did you switch from any other network?"*

48 out of 142 responded as YES while 94 said NO. The data for above two questions is presented graphically in following figure.

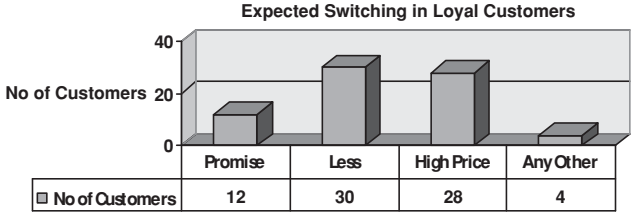


4.52 Expected Switching

As expected switching is discussed in price and loyalty & trust, so in case price respondents were asked that "*Will you switch, if low price brand is offered?"* 60% said YES while 40% said NO.



Whereas in case of loyalty and trust respondent were asked "*Would you like to run off from existing brand?"*. Respondents were given four options, (i) promise breakage (ii) less services quality (iii) charge high price as compared to quality and (iv) any other. 12 out of 74 respondents chose promise breakage as point of switching, 30 pointed out less services quality, 28 respondents will run off if high price is charged for low quality and 4 selected any other. Data is presented graphically in the figure below.



5 Analysis

Marketing theories suggest that corporate branding will boost the consumer awareness about the products as well about the corporation (*Souiden,* et. al., 2006). Strong corporate recognition attracts the customers and employees (*Xie & Boggs,* 2006). Corporate recognition can be gained through corporate branding which is helpful for better market share. Empirical data shows that price has a dominant factor for a customer during the purchase of a mobile phone connection. MTS has 50% share among the sample population and their slogan is "Always the cheapest one" gives the advantage for this high market share. Telenor is at 2nd place with 43% share. *Kotler,* (1994) states that price is the one element of marketing mix and is very important. This is shown in this study that the company having low price strategy is dominating the telecommunication market in the perfect competition. As this study indicates customers are more willing to pay less prices and are more inclined towards MTS. MTS has made strong recognition as a low price brand which is communicated to consumers.

5.1 Affect of Brand Image on Market Share

Souiden, et. al., (2006) states that sales and market share is directly affected by corporate image and building up loyal customers. Empirical data shows that MTS has high market share among sample population and Telenor has slightly lower market share than MTS even it entered in the market in 2006 because Telenor has worldwide recognition. High market share is helpful in building up corporate image, so empirical implies to this theory. Importance of corporate brand in telecommunication is not same like other industries. In mobile phone telecommunication purchase settings are continuous and different than the purchase settings of retails stores ((*Ranaweera & Prabhu,* 2003). Empirical data shows that 382 out of 702 argue that they chose the connection because of price factor. While 62, 142, 74 said that they like brand, S&Q and L&T respectively. So the preferences of the customers about the connection are different but more centered on price. So it satisfies the above theory of Ranaweera & Prabhu, (2003) that purchase settings are different in mobile telecommunication industry as compared to other industries. MTS and Telenor have high market share as compared to VIP because they have good brand image which helps them in gaining this share. Telenor is having more market share around the globe as compared to MTS or VIP. But this study shows MTS having slight edge over Telenor due to price other factors remaining constant.

5.1.1 Attachment with the Brand and Role of Corporate Brand

Customers have emotional attachment with the brand as stated by *Kay* (2006), that brands are incorporated into the lives of the customers. But this research presents that 32% of 30 respondents of this study, who purchased their connection because of brand, argued that they have average attachment with the brand while 32% are somewhat disagree to the question of emotional attachment with the brand. Role of corporate brand in such situation is a communicator of offers i-e low price, wider network, new services etc. the results are in accordance with the theory of *Souiden* et. al., (2006) that corporate branding will boost the consumer awareness about product and corporation.

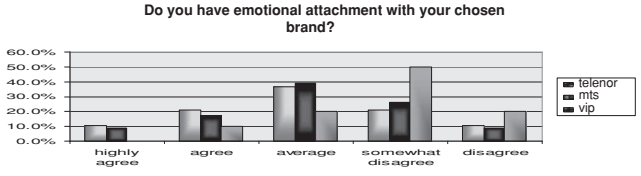


Table 1. Emotional attachment to the brand

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
Do you have emotional attachment with your chosen brand?	Telenor	19	3.00	1.16	0.033*	0.772	0.028*
	MTS	23	2.91	1.08		–	0.025*
	VIP	20	2.20	0.89		–	–

In terms of emotional attachment *(Table 1)*, the difference between the three brands was statistically significant. Telenor and MTS users reported a significantly higher emotional attachment then VIP users, while difference between Telenor and MTS was not statistically significant.

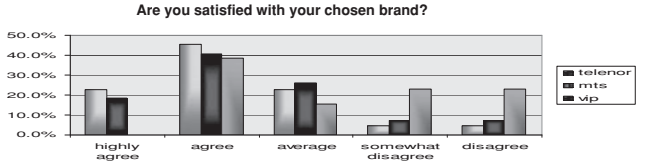


Table 2. Satisfaction with the brand

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
Are you satisfied with iou chosen brand?	Telenor	22	3.77	1.02	0.042*	0.497	0.020*
	MTS	27	3.56	1.12		–	0.056
	VIP	13	2.69	1.25		–	–

Telenor users were satisfied with their phone service provider more then VIP users (Table 2). The differences between Telenor and MTS and between MTS and VIP were not significant.

5.2 Service & Quality

5.2.1 Services and the brand

Whenever anyone purchases any product or service for the first time, there is always some risk associated with it. And this risk is more common in case of services. Degree of perceived risk is highest when customer can't evaluate services before purchasing them (Ozer et. al., 2005). In order to investigate this phenomenon respondents were asked about this factor and to know the importance of the services to the respondents that "*Did you purchase this connection only due to services offered?"* 20% respondents of 142 replied as somewhat disagree while 14% replied as disagree. Remaining are indifferent in this regard. This shows that whenever a customer is faced with services he/she is not sure about it that either it will be good or bad because of the feature of services like heterogeneity, intangibility etc given by *Ozer* et. al., (2005).

Until unless customers do not have any experience with the services they can not evaluate its importance. But it must be remembered that it is only in case of services not in case of products. 8 out of 142 respondents had MTS connection and were highly agreed as well, thus MTS was on top with highly agreed. 16 respondents had Telenor connection and were agree to the question, so Telenor is top in this category while VIP is at second in this category with 6 users. And 34 respondents who responded as average have Telenor connection, while 10 had VIP connection in this category.

Respondents who were somewhat disagree with this connection 10 of them have MTS connection while 10 have VIP connection. 3 having Telenor and VIP each were disagree to this question. This presented a result that Telenor is good at services and customers do know that a particular package has good services or not but overall Telenor. The big reason for this in mobile phone telecommunication is that a company has a single net work for all customers but services may vary in customer services for different groups' e.g. corporate connection but this research only includes the sample population of Belgrade University.

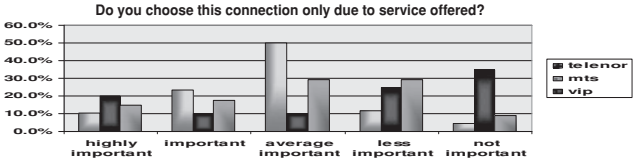


Table 3. Importance of services

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
Do you choose this connection only due to service offered?	Telenor	68	3.24	0.95		0.005*	0.229
	MTS	40	2.55	1.55	0.014*	–	0.094
	VIP	34	3	1.21		–	–

Services were more important to Telenor users in comparison to the MTS users (Table 9). Differences between Telenor and VIP and between MTS and VIP were not statistically significant.

5.2.2 Quality and the brand

Quality is over all judgment about excellency and superiority of the service (*Ozer* et. al., 2005). The research shows that 20% of total sample population selected S&Q as a reason for buying a connection which is greater than brand

and L&T but less than price. And the difference is not very small between price and S&Q. the research shows than 67, 63, and 12 respondents out of 142 are using Telenor, Mts, Vip, respectively, which show Telenor being a leader in service & quality. As Ozer & Aydin (2005) state that quality of a service is hard to measure but customers need a good service quality with price even it is difficult to measure. Research shows that 4% of the total sample selected S&Q with price. Which gives an idea that one factor is very important but if supported by another factor. Those who chose service & quality as a measuring tool during the purchase process, 54% of them replied that the quality of the brand is good and they are enjoying it. While 30% said that it is very good. Respondents for this question also had different mobile phone connection, 20, 18 and 4 had Telenor, Mts and Vip respectively and also said that quality of their chosen brand is very good. While 41, 27 and 8 have Telenor, Mts, Vip respectively and said the quality of their brand is good. 12, 8 and 2 said that quality of their brand is average. While only 2 respondent having Telenor responded it as bad quality brand. The result shows that Telenor has high number of customers, who have experience of good quality with Telenor. So they see Telenor as a high quality brand and this is good for the future of Telenor and for a big customer base.

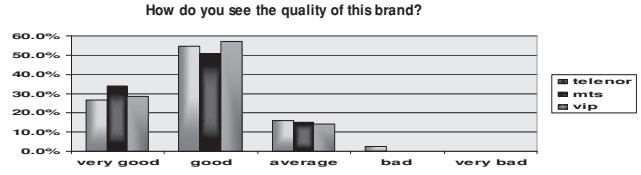


Table 4. Quality of the brand

	Brand	Descriptive statistics			Omnibus Test
		N	Mean	SD	Kruskal-Wallis ANOVA
How do you see the quality of this Brand?	Telenor	75	4.05	0.73	
	MTS	53	4.419	0.68	0.631
	VIP	14	4.14	0.66	–

Quality of the brand was said to be on the same level by respective users of the three providers *(Table 4)*. The differences were not statistically significant.

5.3 Loyalty and Trust

Customer loyalty is very necessary for the firms to be become market leader and for a big customer base with long term relationship (*Ozer* et. at., 2005, *Souiden* et. al., 2006, *Ranaweera & Prabhu,* 2003). It is a very difficult in GSM technology to make loyal customers when there is a chance for switching. But it is part of service provider that they make strategies to get loyal customers. It is not a mature industry and also dependent on information technology so rapid changes are there. In this situation a big customer base is needed which can be gained through different offers but if company make loyal customers. It is beneficial for a company in long term. This study involves a question regarding loyalty that a respondent is either loyal to brand or services, which he/she is using. From sample population 10.4% respondents said that they are loyal to the company and they trust on it. Even it is a small proportionate to price and S&Q but is giving a view about corporate brand loyalty or services loyalty. Services loyalty means if another company offers same services then he/she can easily switch to that company. The result shows that 2% and 49% respondents of 62 answered for brand and for somewhat brand respectively, while 6% and 4% replied for somewhat services and services. The results shows that majority of the customers are loyal with brand. In this question it is also seen that customers are having different brands. Like four customers having Telenor connection replied that they are loyal to company. While 16, 14, 6 customers having Telenor, Mts and Vip respectively replied as somewhat brand. 4, 6 and 2 customer having Telenor, Mts and Vip connections respectively replied as average importance for the brand and the services. While 2 and 10 customers having Mts and Vip connections respectively replied as somewhat services. While there were only 2, 4 and 2 customer having Telenor, Mts and Vip connections respectively replied that they are fully in favor of services. This result shows a scattered result for the loyalty of the customer. There is no single brand which came up as leading brand in loyalty preferences.

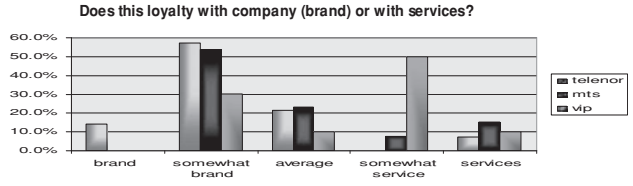


Table 5. Loyalty to the brand vs. loyalty to the services

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
Do this loyalty with company (brand) or with services	Telenor	28	3.71	0.98		0.051	0.001*
	MTS	26	3.15	1.12	0.002*	–	0.083
	VIP	20	2.6	1.05		–	–

When asked where their loyalty lies, Telenor users declared a higher degree of loyalty to brand vs. loyalty to services, when compared with the VIP users *(Table 5)*. The other two comparisons were not statistically significant.

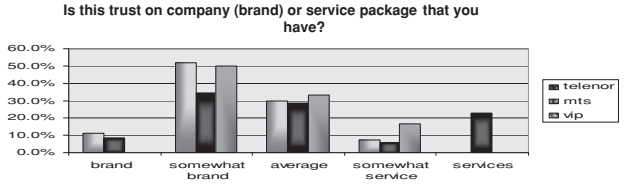


Table 6. Trust on the company vs. trust on services

	Brand	Descriptive statistics			Omnibus Test
		N	Mean	SD	Kruskal-Wallis ANOVA
Is this trust on company (brand) or service package that you have?	Telenor	27	3.67	0.78	
	MTS	35	3.00	1.31	0.130
	VIP	12	3.33	0.78	–

The degree of trust on company was not statistically significant between the three providers *(Table 6)*.

When customer has trust in a brand it means customer has positive buying behavior towards the brand (*Ozer & Aydin,* 2005). Trust is strong predictor of customer retention and customer must realize that they will continue getting benefits in the future as well (*Ranaweera & Prabhu,* 2003; *Ozer & Aydin,* 2005). In this research respondents, who selected L&T as an influencing factor for their purchase, were asked that either they trust their selected brand or they trust on the services. 8% replied as brand being a trust worthy element in their mutual relationship while 43% replied that somewhat brand is important for long term relationship between company and them. While only 8% and 11% thought that somewhat services and services are important respectively. This is in accordance with the theory that trust is key factor for long term relationship and it must be between company and the customer. It is also seen from this question that 3 and 3 customers having Mts and Telenor brands replied that they trust their brand. While 16, 10 and 6 customers having Telenor, Mts and Vip connections respectively were in favor of somewhat brand. 8, 10 and 4 customers having Telenor, Mts and Vip connections respectively were average respondents. 2, 2 and 2 customer having Telenor, Mts, Vip respectively replied as somewhat services. While there were only 8 customers who are using Mts brand were in favor of services as a trust worthy element. This also indicates a scattered result for the trust preferences of the customers. There is no single brand which can be considered as a leading brand among customer choices.

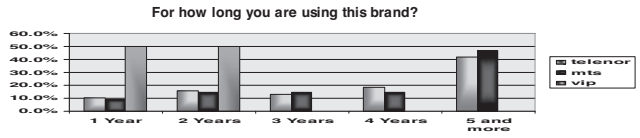


Table 7. Loyalty period

	Brand	Descriptive statistics		Omnibus Test
		N	Mean (years)	Kruskal-Wallis ANOVA
For how long you are using this brand?	Telenor	38	4	
	MTS	34	4	0.138
	VIP	2	1.5	

There was no statistical significance between the three brands in terms of the duration of the loyalty period, though lack of power is obvious due to the small sample of VIP users *(Table 7)*.

5.4 Price

There are many factors available for pricing of any product/service. The price is set according to many factors like stage of product life cycle, competitor's price, segmentation, positioning of product or service or any differential advantage. So price is very important in marketing mix.

Price has very important role in any purchase decision. It is important for company's point of view during the process of planning as well as for the customer when making purchase of any particular product. Companies use different set of pricing strategies, as given by *Daly,* (2002), in order to attract customers. Like MTS is presented and perceived as a company with low calling rates.

5.4.1 Impact of price

Customers are also very price sensitive in Telecommunication sector (*Ozer & Aydin,* 2004). Price is very sensitive and dynamic issue. As in this research respondents were asked that "*How was the impact of price on their purchase decision?"*.

In answer to this question 37% of 382 respondents, who chose price as an influencing factor, replied as very high while 33% replied as high. There were 24% customers who said that impact of price on their purchase decision was average and 4% & 3% replying as low and very low respectively. This discussion yields result that price has very high impact on the purchase decision of the price sensitive customers, as stated in theory. Role of the pricing can't be neglected even in other cases where customers are not price sensitive but it dominates where customers are price sensitive.

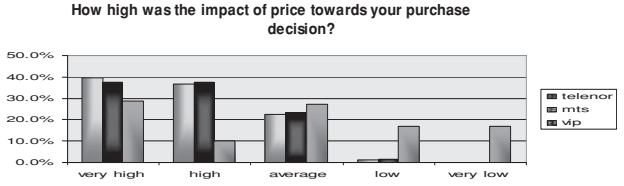


Table 8. Impact of price on the purchase decision

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
How high was the impact of price towards your purchase decision?	Telenor	174	4.1	0.81		0.694	0.001*
	MTS	149	4.11	0.81	0.001*	–	0.001*
	VIP	59	3.17	1.45		–	–

The impact of price on purchase was statistically significantly different between the three brands *(Table 8).* The price was of greater impact on the purchase decision for MTS and Telenor users when compared to VIP users. There was no significant difference between Telenor and MTS.

5.4.2 Price Vs brand

Price affects all service providers but it affects more when there is a perfect competition (*Shi* et. al., 2006). This study includes the Serbian mobile phone industry and competition is very high in this industry. Companies are well established in the market and targeting customers with low price packages having same services. 382 respondents of total sample population chose the price as a major factor for buying a connection. To find out the view of the customers about price and brand a question was asked: "*Do you prefer price or brand?"* 58% respondents said that they like price, 28% replied as somewhat price, 13% said that they prefer price as well as the brand. Remaining replied in favor of brand which makes only 2%. *Shi* et. al, (2006) states that consumer has its own preferences for services. These results satisfy the *Shi* et. al., (2006) theory that price affects all service providers so this case as well. Research shows that customer preference is not the brand but the price and according to theory customer has own preferences for choice of services. *Munnukka,* (2005) argues that customers are price sensitive in mobile phone industry, so it is proved by this research.

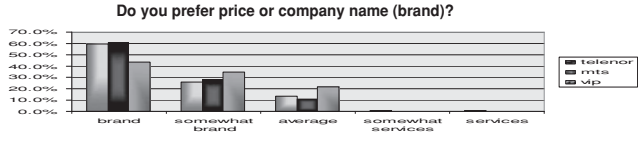


Table 9. Price vs. brand

	Brand	Descriptive statistics			Omnibus Test
		N	Mean	SD	Kruskal-Wallis ANOVA
Do you prefer price or company name (brand)?	Telenor	151	4.43	0.8	
	MTS	181	4.5	0.69	0.070
	VIP	46	4.22	0.79	

There was no significant difference in preferences toward price or brand between the users of the three providers *(Table 9).*

5.4.3 Price for services

Customer buying behavior has a direct relationship between price and service quality of the product/service, so tradeoff between these two makes increase or decrease in sensitivity towards other factors involved in long term relationship (*Munnukka,* 2005). Price and service quality are directly proportional, if service quality is high then customers are willing to pay high for it and vice verse. Daly, (2002) has stated different strategies for pricing and value pricing is one of them which could apply in a situation when services have unique value or have a good quality. In this research respondents were asked that "*Do you think price paid is justifiable for services offered?"*.

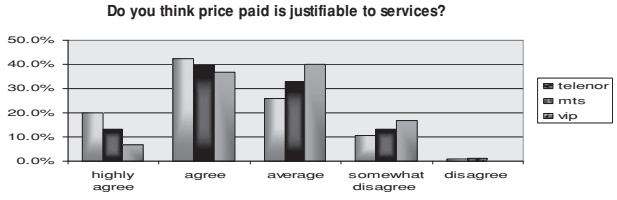


Table 10. Do services justify the price

	Brand	Descriptive statistics			Omnibus Test	Mann-Whitney U-test	
		N	Mean	SD	Kruskal-Wallis ANOVA	MTS	VIP
Do you think price paid is justifiable to services?	Telenor	200	3.7	0.94		0.039*	0.030*
	MTS	152	3.5	0.93	0.027*	–	0.317
	VIP	30	3.33	0.84		–	–

Telenor users declared that services of that provider justified the price they paid in a significantly higher degree, than did MTS and VIP users for their respective companies. The difference between MTS and VIP was not statistically significant *(Table 10).*

As customers are price sensitive in this industry and corporate brand is a main ambassador of its services and price. Customers are used to get idea about services of a company from price. This research shows that 54% of total sample chose price as a dominating factor for purchase. They chose it because they are satisfied from services.

Answer for above question shows that 16% and 41% of 382 said that they are highly agreed and agreed respectively while 30% selected average. These results show that price paid for services is good enough and justified. Also these results are same to the theory of *Munnukka,* (2005).

5.5 Switching

Switching in telecom is moving from one operator to another due change in service quality, loyalty & trust, price or brand. As stated in literature, by *Ozer* et. al. (2005), switching is present not only in monetary shape but it can also be in physical, psychological shapes as well. In this research switching discussed in two ways; past switching and expected switching. Past switching is covering any kind of switching due to brand or service & quality. While expected switching is covering any kind of switching due to less price offered or change in loyalty to customer.

5.5.1 Switching in past

Switching is easy to measure in telecommunication industry as compared to other industries because in telecommunication switching is more than walking to another store (*Ranaweera & Prabhu,* 2003). The reason for the ease of measurement could be that customers can be asked simple question to know about their switching. This was done in this research as well, where respondents were asked very simple questions in shape of yes or no. And from results it was very easy to know about their switching. For switching in past due to company name (brand) shows that 19 out of 31 replied as yes, that they switched because of brand, while 12 replied as no. whereas in service & quality, results show that 48 out of 142 switched because of service & quality whereas remaining 94 did not switch. Results show that switching is not hard to measure in mobile telecommunication industry, but it is difficult to switch in this industry.

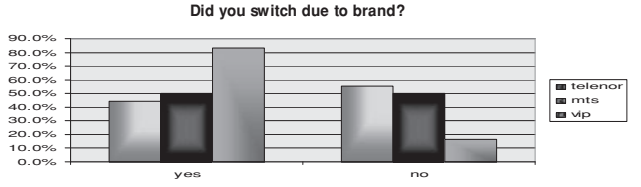


Table 11. Past Switching due to brand

	Brand	Descriptive statistics n (%)			Omnibus test	Pairwise X²-tests	
		N	Yes	No	X²-test	MTS	VIP
Did you switch due to brand?	Telenor	168	8 (44.4)	10 (55.6)	0.017*	0.732	0.008*
	MTS	165	10 (50.0)	10 (50.0)		–	0.018*
	VIP	49	20 (83.3)	4 (16.7)		–	–

The percent of VIP users who switched due to brand was higher than those of Telenor and MTS users *(Table 11)*. Difference between Telenor and MTS users was not statistically significant.

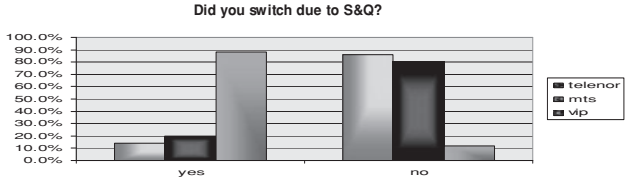


Table 12. Past Switching due to services and quality

	Brand	Descriptive statistics n (%)			Omnibus test	Pairwise X²-tests	
		N	Yes	No	X²-test	MTS	VIP
Did you switch due to S&Q?	Telenor	168	8 (13.8)	50 (86.2)		0.388	<0.001*
	MTS	165	10 (20.0)	40 (80.0)	<0.001*	–	<0.001*
	VIP	49	30 (88.2)	4 (11.)		–	–

The percent of VIP users who switched due to services and quality was higher than those of Telenor and MTS users *(Table 12)*. Difference between Telenor and MTS users was not statistically significant.

5.5.2 Switching in future

Loyal customers and price sensitive customers were asked about that either they will switch in the future or not. *Ozer* et. al., (2005) argues that the loyalty of a customer is being affected by switching and also the trust and satisfaction. This research shows that loyal customers may also be affected and can think about switching because of different reasons, like low quality services are provided, high price is charge, promise breakage etc. The results show that 12, 30, 28 and 4 respondents' loyalty will be affected for promise breakage, low quality service, high price as compared to quality and any other.

Another aspect regarding expected switching is less price offered to price sensitive customers in future. Respondents were asked that "*will you switch if low price is offered in the future?"* The results indicate that 60% of 382 replied as yes while 40% replied as no.

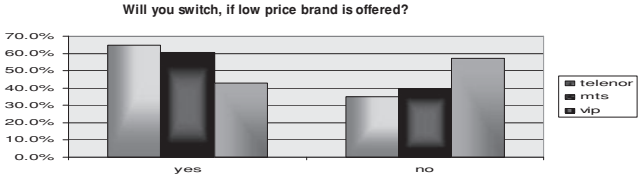


Table 13. Expected switching due to price

	Brand	Descriptive statistics n (%)			Omnibus test	Pairwise X²-tests	
		N	Yes	No	X²-test	MTS	VIP
Will you switch, if low price brand is offered?	Telenor	168	109(64.9)	59(35.1)		0.420	0.006*
	MTS	165	100(60.6)	65(39.4)	0.021*	–	0.028*
	VIP	49	21(42.9)	28(57.1)		–	–

The percent of VIP users who would switch due to price was lower than those of Telenor and MTS users *(Table 13)*. Difference between Telenor and MTS users was not statistically significant.

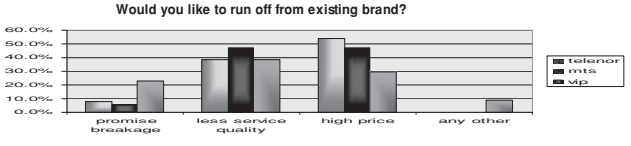


Table 14. Reasons for switching

	Brand	Descriptive statistics n (%)					Omnibus tests
		N	Promise breakege	less service quality	High price	Any other	Fisher's exact test
Will you switch, if low price brand is offered?	Telenor	13	1 (7.7)	5 (38.5)	7 (53.8)	0 (0.0)	
	MTS	17	1 (5.8)	8 (47.1)	8 (47.1)	0.(0.0)	0.631
	VIP	44	10 (22.7)	17 (38.6)	13(29.)	4 (4.91)	

High price and lower service quality were two major reasons for possible switching. Furthermore, promise breakage was named by 22.7% of VIP users. Differences were not statistically significant *(Table 14*).

6. Conclusion

This research was conducted to know the role of corporate branding in telecommunication industry from different perspectives. This study enables to understand the different views of corporate brand in this industry and also focuses on corporate brand that how it works to capture more and more customers for a big customer base. It is the output of marketing mix that how brand managers' position their brands in the selected industry. The research showed that during positioning of a corporate brand in mobile phone telecommunication industry managers must consider what is the benchmark in the target market to build up a good market share with long term relationship. This research was conducted with one particular group of students with limited income level and they knew about their brand and reason that why did they choose it. This group sees its corporate brand as good services with low price. It is the game of right positioning at right time for a corporate brand to make more as well as loyal customers. The research indicated that customers can switch if they feel that good quality services are being offered from any other service provider with cheap rates. So it is the role of corporate brand to make minds of the customers about it especially in this industry to add new customers. Telenor introduced Olimpic Games and popular singer Vlado Georgiev in Serbia to target a particular segment, which is price sensitive but Telenor is using its name along with it in order to show that they are powered by Telenor, because customers consider it as a good quality service provider with best services. Along with it, Telenor pushes infront the competitors by giving interaction, satisfaction and fun of Telenor's one-stop comprehensive offer in new store's, especially in Telenor's new flagship store, opened in Knez Mihailova Street in Belgrade. In its store which pushes boundaries of customer experience forward in regard to layout, design and service concept, Telenor provides its subscribers with high technology enabling them to choose a service and a phone at their preference in an easier and more entertaining manner. The store boasts with materials and lighting equipment not seen in our country before. The outlet is designed as a place where Telenor subscribers meet and chat. The idea was to use interactive communication in educating and entertaining subscribers while testing everything they are interested in. With this flagship store in Knez Mihailova Street along with other 40 stores across Serbia based on the interactive shopping concept, Telenor has been another step closer to subscribers, since it represents an ultimate result of this concept development and progress.

It was found that majority of the customers in this industry are price sensitive; as this industry is not mature yet and new companies are getting into it, so every firms is focusing hard in broadening its customer base. It was found that corporate branding had nothing to do with the purchase decision of the customers but it is main source that communicates with customers about marketing mix of a company. Corporate brand promotes different factors and these different factors were considered important for customer's purchase. As a whole, services offered are almost same for every company; companies just differentiate them by corporate brands. Service & quality is another big issue in this industry along with price. This study showed that S&Q and price are very much interrelated but promoted through corporate brand.

As Telenor is a big corporate brand as compared to other companies involved in this research but Mts has little edge over Telenor because Mts represents itself as cheapest along with best coverage where found. Corporate branding is providing information to the customers about services but it is not an influencing factor for the customers. Customers were asked about their expected switching from existing brand and even loyal customers replied that they will switch in future if they think that company is charging high price as compare to quality. Also price sensitive customers said that they will switch if any competitor brand offers them low price. It means corporate branding cannot influence the customer but works as a medium of communication between company and customer. Customers can only have information from different sources e.g. from print media or broadcast media, about any particular corporate brand. But customers do not go for purchase until or unless certain specific purchase influencing factors like price, service and quality etc are not highlighted with the corporate brand as well.

7. Recommendation

This study can be helpful for brand managers in a way that instead of putting more efforts on corporate branding, they must also put more effort in investigating factors which influence customer buying behavior. After a specific period of time it is also very important to reposition a corporate brand; if companies do not do then these companies may face switching from existing customers. It is the era of globalization not only in manufacturing of products but also in service industry. Brands are also getting globalize. Fundamental are same in every market but some factors vary according to market situation. If a brand gets recognition in the international market then it is easy to go into new markets. One big issue in this research is that segment involved into this research belongs to young generation and everybody is a student. It will be interesting to investigate this idea with two or more segments and involving people belonging to all age groups. This will be interesting because the segment involved in this research belongs to only one age group, so one can expect similar results. But when there will be people from all age segments and also from different fields of life then one can check and compare the results of this research with that one. And can better analyze the role of corporate branding in telecommunication. This research will also be helpful for managers to know about the point of view of consumers about corporate brand. This will also help managers for better positioning of their brand to get target recognition for a better and longer relationship. Finally this

research will be supportive in marketing mix concepts, that how a firm can introduce service, price associated with the particular service and promotional activities to position the correct image of corporate brand as required by managers.

Recommendation for success: How CLM can Optimize Revenue in Today's Telecoms Market?

Customer Lifecycle Management is a new approach to business that is taking the telecoms world by storm. Its focus on delivering true one-to-one dialogues through targeted marketing campaigns has been instrumental in helping some operators drive up ARPU by 20% and reduce churn rates by between 40-60%. *Is this the future of marketing?*

It focuses on the success of Danish CLM provider Agillic and how the company's technology has helped to improve the fortunes of GSM operator Telenor SONOFON. In today's telecoms world it takes a lot more to keep a customer happy. With so much competition and services available, there is very little reason for any user to stand by an operator that isn't delivering the best services with the best prices in town. Attracting customers and ensuring their loyalty is the main business objective for any operator wanting to compete in today's advanced markets.

But what if everyone seems to be offering the same services? Which operator will the customer choose as a life network provider, and most crucially, how will telecoms providers manage to control the cost of acquiring and retaining these loyal customers in the long run?

The answer to these problems lies in the way in which operators are communicating with each of their customers. With so many telecoms providers to choose from, customers have become immune to traditional and impersonal methods of marketing. Direct campaigns such as telemarketing and direct mails have been used in the past by most operators but they are now becoming too costly to run and are largely ineffective. They also give few options for differentiated marketing. In today's competitive mobile world, a more individualized communication approach is needed to help create a one-to-one dialogue with each high value customer and to help win greater loyalty and trust for an operator's brand. More Customer Interaction research, confirms that any operator that tries to simply push offers onto customers rather than developing an individualized customer interaction is doomed to fail. Inbound interactions- like an online transaction or a customer a customer service call- are initiated by a customer with a specific need. Firms must first ensure that the customer need is addressed by positioning offers or other marketing-driven content in the context of the interaction, The report also stresses that Inbound channels of communications must not be used to simply shove more products towards the customers, as this merely creates negative customer experiences and lowers their satisfaction with their mobile operator. It also leads to greater attributions and ultimately degrades the company's brand.

"To avoid these potential pitfalls, firms should evaluate interaction management software which applies business rules and real-time analytics to a customer profile made up of historical and contextual data. This lack of customer loyalty was the result of Companies inability to communicate more effectively with each of their subscribers and to do so with cross channel synergy. We needed to address this serious challenge before we could implicate possible improvement of their performance in the market. There is therefore a need for companies to find an alternative to adding customer value to their business. One way of achieving this result is by establishing a better relationship with the end user, a bond that can offer a real interaction with individual customers in a relevant and timely way. CLM can make this happen. Providers can learn from Agillic's exceptional technology and customer support. Agillic's CLM solution provided the foundation for launching a communications strategy that could manage both inbound and outbound communications with each customer. It was designed to support successful customer interactions by delivering one to one communication- a capability that Serbian Telecom companies were desperate to gain with their core customers. The solution also gave us the potential to build a relationship with each customer over time by learning from every dialogue. It could also support real-time interaction, allowing us to react swiftly to customer behaviors. So if a user clicked on a web link we could automatically send out a message that was pertinent for that moment in time.

All of these capabilities can help the company to create a targeted marketing campaign that fit the user profile of each individual high value customer. This defines individual approach as Customer Life Cycle Management (CLM). Customer Life Cycle Management (CLM) is next generation CRM. In the past, operators would just target customers with different messages to sell services. CLM is different. You are looking at things from a lifecycle perspective and you are focusing on the individual customer. The big difference between CRM and CLM is that with CRM you are communicating to segments of users when you believe they need something. CLM is more about one to one communication- it's about knowing what they want and delivering it when they want it. Questionnaires and forms are not always reliable when comes to assessing customer preferences. CLM is a big step up from the traditional process of asking customers to fill out a profile sheet. With CLM, an operator can take every interaction that has taken place with each customer and apply special promotions and deals. This communication is triggered automatically when a customer repeats a pattern known to the system. So let's say a user sends many texts in one day- the system can automatically generate a message back to that customer informing them that they can get a special deal on SMS. Another big benefit of CLM is its ability to minimize customer acquisition and retention costs by using low-cost digital channels. This approach also offers low cost of ownership for the operator with a hosted solution that does not require network integration. The result is an easy to use system that provides a flexible, on-demand marketing tool that allows operators to gain full control over their programs.

Through the use of real-time behavioral based marketing, CLM is a new innovation that is designed to enable operators to manage, evaluate and automate customer interactions to support one-to-one dialogues, based on user profiles and previous exchanges. The focus of CLM is to create a bond between the operator and the customer throughout the customer's lifecycle so that the operator knows exactly what the customer wants and providing that service to them in real-time. This approach has consistently proven to lower churn and increase ARPU for customers.

References: Literature

Amaratunga D. & Baldry D. (2001), "Case Study Methodology as a means of theory building" *MCB University Press.* ISSN 0043-8022 vol. 50 no. 3 PP. 95-104

Anisimova A. T., (2007), "The effects of corporate brand attributes on attitudinal and behavioral consumer loyalty" *Journal of consumer marketing,* Vol. 24 No.7 PP. 395-405

Aperia T., Bronn S. P., Mchultz M. (2004), " Reputation Analysis of the most Visibe Companies in the Scandinavian Coutries" *Corporate Reputation Review* Vol.7 No.3 PP. 218-230

Aydin S. & Ozer G. (2004) "The Analysis of Antecedents of Customer loyalty in the Turkish Mobile Telecommunication Market*", European Journal of Marketing,* vol.39, No. 7/8, PP.910-925

Babbie R. E., (2005) "The Basics of Social Research" ISBN-0534630367

Chu-Mei Liu, "The effects of promotional activities on brand decision in the cellular telephone industry", *Journal of Product and Brand Management*, Vol. 11 No.1 2002, PP. 42-51

Colin Jevons, (2005) "Beyond Products brand management" *Journal of Product and Brand Management*, Vol14 No.2, PP.117-118

Daly, L. J. (2002), "Pricing for profitability", John Wiley & Sons, Inc ISBN: 0 471 41535 9

"Economic Impact of mobile communications in Serbia, Ukraine, Malaysia, Thailand, Bangladesh and Pakistan" (2008), A report for Telenor ASA 13/02/2008 by Deloitte & Touche LLP(private and confidential report).

Einwilles S. & Will M., (2002) "Towards an integrated approach to corporate branding" *An International Journal* Vol.7 No.2 PP.100-109

Emory W. C., & Cooper R. D., (1991), "Business Research Methods" 4th Edition, ISBN-0-256-09265-6

Fifield, P. (1998) "Marketing strategy", 2nd edition ISBN 0 7506 3284 4

Ganesan S. (1994) "Determination of Long-term Orientation in the Buyer-seller Relationships" *Journal of Marketing,* 58/2 ABI/INFORM

Giden, R. 1993, "The Name game", Cheers, PP.59-62

Gorard S., (2001)., "Quantitative Methods in Educational Research" Edition one ISBN 0-8264-5307-4

Gustafsson A. Roos I. & Edvardsson B., (2003) "Customer Club in a Relationship Perspective: A Telecom Case" *Managing Service Quality* Vol.14, No.2/3 PP.157-168

Gylling C. & Lindberg-Repo K. (2006), "Investigating the Links Between Corporate Brand and a Customer Brand" *Journal of Brand Management* Vol. 13 No. 4/5 PP.257-267

Johnson C. W., Sirikit A., (2002), "Service Quality in the Thai Telecommunication Industry: A tool for achieving a sustainable competitive advantage" *Management Decision,* 40/7 PP.693-701

Joseph Arthur Rooney, (1995) "Branding: a trend for today and tomorrow", *Journal of Product and Brand Management*, Vol. 4 No. 4 PP. 48-55

Karine, M. E., Frank, L. & Laine, K. (2004), Effect of price on the diffusion of cellular subscriptions in Finland, *Journal of product and Brand management,* Vol. 13 No. 3, pp. 192-199

Kay J. M., (2006) "Strong Brands and Corporate Brands" *European Journal of Marketing* Vol.40 No.7/8 PP. 742-760

Kotler, P., Armstrong, G., Saunders, J. and Wong, V. (1996), *Principles of Marketing: The European Edition*, Prentice-Hall, Hemel Hempstead.

Kotler P., Armstrong G., Saunders J., Wong V., (1999) "*Principles of Marketing*" (2nd Edition) Europe Prentice Hall Edition.

Kotler P., 1994 "*Marketing Management"* Prentice Hall International ISBN 0-13-098005-6

Laforet, S. and Saunders, J. (1994), "Managing brand portfolios: how the leaders do it", *Journal of Advertising Research*, Vol. 34 No. 5, pp. 64-7.

Leisen B., Vance C., (2001) "Cross national assessment of Services Quality in Telecommunication Industry: Evidence from USA and Germany" *Managing Service Quality* Vol.11 N0.5 PP.307-317

Lindmark S., Andersson J. E., Bohlin E., Johansson M., (2006), "Innovation System Dynamics in the Swedish Telecom Sector" *Emerald Group Publishing ,* Vol.8 No.4 PP49-66 ISSN 1463-6697

Lisa Wood, "Brand and Brand Equity: Definition and Management" *Journal of Management Decision*, 38/9, 2000 PP. 662-669.

O'Loughlin D., Szmigin I. & Turnbull P. (2004), "Branding and Relationships: Customer and Supplier Perspective" *Journal of Financial Service Marketing* Vol. 8 No.3 PP. 218-230

Maruzzelli G. (2005) "Investing in Serbia's Internet and IT Sector: Challenges and Opportunities" (Public Report)

Maxwell J. A. (1996), "Qualitative design research" Sage publications applied Social research Methods series Vol. 41 ISBN 0-8039-738-2

Mcnabb E. D., (2002), "Research Methods in Public Administration and nonprofit Management", ISBN-0765609576

Munnukka T. (2005), "Dynamics of Price Sensitivity Among Mobile Service Customers" *Journal of Product and Brand Management,* 14/1, PP. 65-75

Oulton T. (1995), "Management Research for information" *Management Decision,* Vol.33 No.5 PP.63-67

Ozer G., Aydin S., Arasil O. (2005) " Customer Loyalty and Effect of Switching Costs as a Moderator Variable" *Marketing Intelligence and Planning* Vol.23 No.1 PP. 89-103

Parry C. (1998), "Process of a case study methodology for post graduate research in marketing" *European Journal of Marketing* Vol. 32 No. 9/10 PP. 785-802

Ranaweera C. Prabhu J. (2003), "The Influence of Satisfaction, Trust and Switching barriers on customer retention in a continuous purchasing setting" *International Journal of Service Industry Management* Vol.14 No.4 PP. 374-395

Remenyi D., Money A., Williams B., Swartz E., (1998) "Doing research in Business and Management: An introduction to process" Sage Publication, ISBN- 0761959505

Riezebos R. *Brand management*, 2003, FT Prentice Hall ISBN 0-273-65505-1

Saunders J. and Guoqun Fu., 1997, "*Journal of Product and Brand Management*" Vol. 6, No.1 PP.40-48

Schultz M. Antorini M.Y, Csaba F.F "*Corporate Branding, Purpose/People/Process"* Copenhagen Business School Press, 2005. ISBN: 8763001403

Shi, M., Chiang, J. and Duk Rhee, B. (2006), "Price competition with reduced consumer switching costs", *Management science,* Vol. 52, No.1, pp. 27-38

Souiden N. Kassim M. N. Hong Ja. H., 2005, " The effect of corporate branding dimensions on consumer's product evaluation" *European Journal of Marketing* Vol. 40 No. 7/8 PP. 825-845

Uggla H., (2006), "The Corporate brand association base" *European Journal of Marketing* Vol.40 No.7/8 PP. 785-802

Uncles, M., Cocks, M. and Macrae, C. (1995), "Brand architecture: reconfiguring organisations for effective brand management", *The Journal of Brand Management*, Vol. 3 No. 2, pp. 1-12.

"Utilization of information and communication technologies in Serbia" (2008) by Serbian statistical office.

Venetis A. K. Ghauri N. P. (2004), "Service quality and customer retention; building long tem relationship" *European journal of marketing,* Vol. 38 No. 11/12, pp.1577-1598

Verikoukis Ch. and Angelidis P. (2006) "Mobile Telecommunications Landscape in Associate Candidate and Western Balkan Countries "

Xie Yu. H. Boggs D.J. (2006) "Corporate Branding versus Product Branding in emerging Markets" *Marketing Intelligence and Planning,* Vol.24 No.4, PP. 347-364

Yin Robert K. (1994), "Case study Research Design and Methods" 2nd edition, sage publications.

Internet

http://books.google.com/books?id=XvZ2o9FUuQ8C&dq=corporate+branding+history&source=gbs_summary_s&cad=0 View on 15 Nov. 2008. 3:55 AM

www.bg.ac.yu

http://www.mts.telekom.rs/

www.telenor.com

www.telenor.rs

www.telekomunikacije.co.yu/**mobilna/**mts_cene.html

www.**telekom**.yu/

www.**vip**mobile.co.yu/

www.vodickrozbu.com/index_en.htm

www.vodiczabrucose.com/organizacije_en

THE APPLICATION OF BALANCED SCORECARD IN TEAM SPORTS

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Abstract: The present article discusses the application possibilities of the Balanced Scorecard strategic planning and controlling device for businesses managing team sports with the goal of professional efficiency and its long term sustainability.

Key words: Balanced Scorecard, balanced indicator system, team sports

1. Introduction

In the last decades an increasing number of clubs, associations, and partnerships behind professional team sports have become business enterprises as well; as regards their income and number of employees, there are numerous companies managing sports clubs in the medium sized enterprise sector. By nature of being businesses that manage sports, successful performance is usually the number one strategic consideration, however for the implementation of professional goals and their sustainability in the long run, the existence of a stable financial background and quality organisational process structure is absolutely necessary.

In order to develop and manage a suitable business strategy, a growing number of sports companies use processes applied in business solutions; the German football team VFB Stuttgart can be seen as an example, being the first in Bundesliga to introduce the Balanced Scorecard method for the definition of strategic directions and process control (*IFUA Horváth* and *Partners,* 2004).

A large number of national and international professional writings and case studies have dealt with the Balanced Scorecard (BSC) system therefore the emphasis in this article is not on the general introduction of the planning-management tool but on its presentation in a sports management context. Following the section on theory, I will examine the application possibility of the method in the case of a team sport managing company, which has in the centre of its strategic objectives a team of solid capital, having stable management, successful reserve and competitive sports and which aims at the deliberate development of the strategy, its division into clear areas, and operative implementation of subtasks.

2. Balance Scorecard Philosophy

In 1992 R.S. Kaplan and D.P. Norton realized that financial indicators alone are not suitable for the management of a company, as competition and the dynamically changing environment make these past-oriented indicators outdated already at the time of application; therefore such tools should be involved also that provide information regarding factors influencing future performance (*Imre,* 2004). The authors developed the Balanced Scorecard (hereafter referred to as BSC) model for the operative translation, representation, and tracking of corporate strategy. The model represents corporate management and controlling from four significant – and balanced – perspectives: financial, customer, internal processes, and learning and growth potential (*Kaplan-Norton,* 2000).

The primary objective of using the BSC is to support the implementation of corporate strategy, for which the following are essential in advance: development of adequate vision, the clear definition of strategic objectives, the visual representation of objectives with the help of strategy maps, and the division of objectives into parts of objectives that can be measured by indicators with the designation of necessary target values (*Bitó-Czerny,* 2010).

3. Balanced Scorecard in Sports Management

The BSC model may serve the realization of a strategy along three corporate levels: optional number of scorecards (mapping of corporate strategy to be followed), perspectives that can be created within particular scorecards, and indicators controlling the implementation of the strategy (or parts of the strategy).

3.1. Corporate Strategy

In the case of businesses managing sports associations or sports clubs, the number one strategic perspective is almost always to perform successfully in the long run, the perspectives of which are presented in *Figure 1.* The strategic

objectives can be further divided on the basis of several criteria, we may examine the parts of the strategy in relation to a time horizon (short, medium, and long term), but one can also define partial strategy objectives for the reserve or adult teams of a sports club, in which case strategic goals are defined and divided according to age groups.

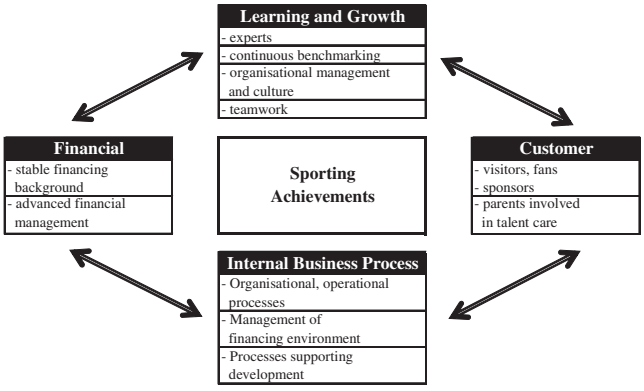

Figure 1. Perspectives of BSC
Own illustration on the basis of (Kaplan-Norton, 2000)

3.2. Perspectives of BSC

The perspectives of a sports enterprise BSC have a lot in common with the scorecard of a general producer or service provider company, as the existence of adequate financial management, well defined and effectively operating internal processes, necessity for development, or the management of the customer environment is just as important for successful operation as in the case of other business enterprises. The major difference is that it is not financial performance that serves as the final measure for the success of a particular organisation but the achievement of results in the profession of sports, which can become part of value creation as intangible assets.

Table 1. Customer Perspective in the BSC of a sports enterprise

	Fans	**Sponsors**	**Parents**
Customer perspective	- good performance by the team - good quality matches - suitable ticket prices - quality of service - team image - club loyalty - merchandise - VIP section service	- valuable and effective advertising space - sponsorship with returns - media presence - growing corporate value - management of sponsors - number of fans, match attendance	- successful adult team - adequate vision for the reserve team - talent care with high professional quality - appropriate information regarding plans and objectives

Source: Own illustration

The Customer Perspective

In the case of businesses managing sports clubs, we can define various customer segments, target groups: visitor and fan groups, sponsors, and the parents behind reserve teams. These groups differ not only in terms of their composition and structure but also because for the particular customers different achievements serve as components of performance. In all three cases satisfaction, preservation, and growth can serve as acceptable measures of success, however different customer value propositions have to be placed in the centre of strategy in the different cases (*Kaplan, Norton,* 2004).

The Business Process Perspective

Value creation is implemented through internal business processes, performance through these serves as the basis for improvement from the point of view of customers. The internal operation processes can be divided into four additional areas: basic, customer, innovation, and controlling/social processes. By basic processes we refer to a system which governs the general operation of the business through internal documentation systems, the relationship between the management and coaches, coaches and players, and the systems monitoring general and professional work. Customer management controls the system of contacts with the groups defined in the customer perspective, the development of contractual relationships with sponsors, the creation of processes to acquire and keep fans, as well as the management of parental background behind reserve teams. In the case of producer and service provider companies, innovation processes involve R+D, in the case of sports this is implemented in the area of talent care with the continuous development of educational and training methods (*Staudt,* 2004).

Table 2. Business processes of BSC

Basic processes	**Customer management**	**Innovation**	**Controlling and social processes**
Processes influencing the general operation of the organisation	*Processes increasing customer value*	*Search for new opportunities in the processes of value creation*	*Processes aimed at the improvement of the environment and community*

Source: Own illustration

The Learning and Growth Perspective

The learning and growth perspective includes studies in connection with the skills and motivation of employees. Organisational growth can be realized if all employees are aware of the corporate strategy and can identify with it.

It is important for the organisation to have the ability to change through its employees and in order to achieve this, its workers, coaches have to be trained continuously, and a proper information base has to be established for the implementation of processes (*Kaplan-Norton,* 2002). The continuous improvement of trainings, the development of sections of talent care (additional trainings, sports psychology, etc.) can be aspects of growth.

The Financial Perspective

The strategic aspect of the financial perspective is the development of an enterprise of solid capital which is able to finance operational costs and necessary investments. Financial objectives are usually connected to profitability, typically through the increase in income and the return of invested capital (*Kaplan-Norton,* 2004). The long term proprietors' value, as the main goal in the financial perspective, includes two strategies: efficiency and growth strategy with the following segments: improvement of cost structure (reduction of expenses, solution of deficiencies), improvement of asset management; extension of income opportunities (new income sources), increasing of customer value (improvement of the profitability of customers).

In the case of profit-oriented companies, the increase of shareholder value is the number one financial objective, for the achievement of objectives in the profession of sports, the financial perspective aids the realization of strategy.

3.3. Indicators

"You cannot manage what you cannot measure. You cannot measure what you cannot describe."(*Norton-Kaplan,* 2004). The above quotation serves as the basis for the use of indicators of the balanced scorecard. If the enterprise has already defined its strategic objective and has divided the targets into the strategy sections according to the four perspectives, the realization of the objective becomes measurable and controllable with the use of key performance indicators. Simultaneously with the definition of indicators, the designation of target values is also needed, which can be used as points of reference during the realization of the strategy.

4. Practical Use of Balanced Scorecard in the Case of Team Sports

With the help of BSC, I am going to present the strategy of an enterprise the aim of which is to participate in the first league and to establish an extensive reserve basis. The case study presupposes a financing environment (sponsors, local government, payments by parents, etc.) which can provide the financial background of the enterprise until the realization of the strategic objective. Besides those mentioned above, the necessary infrastructure (training, competition locations) is also available for the achievement of the objective providing the necessary training time capacity for trainings and competitions required by the enterprise.

First let us examine the cause and effect relations between the perspective level objectives of the enterprise, the graphic representation which is often facilitated in a so called strategy map (in the strategy map the perspectives are above one another according to the strategy of the enterprise).

In the case of the enterprise under consideration, the financial perspective was placed at the lower part of the strategy map, that is it does not suppose primarily profit-oriented activity (in the strategy map of these enterprises the financial perspective is at the top of perspectives built on one another), but a financial approach that can ensure and finance long term operation. During the examination of the financial perspective two strategy sections are distinguished: the efficiency and growth strategy. The efficiency strategy can be further divided into operational cost structure and asset acquisition and management related examinations. During the development of the cost structure, all types of costs that can emerge until the realization of the strategic objective have to be considered; following their definition, it is practical to create a clear cost classification. Aspects of the cost structure can be for example the direct costs attributed to particular reserve age groups (renting of training location, competition costs – travel, accommodation, referee fees, etc.) and the indirect costs (administration costs of the management or for example the wage costs of the masseur). The other aspect of the efficiency strategy involves the management of processes in connection with asset acquisition and asset utilization which can also be divided to asset management in connection with general and reserve teams as mentioned above.

The other segment of the financial perspective is the implementation of growth strategy objectives, which – similarly to the efficiency strategy – can be arranged around two strategy section aspects. The recognition and adequate utilization of income opportunities is one of the major aspects of growth opportunities which manifest itself in the definition of income sources that can be realized and in the maximisation of income opportunities. From the perspective of the enterprise, membership fees, ticket sales, sponsorship contracts, services provided during the matches, television broadcast rights, tendering sources, and local or national government subsidies can be income opportunities.

Following the study of the financial perspective, the learning and growth perspective defines what type of human, information, and structural capital is necessary for the support of internal processes (*Kaplan-Norton,* 2004). One of the crucial aspects for the fulfilment of professional objectives is the existence of a training staff with appropriate expertise and management conducting general tasks. Within the learning and growth processes of human capital, special attention should be paid to the adequate training of the coaching staff (benchmarking in countries with well developed sports, participation in further trainings for coaches) and the field of talent care.

The next segment of the strategy map involves the examination of the internal processes perspective. If the company has well definable strategic goals, besides the learning and growth perspective, the internal processes will show the opportunity to implement the strategy. Internal processes can be grouped around four aspects: structural processes defining basic processes, management of customer environment, study of development processes, and the controlling processes. In the case of a sports organisation, we can define activities in connection with general operation,

management, and human resources as basic processes, while activities in connection with talent care can be interpreted as a special section of the last one.

The perspective of customer environment management includes those financing the sports organisation, with special regard to sponsors and parents paying membership fees. In the case of sponsorship contracts, it is necessary to create a media offer which includes the marketable spaces of the enterprise, its events, as for example the sale of team shirt advertising space or sponsorship of the match, event. The management of relationships with sponsors requires maintaining contacts with the sponsors continuously following the conclusion of the contract.

At the end of the case study let us summarize the strategic objectives and indicators connected to a particular perspective.

Table 3. Strategic objectives and indicators

Perspectives	**Strategic objectives**	**Indicators**
Financial perspective	Increase of income	Income from sponsors
Customer perspective	Increase of sponsorship contracts	Number of contracts
Internal processes perspective	Selection, talent management	Increase of selection criteria
Learning and growth perspective	Development of professional work	Number of trainings for coaches

Source: Own illustration

5. Conclusion

Similarly to business enterprises, companies managing team sports also need to develop an appropriate strategy and introduce and continuously use systems supporting implementation. The Balance Scorecard model is suitable for sport businesses because it is capable of presenting not only the financial processes but also the elements of vision and strategy so crucial in sports. With the designation of a target value connected to non-financial perspectives, the customer, learning and growth, and internal structural perspectives connected to organisational performance can also become quantifiable and through the assigned indicators the development tendency can be measured and controlled.

References

1. **Bitó, János – Czerny, József (2010):** A Balanced Scorecard alkalmazása egy termelő vállalat létesítménygazdálkodási funkciójára. Vezetéstudomány XLI. évf. 2010. 1. szám, pp. 57-64, ISSN 0133-0179
2. **IFUA Horváth & Partners (2004):** Radikális váltás a Vfb Stuttgart irányításában, Balanced Scorecard a Bundesligában.

http://oldsite.ifua.hu/files/50/Sajtoanyag_IFUA_VfB_Stuttgart_BSC.pdf

3. **Imre Tamás (2004)** Balanced Scorecard: Hogyan lehet valóban kiegyensúlyozottá tenni? – Vezetéstudomány. 2004. 35. évf. 3. szám pp 19–28.
4. **Ittner, Cristopher D. – Larcker, David F. (2004)** A nem pénzügyi jellegű teljesítménymérés hiányosságai. – Harvard Business Manager. 2004. 6. évf. 3. szám pp 16–23.
5. **Kaplan, Robert S. – Norton, David P. (2000):** Balanced Scorecard, kiegyensúlyozott mutatószámrendszer. Eszköz, ami mozgásba hozza a stratégiát. KJK-Kerszöv, Budapest pp. 43–191. ISBN 0-87584-651-3
6. **Kaplan, Robert S. – Norton, David P. (2002):** A stratégia-központú szervezet. Hogyan lesznek sikeresek a Balanced Scorecard vállalatok az új üzleti környezetben? Panem, Budapest, pp. 115–116. ISBN: 978-963-545-323-8
7. **Kaplan, R.S. – Norton, D.P. (2004):** Stratégiai térképek. Hogyan alakulnak át az immateriális javak pénzügyi eredménnyé? Harvard Business School Publishing Corporation. ISBN 963-545-423-6. pp.87–227
8. **Karagiannis, Dimitris – Rieger, Bodo (2006):** Herausforderungen in der Wirtschaftsinformatik. Springer-Verlag Berlin Heidelberg, pp. 134–140 ISBN-10 3-540-28906-2
9. **Staudt, Erwin (2004):** Das Management eines Fussballvereins über die Balanced Scorecard.

   http://www.fit4service.com/files/veranstaltung_2004-12/Vortrag_Staudt_VFB.pdf

NEW TYPES OF TOURISM AND TOURISM MARKETING IN THE POST-INDUSTRIAL WORLD

László Arva and Zsuzsa Deli-Gray

Abstract: At the end of the 20th century in the most developed countries economy and society went through profound transformation. The emerging post-industrial society can be characterised by the dominance of service industry, more leisure time of the population, higher disposable income and more conscious consumers. These conscious consumers are more and more quality orientated and reject undifferentiated mass products. New customers of tourism and hospitality industry are not only more affluent – so less price conscious – and more quality orientated but they are also seeking activity, participation, fantasy, and experience. These new types of tourists are interested rather in aesthetic aspects of life and are seeking highly differentiated, personalised experience. In the following article the authors, professors of the French ESSCA business school overview theoretical aspects of new, post-Fordist tourism demand and present examples of the new tourism and hospitality products having emerged in the developed countries during the last years.

Key words: tourism, tourism marketing, post-modern marketing, consumer behaviour, product development, new types of tourism

1. Shift from Fordist to Post-Fordist Tourism Consumption and Production

In order to be able to understand those new forms of tourism which emerged during the last decades, starting from the new types of educational tourism through the youth music festivals till the new types of entertainment centres at the highways, we have to overlook the new developments of tourism consumption theories briefly.

After summarizing the latest findings of tourism consumption theories, based on the works of *Miles* (1998), *Saunders* (1981) and *Bourdieu, Shaw* and *Williams* (2004) described the development of tourism consumption in the developed countries from Fordist type consumption to post Fordist consumption patterns.

Fordist type consumption was the product of the post WWII economic development, with longer paid holidays, wide use of cars, and increasing purchasing power. This tourism can be called mass tourism and according to *Shaw* and *Williams* (2004) its characteristics are the following:

- collective consumption by undifferentiated tourists
- Collective gaze of tourists – focused on signifiers designed to concentrate tourists' seasonally polarized consumption
- Demand for familiarity by tourists
- Undifferentiated product – similarity of facilities and experiences
- Rigidity of production – highly standardised, large scale, dependent on scale economies
- Low prices – importance of discontinuing and price cutting
- Large numbers of tourists to a circuit of mass production

The Fordist type of tourism consumption was the result of the "trente gloriouses", the thirty-year-long rapid economic development in Western Europe and in the USA between 1945 and 1975. The first and second oil crisis (1973–1977) and consequently, the introduction of new technologies – computers, IT technologies, satellite communication – and new production methods – Toyota just in time system, foreign investments and multinational company structures – speeded up the process of creation of the "Global Village" (*McLuhan,* 1962). In this "global village" information spreads at speed of light and the IT based technologies make the development of tailor made, specialised products for a differentiated market easier. With the spread of foreign investments and the development of the multinational companies, income differences also have started to grow rapidly and this contributed to differentiation of tastes and demands. The formerly homogenous middle class has become more differentiated and Bourdieu's definitions (1984) "new bourgeoisie" and "new petit bourgeoisie" have emerged.

This "new bourgeoisie" and "new petit bourgeoisie" are important taste makers, they are highly educated but their life-styles are different from that of the traditional bourgeoisie. The new bourgeoisie is active mainly in service industry and rich in economic and cultural capital, as the "new petit bourgeoisie" has much more modest economic capital but their educational level is very high (*Shaw, G., and Williams, A.M.,* 2004). Representatives are mainly professors, teachers, journalists, and civil servants.

The emergence of the "new bourgeoisie" and New Petit Bourgeoisie" contributed to the appearance of the "post-industrial or post-Fordist mentality" and "post-industrial or post-Fordist consumption patterns".

It is important to note that philosophers and sociologist are referring to this complex post-industrial attitude as post-modernism, stating that the modernist philosophical and artistic movement of the 20th Century are greatly the off springs of the industrial, mass society with its mass consumption attitudes (see in the works of *Lyotard* (1984), *Brown,* (1997) or *Shaw* and *Williams* (2004)).

After the book of *Urry* (1995) Shaw and Williams summarized the pattern of post-Fordist or post modern tourism in the following table:

Characteristics of post-Fordist consumption	**Tourism examples**
Consumers are increasingly dominant and producers have to be much more consumer orientated	Rejection of certain forms of mass tourism (holiday camps and cheaper packaged holidays) and increased diversity of preferences
Greater volatility of consumer preferences	Fewer repeat visits and the proliferation of alternative sights and attractions
Increased market segmentation	Multiplication of types of holiday and visitor attraction, based on lifestyle search
Growth of consumers' movement	Much more information provided about alternative holidays and attractions through the media
Development of many new products, each of which has a shorter life	Rapid turnover of tourist sites and experiences, because of rapid changes of fashion
Increased preferences expressed from mass forms of production/ consumption	Growth of 'green tourism' and forms of refreshment and accommodation individually tailored to the consumer (such as country-house hotels)
Consumption as less and less functional and increasingly aestheticized	'De-differentiation' of tourism from leisure, culture, retailing, education, sport, hobbies

New types of tourism demand have profoundly changed tourism supply and tourism marketing activities as well. Differentiated product development and differentiated marketing became more important and generation of experience became important practically in all tourism products. At the same time, visitors are not only passive consumers of experience but would like to participate in the generation process of the experience actively.

In the next pages we will present examples of these new-typed tourism products and new types of tourism marketing activities from Hungary, by describing some new types of motorway highway stations, new forms of festival tourism and new forms of educational tourism.

2. Analysis of new tourism products

2.1. Motorway highway stations

Post-modern tourism experience can perhaps be illustrated the in the best way by the example of new types of motorway service stations in Europe.

The development of highway service stations started in Europe after the WWII with the highway construction boom in Germany, Italy and France. Traditionally highway service stations have offered the travellers gasoline and some snacks in small rapid restaurants in the vicinity of the filling stations. Sometimes smaller motels were built in the area mainly for long distance truck drivers.

As in the 60s personal cars became more widespread in the middle class and as people could enjoy longer holidays, more and more families started to travel by cars to the seaside or to the mountain ski resorts. This was the time of mass family tourism and highway service stations started to get adapted to the changing demand.

The first step of adaptation was generally the enlargement and modernization of the cafeteria at the filling station in order to attract other clients than the long haul truck drivers. The next step in Western Europe, mainly at the end of the eighties and at the beginning of the nineties was, that separate catering and hospitality centres appeared at the highway service stations, generally approximately 100–150 meters from the filling stations. In these catering and hospitality centres everything was about to serve the middle class travellers. Restaurants, grill bars, coffee shops, souvenir shops, business lounges and even smaller conference rooms are waiting for the travellers in the new catering and hospitality centres, which in Austria are mainly operated by the Rosenberger, the Marché or the Italian Autogrill companies. In these catering and hospitality centres also smaller, 3 star hotels with 5–10 rooms can generally be found. The hotel facilities are also aiming the families and business voyagers instead of the truck drivers. The choice of food and beverages are much greater in these centres than in the old-fashioned quick restaurants at the filling stations or in the traditional road side inns. They are targeting the typical demanding, well off new middle class travellers, let they be on business trips on family excursions.

In Hungary similar centres have just been built beside the M1 highway at Mosonmagyaróvár and at the Budapest MO periphery highway. They are all operated by the Swiss Marché group.

Though these new catering and hospitality centres are relatively new establishments, targeting new middle class travellers, this is not the last word of the development of the catering and hospitality centres beside the highways.

The new, we would say "post-modern" catering and hospitality centres at the highways are different from the traditional catering and hospitality centres not only in their appearance but in their marketing philosophy as well. As the traditional centres do not want to be anything else than high quality and efficient places beside the highways, where middle class travellers can have a shorter or longer stop-over, and where they can eat, refresh or perhaps spend a night or can have shorter company meetings, the new "post modern" centres want to give special experience to the travellers.

Typical example of these post modern catering and hospitality centres are operated by the Austrian Oldtimer company. The Oldtimer catering and hospitality centres are highly visible from the highways. These centres – there are four ones in Austria today – are rather eccentric

architecturally, and catch the eyes of the travellers. Beside one of the Oldtimer centres there is an oversized pirate ship, where children can play if they wish. The internal setup of these centres is also unique and rather eccentric, too. In these centres travellers can also find restaurants, coffee shops, conference rooms and small hotels, just like in the more traditional catering and hospitality centres, but the internal decoration of these facilities is different. Some old furniture can be found here; there is an old motorbike and at the corner an armoured cavalier is watching the guests. The walls are covered by wooden sculptures in the famous Hundertwasser style.

The Oldtimer Centres are close relatives of the Disneyland castles and their aim is also the same: to create special experience for children and for the adults who have kept the child in their hearts. Naturally these centres are not only passive spaces of the childhood nostalgia as in case of special Oldtimer car meetings, special country music festivals and other events.

Children play a special role in the marketing philosophy of the Oldtimer centres. The marketing managers of the Oldtimer company have realized that more and more middle class families travel on the highways with children. Business travellers travel by airplanes or express trains but families generally prefer cars as it is easier to carry all the equipment, toys and sport gears needed for the children than by airplane or by trains. And as the children are the apples of the middle class families, naturally they will have a short stop-over where the children wish – and they prefer pirate ships, wonderland and the armoured cavaliers of the Oldtimer Centres.

The Oldtimer Centres are typical examples of Disney-fication of tourism and catering – creation of experience in the everyday activities, even in the middle of the highways, between Vienna and Graz.

The slogans of these centres are: activity, participation, fantasy, entertainment and fun.

2.2. New types of educational tourism

Students travelled to faraway places even in the Middle Ages in order to be able to learn from the best professors of their time. Universities were founded in the peripheral countries in Europe only later, and never became as important as the traditional Western Universities in Heidelberg, in Berlin, in Paris.

Till the emergence of "new educational tourism" universities had practically only one unique "marketing tool" to attract foreign students: to invite the best known professors to their cathedras.

Today higher educational mobility has a completely different new aspect. Educational mobility today is getting more and more as much a tourist activity as an educational one. In our days according to the OECD more that 4 million students study abroad at colleges and universities all over the world. Half of the students arrive from the newly industrialized countries and they are sons and daughters of the new middle class, who can afford to travel to the developed countries. The proof of it is that the majority of the students arrive in the USA, Western Europe and Australia.

Naturally, one of the major aims of the foreign students arriving at the universities of the developed countries is to learn, but the emphasis from the big names of certain professors has shifted to the general judgement of the universities which is mainly measured by the university ranking list, produced generally by the great journals and magazines.

But besides learning other aspects are also getting more and more important for the students arriving from abroad.

These aspects are the following:

- the general level of development of the country where the university is working
- ambience of the university town
- tourist attractions in the vicinity of the university
- sporting facilities and other entertainment possibilities of the university
- general ambience of the university.

As priorities of students regarding to their university choice are changing, the marketing activities of the universities also have to develop. In case of ESSCA, Ecole Superiuere des Sciences Commerciales d'Angers, the leading business school of France, besides providing high level academic programmes, which is the highest priority, internationalization and organizing programs for the students getting more and more important. That is why ESSCA has created filials in Budapest and Shanghai where students who have started their studies in France can continue their studies and can get acquainted with completely different general and company cultures. Internationalization makes it necessary to have partnership with other universities from where students and professors arrive at ESSCA, and naturally students of ESSCA also can spend one or two semesters in these partner universities.

Beside the internationalization it is extremely important to provide facilities for students for their after-learning hour activities. Sport halls, entertainment centres are also provided for the ESSCA students. As after-class entertainment is regarded very important, special evenings are organised for the students by the university where they can present their home culture for the students of other nations.

For universities it is very important to have foreign students as in the developed countries their number is generally declining because of the well known demographic trends. To attract students they need well designed marketing activity, where, beside the traditional academic values, tourist aspects have to be taken into consideration as well. Naturally it is a great danger to overemphasize tourist aspect against the traditional academic values as even today the core product of the universities should be knowledge, but the auxiliary tourism products around it is getting more and more important.

2.3. New musical youth festivals in Hungary

Before 1990 different musical groups organized summer camps for their fans and similarly folk music and folk art camps and events were also organised sporadically. At the

beginning of the 90s two independent initiatives emerged to organise summer youth festivals, where not only the fans of one type of activities or of one music style could find their interesting programs but these several-day-long festivals could attract youth having completely different interest. The idea was to organise a festival with highly differentiated products for highly segmented customers.

As we have mentioned this idea came to the mind of the group leader of the successful Hungarian pop group, named Sziami, Peter Muller and independently from him to the avant garde composer, Istvan Marta.

Though the target group in each case was the same, realization of the "product" was different: Peter Muller started to work out a Music Festival in the heart of Budapest, István Márta wanted to organize his festival in the countryside. In both cases the main target group were the well off young people, interested in music, but in case of Muller's project the stress was on pop music, in case of Marta' project folk music and amateur performances were also part of the menu.

From Peter Muller's idea the famous Sziget Fesztival (Island Festival) has emerged which has become one of the most important music festivals of Europe with nearly 400 000 visitors in 2009, and from Istvan Marta's idea the also famous Kapolcs Art Festival was born, which has also attracted tens of thousands of young Hungarian and foreign visitors during the last years.

As both festival were highly successful regarding the number of visitors, the Sziget Fesztival of Peter Müller has generated increasing volume revenue and profit, Kapolcs Art Festival was a financial disaster and in 2009 it seemed that it would die away forever because of the financial problems.

What were the causes of these differences in profitability of the two festivals? First of all, Sziget Fesztival as a product has attracted largest number of visitors because besides the local groups real big pop stars could be invited just because of the solid and every year increasing revenue of the event. On the other hand Kapolcs Art Festival could never get rid of a certain flair of amateurism, as the events were dominated by less widely known performers and ensembles.

But it was more important that in case of Sziget Fesztival the whole process was organised in an excellent way, while the process of the organisation was more haphazard and occasional in case of Kapolcs Art Fesztival.

In case of Sziget Fesztival, the events were organized in the hearth of Budapest, at an easily accessible place, on an island. It is important that to this island the visitors can enter only through a limited number of entrances, across bridges, so entrance fee can be easily collected. Companies were also eager to sponsor the event as very large number of visitors gathered at a relatively limited place where their information had a large chance to reach the young people participating at the festival.

In case of Kapocs Art Fesztival, events were scattered around a dozen of villages, and the entrance of visitors could not be controlled and entrance fees could not be collected as there were altogether more than 7 big roads and numberless side roads where anyone could enter the festival sites. Revenue of the festival entered into the owners of the restaurants, hotels and even gardens where visitors had to pay for tent places. Sponsors were not happy with the participation of large number of villages in the festival as relatively small number of visitors presented at each site.

Regardless of the differences in financial performance of the two festivals, both are good examples of the new types of festivals aiming the demanding and relatively well off new middle class youth as target group. It is also important that in both cases the festival offers good opportunities for young people to meet each other, and this aspect of the events perhaps has attracted as many visitors as many big names of pop music, who performed at these festivals.

In both festivals – regardless of the relatively large number of participants – the programmes are highly differentiated for the different audiences. For the participants active participation and interaction are very important elements.

3. Some conclusions

As in service industry generally, in tourism the changing demand is generating new products, and/or changing the faces of the old products. New bourgeoisie and new petit bourgeoisie with their new post-modern attitudes demand products which are radically different from the old style mass tourism products. These new customers are more informed, have higher disposable income, need more freedom in their choices, reject "passive gaze" and are more active. As they are spending a lot of time in front of the computer, they are not only more informed but at the same time they live in a virtual world as well, so they need more fantasy – some Disneyland effects are always welcome by these customers.

Tourism marketing also has to get adapted to the new consumer behaviour.

Old products are reappearing in new forms and completely new products are developed in order to meet the changing needs of the new customers.

The life cycle of products is getting shorter, market segmentation is getting more difficult and the market segments are getting smaller. Products are more targeted.

In the previous examples we could see that activities, which had formerly no or insignificant tourist elements – like education –, today have a lot of tourist aspects. We saw that traditional, even a little "boring" services like highway-side service stations can be transformed into Disney-like fantasy land entertainment centres, universities get tourism aspects and single product music festivals are changing into multi product, week long festivities.

The slogans of new tourism marketing are:

- **"Participation,**
- **Entertainment**
- **Fantasy**
- **Personalization and**
- **Fun"**

These are the basics of tourism product development in our days and these could guarantee the satisfaction of the new, affluent, informed and educated customers in tourism.

References

Belk, R.W. (1995): Studies in the new consumer behaviour. In: Miller, D. Acknowledgeing Consumption, Phaidon, London.

Bourdieu, P. (1984): Distinction: A social critique of judgement of taste. London, Rutledge and Kegan Paul.

Holloway, J. Ch. (2002): The Business of Tourism. 6th Ed. Person Educational Ltd. Harlow.

KSH (2007): Jelentés a turizmus 2006 évi teljesítményéről. Budapest, 2007

Brown, Stephen (1997): Postmodern marketing. International Thomson Press, London

Firat, A.F. et al. (1995): Marketing, in a postmodern World, European Journal of Marketing, Vol. 29. No. 1.

Holloway, J. Ch. (2002): The Business of Tourism. 6th Ed. Person Educational Ltd. Harlow.

McLuhan, M. (1962): The Gutenberg Galaxy: Making of the Typographic Man. Univ. of Toronto Press. Toronto.

Lyotard, Jean-François (1984): The Postmodern Condition: A Report on Knowledge. Minneapolis: University of Minnesota Press

MacCannell, D. (1976): The tourist: A New Theory of the Leisure Class, New York: Sulouker Books.

Miles, S. (1998): Consumerism as a way of life. London, Sage

OECD [2007]: Education at a Glance. OECD.

Oktatasi Statisztikai Evkonyv (2006): (*Statistical Yearbook of Education)* 2005/2006, Ministry of Education and Culture, Budapest,

Ritchie, B.W. (2003): Managing Educational Tourism. Aspects of Tourism 10. Channel View Publications, Clevedon.

Ritzer, G. (1995): The McDonaldization Thesis. London, Sage.

Ritzer and Liska (1997): "McDisneyization" and "Post Tourism": complementary perspectives on complementary tourism. in: C. **Rojek and J. Urry (eds):** Toursing Cultures, Londons, Routledge.

Shaw, G., – Williams, A.M. (2004): Tourism and Tourism Spaces. SSGR Publications, London

Urry, J. (19995): Consuming Places, London, Routledge

EFFECT OF CLIMATE THERAPY AND REHABILITATION IN MÁTRA MEDICAL INSTITUTE

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Abstract: Our research we organised at the Mátra Medical Institute in Mátraháza and Kékestető among sick of asthma, COPD and hayfever. Our aim was to prove the effect of climate therapy in the Mátra Medical Institute. The subalpine climate to plays a very important role in the cure of the Respiratory diseases, because to improve the life quality of the sick and reduce the medicine uses afther the therapy. Our researche took part more than 100 respiratory diseased.We analyse the data with SPSS.version 16. We measure average, standard deviation, Chi² probe, t-probe. You can see our results in the article.

Key words: asthma, pulmonology ilnesses, climate therapy, life-quality

Introduction

The asthma of all ages is a serious public health challenge worldwide. Asthma is the 25th reason included in the Disability Adjusted Life Years ranking in 2001, prevalence and quality of life and the impact of health spending under considerable pressure and gives the task of doctors working in primary care as well.

Nearly 300 million people are concerned worldwide, prevalence is observed between 1–18%.

Determining the prevalence of asthma in a wide repertoire of domestic literature *(Nagy* et al., 1997; *Mora,* 1998; *Gönczi,* 1998; *Páll* et al., 2001; *Virágh,* 2004*).*

Hungary, a significant increase in asthma over the last few years. In 2005, 196 thousand were number of asthmatics registered in the network of lung clinic and while it was only 78 thousand based on historical data 10 years ago (*Somfay,* 2007).

The number of getting asthma rising with 18,000 every year. Outstanding is the rapid increase in the number of children with asthma. Examining each group of ages, cases of the 20–30-year-old all makes up 1/5 of all patients.

County Zala and Fejér and lead the distribution of number of asthmatics, while in Borsod-Abaúj-Zemplén and Pest County are less "infected" counties. This figure is much worse, if we check the asthma, together with changes in the number of patients of hay fever and bronchitis treated since 2000 from 390 to 650 thousand in 2006, an increase in the number (*CSO,* 2006).

The use of natural curative factors gets special attention to diseases in both domestic and international context, which could cost the drug treatments. The treatment of respiratory diseases, a number of useful medicinal factors: climate, salty air of the cave or the beach.

Mátra hospitals is the only sub-alpine air medical institution in our country where in treatment of the asthmatics, COPD patients and hay fever patients climate impacts were added to the medicinal and the movement-therapy treatments good results have been achieved in improving the quality of the patients' life and their needs of medicine. Mátraháza unit is about 700 m the unit Kékestető is 1000m above sea level. On this is height the house dust mites cannot live and the ragweed occurs extremely rarely. The clean air, dust and pollen free environment are extremely favourable conditions for the health institution. These are also favourable conditions for the use of respiratory diseases, as they are popular practice spots for cure-terraces, Terra cure and the respiratory route.

Literature review

The affect of climate on healthy and sick people has been dealt for a long time. Genersich Andor, Hungary's chief medical director, opened the first 300-beds lungclinic in 1932 on 15 June. Official name: Hungarian Mátra (Royal), Miklós Horthy hospital. The Director of the Institute defined climatology that it deals with all the effects of the wider meteorological factors in living organisms. Based on his empirical experience he found that tubercolosis gets better and recover quickly with a certain climate. (*Genersich,* 1932).

Several internaitonal researches report the possibilities of high-mountain climate therapy. Mátraháza is known as „The Hungarian Davos". Skiplaces of Switzerland, like St. Moritz, Davos, Arosa, Saasa Fee, Pontresina and Interlaken, function as skiplaces in winter and climate medical holiday home in summer. The first lungclinic was in Davos. The mountain

climate, clean air and plenty of sunshine seemed to ensure all main ingredients that were needed for the treatment of tubercolosis before effective therapy treatments. Davos means attraction for the growing number of people suffering with asthma, other allergic diseases and atopic skin disease. There are currently more than 14,000 patients treated every year who came from Switzerland, Germany, the Netherlands and other countries here. The main aim of the Swiss Allergy and Asthma Research is to start an overall study to made the immune system and its controlling more understandable. (*Kurt Blaser,* 1989).

According to the researchers conducted high-altitude climate therapy it is a very accepted method, which improves the clinical symptoms of asthma. The climate therapy reduces airway inflammation and regulates the lymphocytes (lymphocytes) activity (*Karagiannidis C.* et al., 2006), which is also an international research report.

Previous studies (*Müller-Kerenyi,* 2009), performed by the Medical Mátrai treated 50 patients with asthma, allergy and COPD showed that after the first month of the treatment of the examined patients' suffering the 3 types of desease needed significantly less medicine, than a half year later.

Materials and Methods

September–October 2009 launched a research in the circle of asthma, hay fever patients and COPD patients in a medical background. Pest Anna chief medical officer, internal medicine, pulmonary rehabilitation specialist, and. Peter Kenyeres Dr, chief medical officer, anesthetist took part in it from Mátrai Medical Centre.

With our research we aim to prove that two units of Mátra hospitals in Mátraháza and Kékestető play a significant role in treating patients with respiratory problems, improving quality of life of patients and reduce the needs of medicine.

Ask questions:

- How are asthma and allergy healing and the quality of life coming out after a medical treatment completed with climate therapy in the institution of Mátra and Kékestető hospitals?
- What factors affect patients to choose institutions?
- What is patient satisfaction like?

Hypothesis:

- After hospitalize asthma, allergy and COPD patients their quality of life improved and their needs of medicine reduced. After the hospital treatment the effect of treatment reduces with time.

From 2009 October 2010 until January in the institution, the patients with asthmatic and allergic symptoms filled out questionnaires, which, was internationally standardized, based on St. George life quality (simplified by Professor Somfay) and Asthma Control test. In the questionnaire was used both closed and open questions. The questions have been done alternative answers, which facilitated the completion of the questionnaire. The medical questionnaire measurements (BMI index, FEV1, FEV1/FVC, 6-minute walk test) was added.

The internationally validated Asthma Control Test (ACT) and the also validated St. George life quality test were used, completed with other issues as well. The part of these issues were questioned about the social-demographic data of patients, smoking habits, continuing physiotherapy, development of the medicine demand after the 6-month interwall treatment of the institution.

Primarily analysed the life quality of asthmatic patients, COPD patients and hay fever patient.

The results of a questionnaire processed by the SPSS 16.0software. Expected average, standard deviation, median and Mode values were calculated. The examination of coherence the Pearson Chi² test was used.

A sample:

In the main study, 113 (male n = 19, female n = 94 persons) respiratory patients were participated who had been treated more in the Mátrai Medical Institute. The questionnaire was filled out by every fifth patient, who were treated asthma, rhinitis or COPD disease from September of 2009 til January of 2010 the department of pulmonology hospitals Mátra.

35.4% of the patients were in Mátraháza, while 74.6% of them were in Kékestető for 3 weeks. The 16.9% were male, 83.1% were female of the survey respondents.

14.2% of the respondents live in the villages, 31% in town, 30.1% in county and 24.8% live in the capital city. Mátra hospital has nationwide authority, which was included in the sample of patients as evidenced by residence because all regions were represented.

The average age of the patients was 61.54 years (SD = 9.489), and therefore the 76.9% of the patients were retired. Among the free time activities of the patients were not found anything, which would be heavy physical stress or high load to them. Typical recreational activity were the followings: reading, watching TV, rebus, needlework, hiking.

72.6% of the patients (82 persons) were asthmatic, 33.6% (38 persons) were hay fever patient and 37.2% (42 persons) had COPD disease were diagnosed and treated. The most commonly occurring respiratory disease was the asthma then the COPD and the lowest the hay fever patients. In the sample 14 people were particapeted who have asthma and COPD disease together, 35 people had allergic asthma accompanied hay fever and the 4 people main who had COPD disease and hay fever were at a time.

Results and Discussion

The motivation was questioned of choosing institution. For this question, we have more alternatives and the patients could mark more than one. 91.2% of the respondents (103 people) mainly visited the institute because of the healing, the same, 103 (91.2%) people because of the climatic spa-factor. Therefore the most of patients know the climatic, spa-factor. Thus, the considerable history, the good reputation,

the developments of the last decade, and the well-introduced brand in the home healthcare market resulted the very high proportion of recurrent patients. Physician's recommendation was a determining factor, which was marked by the 68.1% of the patients (77 persons). 68.1% of the patients (77 persons) marked the previous positive experience, which motivated choosing the institution.

Activities	**The formation of the average and diviation values of the certain functions compared the 1-6 months after the treatment in Mátraháza or Kékestető**					
	1. month **average** (sd)	2. month **average** (sd)	3. month **average** (sd)	4. month **average** (sd)	5. month **average** (sd)	6. month **average** (sd)
Walking	0,23 (0,50)	0,37 (0,657)	0,6 (0,688)	0,99 (0,785)	1,35 (0,894)	1,58 (0,864)
Stair climbing	0,63 (0,734)	0,82 (0,782)	1,13 (0,829)	1,42 (0,863)	1,64 (0,887)	1,77 (0,886)
clothing	0,20 (0,446)	0,23 (0,463)	0,35 (0,563)	0,50 (0,709)	0,67 (0,881)	0,76 (0,909)
Washing	0,19 (0,454)	0,19 (0,460)	0,31 (0,552)	0,50 (0,683)	0,63 (0,804)	0,69 (0,727)
Shopping	0,41 (0,727)	0,50 (0,746)	0,76 (0,805)	1,12 (0,825)	1,41 (0,852)	1,50 (0,888)
Housework	0,40 (0,688)	0,50 (0,698)	0,89 (0,828)	1,20 (0,836)	1,50 (0,836)	1,58 (0,863)
Working	0,50 (0,733)	0,63 (0,734)	0,96 (0,828)	1,29 (0,831)	1,58 (0,843)	1,63 (0,858)
Hobby	0,14 (0,351)	0,16 (0,369)	0,32 (0,524)	0,54 (0,721)	0,71 (0,841)	0,76 (0,841)

chart 1. The disease is confined to the core activities of the extent of hospital treatment after compared 1 – 6 months

In the chart, can be observed that after the hospital treatment in the first month in almost all activities, the average low is between 0 and 1, which means that patients in the hospital treatment after the first month the illness were not or only slightly limited in the everyday activities and work.6 months later, the averages have increased, which indicates the reduction of the impact of the treatment and their illnesses or symptoms are more limited in the above named activities.

The results of the hospital treatment after the first and sixth months were compared with two-sample t-tests, and walking, climbing stairs, dressing, washing, shopping, housework, working and hobbies showed a very strong significant difference ($p < 0.001$). Thus, demonstrated that after the therapeutic treatment in the Mátra Medical Institute for (medication, physiotherapy and breathing exercises) in the first months the asthmatics, allergy and COPD patients could more easily carry out the test activities, then after the treatment in the sixth month. This fact is important because doing these daily activities without limits ensures the patient's convenience and significantly affected of the quality of life.

After the complex therapy not only the patients life quality was better, but also decreased the medicine demand. The results after the first and the sixth month of hospital treatment were compared with o two-sample t-tests and significant differences were experienced:

- After the first month of hospital treatment the demand of Steroid and Medrol of COPD patients was less than after the sixth month. (t=-3,767 df= 41, p= 0,001).
- After the first month of hospital treatment, the Allergic rhinitis (hay fever) patients took less allergy medicine then after the sixth month it increased significantly (t =- 3.582 df = 37, p = 0.001).
- After the first month of hospital treatment, the Allergic rhinitis in (hay fever) patients used less nasal spray than after the sixth month. (t=-3,822, df=37, p=0,000). The results shows a very strong significant difference (t =- 3.822, df = 37, p = 0.000)
- After the first month of hospital treatment, the asthmatic patients used is less inhalative device (Ventolin, Berodual, Berotec) than after the sixth month (t =- 9.815, df = 81, p = 0.000).
- After the first month of hospital treatment the patients used less steroids (t =- 2.840, df = 81, p = 0.006) and intravenous injection (t = 1.997, df = 81, p = 0.049) than after the sixth month.

These data partly confirm that the personal hospital treatment, climate therapy of Mátraháza added, significantly improves the life quality, health status of asthmatic patients and reduce the medicine demand. The research results confirm that the investigations being continued with more people under treatment.

Discussion

Treatment of asthma went through significant improvements in the last few years. Today, the inflammatory nature of asthma proven and accepted fact. Therefore the steroid-contained antiphlogistics play important role in the treatment of asthma. These drugs are very expensive and it sets a significant burden on individuals and society as well, because of the growing number of asthmatics.

The medicine demand can be significantly reduced by hospital treatments, climate and movement therapy, which were justified by the examinations of patients who were treated in the Mátra Medical Institue.

References

1. **Dr. Somfay Attila (2007):** Kezelési stratégiák asztmában. Mi a beteg, az orvos, a hatóság és a gyártó érdeke? In: *Asztma – COPD evidenciák 2007* http://www.webdoki.hu/minisite/ COPD/
2. **KSH 2006:** http://www.erdon.ro/hirek/im:all:rightnow/cikk/ksh-a-szuleteskor-varhato-elettartam-2006-ban-volt-a-legmagasabb/cn/haon-news-charlotteInform-20071002-0421372214
3. **Kurt Blaser (1989):** The Swiss Institute of Allergy and Asthma Research. In: Regulatory Process in Allergy and Asthma Int. Arch Allergy Appl Immunol. 1989; 90:1–2

4. **Karagiannidis C, Hense G, Rueckert B, Mantel PY, Ichters B, Blaser K, Menz G, Schmidt-Weber CB. (2006):** High-altitude climate therapy reduces local airway inflammation and modulates lymphocyte activation. In: Scand J Immunol. 2006 Apr;63(4):304-10. (http://www.ncbi.nlm.nih.gov/pubmed/ 16623931)
5. **Genersich Andor (1932)**: A klimatológiai észlelésről. In: Népegészségügy. XIII. évfolyam. 1.szám. II. rész. 134–137.p.
6. **Kerényi Erika-Müller Anetta (2009):** Javuló életminőség és költséghatékonyság. A Mátrai Gyógyintézet asztmás, szénanáthás és COPD-s betegei terápiás kezelésének hatásvizsgálata. In: Economica. A Szolnoki Főiskola Tudományos Közleményei. 2009. 3.sz. 59–64.p.
7. **Nagy E., Forrai Á., Bánfalvi I. és mtsai:** Légúti allergiás megbetegedések felkutatása középiskolás fiatalok közében. Med. Thor. 1997, 50, 439–442.p.
8. **Móra I.:** Légúti allergiás megbetegedések előfordulási gyakorisága egy budapesti gyermekorvosi praxisban. Gyermekgyógyászat.1998, 49, 495–499.p.
9. **Gönczi Zs.:** Komplex allergológiai szűrőviszgálataok pubertás korban. Med. Thor. 1998, 51, 221–223.p.
10. **Páll G., Éliás T., Máth J.:** A rizikófaktorok szerepe az allergiás betegségek kialakulásában. Allergol.Klin. Immunol. 2001, 4,13–20.p.
11. **Virágh Z.:** Védd Környezetedet és Egészségedet! Kiadja: Magyar Orvosok az Egészséges Környezetért Társaság és a „Fodor József" Országos Közegészségügyi Központ Környezetegészségügyi Intézete, Budapest 2004.36-38.p.

CHANGING PATTERNS IN HOTEL ROOM DEMAND – CASE STUDY OF THE AQUATICUM DEBRECEN THERMAL AND WELLNESS HOTEL

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Abstract: Aquaticum Debrecen Thermal and Wellness Hotel is a very successful lodging property not only in Debrecen but also in the Northern Great Plain Region and in the Eastern part of Hungary and in point of fact in Hungary. In the past years Aquaticum Thermal and Wellness Hotel has been the leader in the region by revenue per available rooms (RevPAR). RevPAR indicates the overall performance of properties, accordingly it is the most commonly used statistical indicator in comparison to competitors in Hotel industry.

In the past years, demand for Hotel rooms has changed. This changing has several signs. For instance the occupancy rate, the rate of domestic and foreign guests, the nationality of foreign guests, the time between booking and travelling, and many other demand patterns have changed. During the last year, the changing has been accelerated by the global economic crisis.

Guests are waiting with their bookings hoping for better rates and last minute offers. The forecast of demand became much harder than ever before. These forecasts are basic ingredients of the revenue management systems, which systems are in use or will be in use by Hungarian Hotels. These systems are necessary to keep RevPAR at a higher level and to help Hotels to achieve better performance.

Key words: demand, Hotel, market, Aquaticum, revenue managemen

1. Introduction

In this chapter, I briefly introduce the Aquaticum Debrecen Thermal and Wellness Hotel and its role in the tourism of Debrecen and in the Northern Great Plain Region.

The four-star Aquaticum Debrecen Thermal and Wellness Hotel is situated in the first nature conservation area of Hungary, the leisure-time zone of Debrecen, in the heart of Great Forest of Debrecen. The Hotel is located in Aquaticum Medical and Bathing Centre, where thermal baths, indoor swimming pool, outdoor pools, the indoor Mediterranean Water Park, a medical department, a wellness island, a Thai Massage Centre, a Dental Centre and restaurants offering Hungarian specialties, provide complex services to the Hotel guests.

In the air-conditioned Hotel, 56 double rooms and 40 comfortable apartments await the guests. Each room features a balcony, bathroom with tub or shower, television, pay-tv, movie channel, WI-FI Internet connection, minibar, in room safe, hair-dryer, and bathrobes.

Aquaticum Mediterranean Water Park can be accessed directly from the Hotel via a glass-walled corridor. This direct connection is the most valuable facility of the Hotel. The abundant tropical flora and adventure elements of the special water centre conjure summer out of every single day of the year.

In the Mediterranean Water Park, a wave pool, children and baby pool, 12 slides, a climbing wall, slow-river corridors, water massage jets, water mushroom and neck showers, cave pools, pleasure paths and water choppers offer great entertainment. The Mediterranean Restaurant, Thai Massage Centre, as well as a Sauna Centre equipped with a Finnish sauna and steam chambers serve the recreation of the guests.

Nowadays the Hotel and the Water Park together is a paradise for families with little or bigger children. However, if we look back to the past we can see a different picture.

The Hotel was built in 1998 in order to provide services for guests who had rheumatic diseases. That time the market of medical tourism was large. The neighboring city Hajdúszoboszló had been world famous for its thermal water and known as the „Mecca of rheumatics". The ingredients of the thermal water of Hajdúszoboszló and the thermal water of Debrecen are nearly the same. This fact and the success of the medical tourism in Hajdúszoboszló were the main drives of the idea of planning and building a Thermal Hotel in Debrecen in 1998 for treating guests who have rheumatic diseases. The largest part of the guests of Hajdúszoboszló was from Germany, especially from Eastern-Germany. In 1998, 40 apartments were built in the 96-room Aquaticum Thermal and Wellness Hotel in order to make the long stay of

German guests more comfortable. These guests arrived for a 2 or 3 week-long cure. In the first five year, the average occupancy rate of the Hotel was 52% and the management realized during those years that the potential of this market segment had been decreasing. A new target group had been set and the first indoor Mediterranean Water Park of Hungary opened in Debrecen in 2003. The success has exceeded the expectation.

2. Materials and Methods

Secondary data were obtained from the database of the Hungarian Central Statistical Office. Primary data were obtained by carrying out my own analyses and field research and from data collected in the Hotel. First, I had focused on primary markets of the Hotel and analyzed the changing of guest nights and guest arrivals from these markets.

Additionally, 9678 room reservations and price offer requests have been analyzed based on the time when the reservation or the request was received and based on the date of arrival of the guests. These inquiries were sent by individual guests from 01.01.2009 to 31.03.2010 through the website of the Hotel.

Furthermore, I have analyzed the booking curves of three-highlighted season in 2008, 2009, and 2010. These seasons are the New Year's Eve, the weekend of the Hungarian national holiday, 15th of March, and the Easter.

At last, I have analyzed the tendency of booking through the Hotel's website.

The analyses and comparisons were carried out by means of the software Microsoft Excel 2007.

3. Results and discussion

3.1 Guest arrivals and market share in the past years

As I mentioned before the nationality pattern of the guests has been changed. The main inbound markets are Rumania, Germany, Slovakia, and Ukraine. While the increasing number of Hungarian and Ukrainian guests has been refracted by the global economic crises, guest arrivals from Rumania and from Slovakia are increasing continuously *(Fig. 1, Fig. 2).*

Figure 1. Number of guest arrivals from Hungary to the Aquaticum Hotel in the last four years.
(Source: Aquaticum Hotel database)

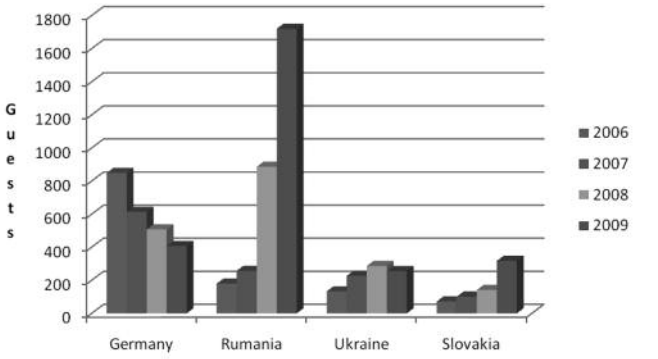

Figure 2. Number of guest arrivals from the main inbound markets of Aquaticum Hotel in the last four years.
(Source: Aquaticum Hotel database)

The number of guest nights shows almost the same picture *(Tab. 1).*

Table 1. Number of guest nights by key markets in the last four years

	2006	2007	2008	2009	Index (2009/ 2008)
Hungary	41563	39753	44785	41139	91.9%
Germany	5105	3316	2895	2246	77.6%
Rumania	351	579	2289	4332	189.2%
Ukraine	528	742	1120	974	87.0%
Slovakia	138	232	384	857	223.2%

(Source: Aquaticum Hotel database)

The demand for Hotel rooms of Aquaticum from Rumania and from Slovakia doubled in the last two years. In 2009, Hungary became very cheap for Slovakian guests because of the HUF/EUR rate. HUF was weak and Slovakian guests got more HUF for their EUR. On the other hand, the negative impact of the global economic crises in Rumania was lower than in Hungary or in Ukraine. Demand from Germany decreased not only in Aquaticum Thermal and Wellness Hotel but also in other regions of Hungary. The competition among the countries on the German outbound market became bigger and bigger and it seems that Hungary has dropped behind.

In the last years, the ratio of the domestic and foreign guest nights has changed. While in 2007 the proportion of domestic guest nights was 82%, in 2009 it was 76% *(Fig. 3).*

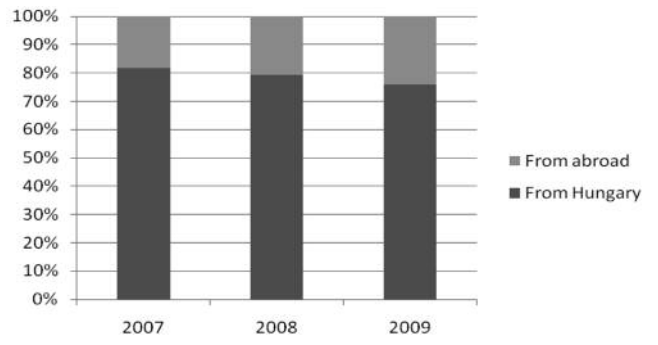

Figure 3. Ratio of guest nights.
(Source: Aquaticum Hotel database)

Aquaticum Thermal and Wellness Hotel plays a key role in the tourism of Debrecen and in the tourism of the Northern Great Plain region as well. In spite of the global economic crises in 2009, the Hotel's market share of guest nights spent in the Hotels of Debrecen and in the Hotels of the region was greater than ever before *(Tab. 2)*.

Table 2. Guest nights spent in Hotels and market share of the Aquaticum Hotel in the last four years.

	Debrecen	North Great Plain Region	Aquaticum Hotel	**Market share (Debrecen)**	**Market share (Region)**
2006	318 322	1 237 761	52 348	**16.4%**	**4.2%**
2007	304 510	1 252 821	48 602	**16.0%**	**3.9%**
2008	288 800	1 243 771	56 525	**19.6%**	**4.5%**
2009	232 162	1 081 029	54 159	**23.3%**	**5.0%**

(Source: Hungarian Central Statistical Office, Aquaticum Hotel database)

3.2 The time of making the reservations by the guests

First, let us have a look at the time scale of receiving the inquiries (price offers and reservations) by the days of the week. *Fig. 4* shows that the proportion of inquiries received on business days is much higher than those ones received on the weekends. On business days, a decreasing trend can be identified from Monday to Friday and it seems as if the guests were getting tired when the weekend is coming.

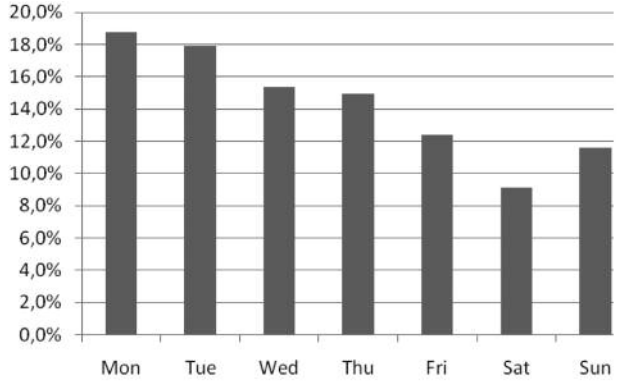

Figure 4. Ratio of received reservations and offer requests by day-of-week. (Source: Aquaticum Hotel database)

When we investigate the exact time of receiving inquiries on a day *(Fig. 5)* it shows that most of the inquiries have been sent during the business hours followed by a valley at 4–5 pm. (getting home) and there is another peak in the evening at 8 pm.

Aquaticum Thermal and Wellness Hotel is a great destination for families for a weekend. Weekends are high seasons in the Hotel. *Fig. 6* proofs that most of the guests arrive on Friday. If we consider that the average length of stay is 2.6 days it is clear that, the busiest days in the Hotel are Fridays and Saturdays. Although the occupancy rate on weekends and on special Holidays (Easter, Christmas, etc,) was high enough both in 2009 and 2008, the demand for Hotel rooms has changed.

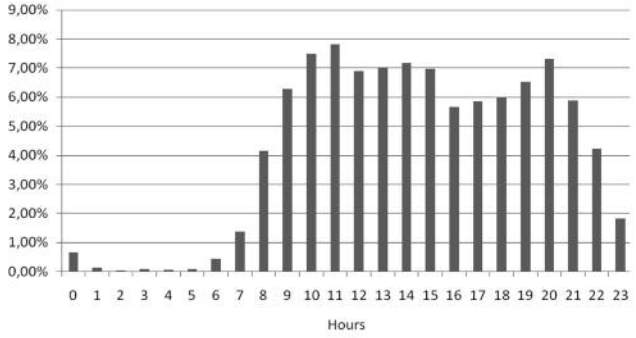

Figure 5. Ratio of received reservations and offer requests by hour-of-day. (Source: Aquaticum Hotel database)

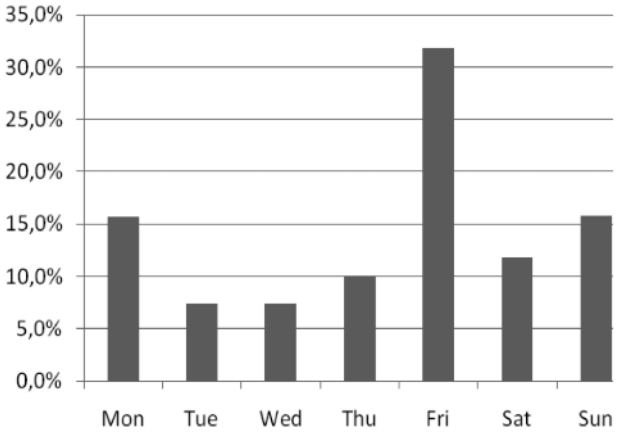

Figure 6. Ratio of guest arrivals by day-of-week. (Source: Aquaticum Hotel database)

Demand forecasting plays a key role in the management operations of a Hotel. Every Hotel wants to maximize its revenue. Achieving this aim is unimaginable without demand forecasting, which is a very important ingredient of a revenue management system (*Brewer-Marek,* 2006). The fluctuations of demand made accurate forecasting very difficult and accordingly made many problems for revenue management systems (*Sedat,* 2007; *Kimes,* 2001). To manage the changing in demand for Hotel rooms is a great challenge for these systems.

3.3 Analyzing the booking curves

The evidence of the changing in demands can be discovered on the booking curves. The booking curve is a chart of occupancy rate of a given day, recorded at regular intervals. These intervals might be months before arrival, weeks before arrival, or days before arrival. The booking curve is a picture of the accumulation of bookings in the weeks leading up to an arrival date. Based on historical data, this curve provides information about general tendencies in booking behavior that can be very useful in forecasting future bookings.

Booking curves, like forecasts, can be created for specific days of the week, rate classes, or market segments or the data can be an aggregate of all reservations on hand.

If we have enough data to work with, we may want to create an average booking curve using averages of data sets.

An average booking curve may provide stronger evidence of general trends than a booking curve based on just one data set, because it draws on a greater number of experiences (*Kimes,* 2010).

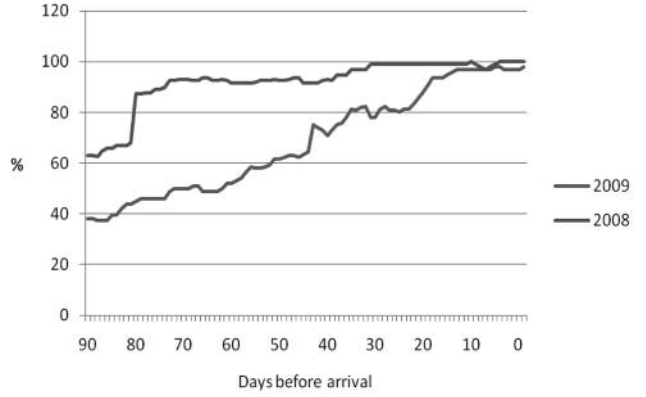

Figure 7. Booking curve of the New Year's Eve. Occupancy rate by the days before arrival.
(Source: Aquaticum Hotel database)

Examination of booking-pace data can lead to some surprising results. In 2009, 60 days before arrival the occupancy rate for the New Year's Eve was only 52% while in 2008 the occupancy rate was 92% 60 days before arrival. In 2009, a significant number of bookings are still taken, in the 40- to 15-day window prior to arrival. When the Hotel realized last year that they had much fewer reservations on hand, than they had a year before, they had to make an important decision. According to the literature Hotel rooms are generally price elastic because substitutions are available thanks to the high competition on the market and because the room rates make up a large portion of the consumer's total budget (*Jagels-Ralston,* 2007; *Kimes,* 2010; *Seve,* 2008). It means that a little reduction in prices may cause high increasing in demand. On first sight, the only thing that Aquaticum Hotel could do was to reduce price for the New Year's Eve in order to increase demand. However, the Hotel chose another way; they took the risk of not reducing their prices. Finally, success attended this strategy because the hotel had 98% occupancy rate for the New Year's Eve season in 2009.

The economic crises showed that price elasticity of demand for a Hotel room is not a simple question. A study made by the Hungarian Association of Hotels in March of 2010 pointed out that in spite of the decreasing rates the demand for Hotel rooms unfortunately did not increase dramatically (HAH, 2010). This study has given a proof of that the right decision, the right strategy is not to do panic, not to drop prices immediately. Aquaticum Debrecen Thermal and Wellness Hotel has applied the same room rates in 2010 than they applied in 2009 and 2008. As the graphs illustrate on the figures *(Fig. 7, Fig. 8, Fig. 9)* the Hotel can reach almost the same occupancy rates on the highlighted days than it could reach in the previous year.

In 2010, 11 days before arrival the occupancy rate for the 15th of March was only 36%! Finally, the Hotel could reach

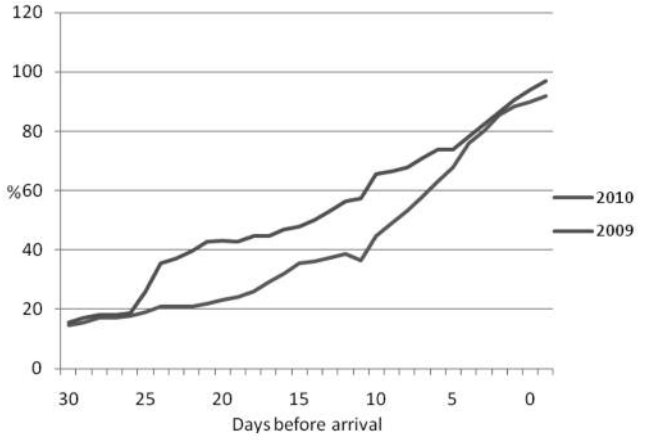

Figure 8. Booking curve of the National Holiday (15th of March). Occupancy rate by the days before arrival.
(Source: Aquaticum Hotel database)

92%! Almost 61% of the reservations were received in the last 11 days. Such a great increasing in an 11 days term had never been registered before. The time interval between the date of booking and the date of travel decreased dramatically. This fact makes accurate forecasting nearly impossible.

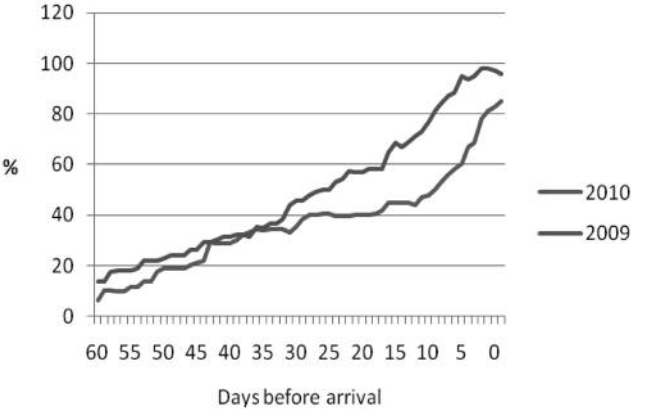

Figure 9. Booking curve of the Easter. Occupancy rate by the days before arrival.
(Source: Aquaticum Hotel database)

3.4 Reservations received through the Hotel's website

The Hotel received 3890 bookings through their website for 2009. These bookings were made by individuals, so the reservations of groups were not included. Every booking means different room nights. I have summarized the room nights of the bookings received through the website for the four quarters of the year 2009. These quarters had been denoted by Q1,Q2,Q3,Q4. Then I compared these sums to the total number of room nights booked by individuals and received in any kind of way (website, e-mail, phone, fax, etc.) *(Fig. 10).*

I analyzed the ratios instead of the natural numbers of room nights because the room nights vary month by month.

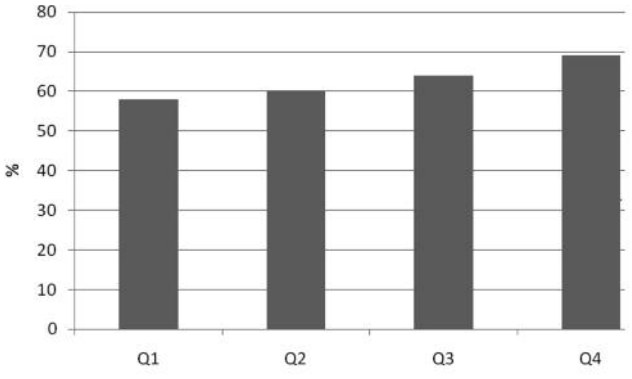

Figure 10. Proportion of individual's room nights booked through Hotel's website to the total room nights of individuals.
(Source: Aquaticum Hotel database)

This chart shows that the proportion of room nights booked through the Hotel's website by individual guests has a growing tendency.

References

P. Brewer – S. Marek (2006): Revenue Management. American Hotel and Lodging Educational Foundation, Washington DC, pp.7-14

Hotel Association of Hungary (HAH) (2010): A hazai szállodaipar jelenlegi helyzetének értékelése (Valuation of Status of the Hungarian Hotel Industry), www.hah.hu

M.G. Jagels – C.E. Ralston (2007): Hospitality Management Accounting, John Wiley & Sons, Inc, Hoboken, New Jersey, pp.278-280, ISBN-13: 978-0-471-68789-4

S.E. Kimes (2001): Yield Management Report, Center for Hospitality Research at Cornell University, pp. 2–6

S.E. Kimes (2010): Pricing Strategy and Distribution Channels in Hotel Revenue Management, Cornell University, Distance learning online material, Ithaca, New York

Y. Sedat (2007): An Integrated Forecasting Approach to Hotel Demand. Mathematical and Computer Modeling, Volume 46, Issues 7-8, October 2007, pp.1063–1070

C. de Seve (2008): Room Taxes and Economic Impact of the Lodging Industry. American Hotel and Lodging Educational Foundation, Washington DC, pp. 23–24

Aquaticum Debrecen, www.aquaticum.hu

Központi Statisztikai Hivatal (Hungarian Central Statistical Office), www.ksh.hu

NETWORKING ON THE UTILIZATION OF LOCAL NATURAL RESOURCES

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Abstract: Together with its partners, Szolnok College is planning to evaluate a new project for networking on the utilization of local natural resources. This project is based on a research work (using the findings of the surveys completed by the representatives of hosts living in the eastern part of Hungary).

The project itself is based on the adaptation of the theory of tourism into practice by presenting existing natural values in the supply portfolio of tourist service providers. A unique natural environment can be found alongside a 120 km-long stretch of River Tisza. These natural values interlink and complete each other with respect to Lake Tisza and River Tisza. Regions and settlements situated further from the specified settlements are also rich in natural values which guests will definitely be pleased to get acquainted with. The six landscape centres (including LHH regions) alongside river Tisza (in the two regions) symbolise the interdependent system of the sample area of the project while a single landscape centre in the Pásztó Minor Region embodies a unique character.

A register will be prepared for each landscape centre containing unique natural values that can be involved in the tourist supply and handicraft/economic activities (e.g. basket weaving, floodplain economy) that are or can be built on these natural values.

A pictorial English/German-Hungarian professional dictionary summarises the distinctive nature of landscape centres.

The education material demonstrating the registers is going to be developed both in conventional and electronic form; its spatial IT appearance on the Internet is considered a special feature. The education material will be supplemented with other information currently missing such as those related to environmentally friendly economy, and the legal context.

The methodology allows the adaptation of the method in other regions, even in the whole country.

The new qualifying and benchmarking system and the trademark managed by a profession-specific cluster that strengthens network co-operation and controls the development guarantee the achievement of high quality tourism.

Key words: networking, cluster, register of unique natural values and handicraft/economic activities

Introduction

The regions of the North Plain and Northern Hungary have rich natural resources, of which only a small proportion has been utilised intensively in tourism and has acquired the required reputation accordingly (e.g. Hortobágy, the Aggtelek Karst). Besides natural resources, the two regions have significant farming and cultural traditions as well (e.g. overbank farming, pottery), of which the involvement in the offer for tourists is still low.

The actors and professional organisations of the tourism market do not have extensive information on the values mentioned above (which already exist in their micro-environment) and on the method of their sustainable utilisation. The representation and further utilisation of existing good examples – national and foreign best practices – (e.g. in education) are also unsatisfactory.

The role of the institutions of higher education that can be found in the above mentioned regions is especially important from the point of view of teaching the young experts e.g. in the field of tourism. Szolnok College represents one of those institutions that try to involve students in different research work and in working out projects for different applications, connected to tourism.

This paper contains the results of a research work (based on the assessment of the surveys carried out by the students) and of a project using partly the findings of this research process.

1. Material studied

1.1 Research work

The research work was about getting information on the work and opinion of the hosts living in the settlements, where our students came from, in the eastern part of Hungary. (So the results were not representative but gave useful information to students and to the teachers about the way of thinking of the hosts, as well. *Table 1.*)

This paper highlights only three of the questions that are mostly related to the aims of the project below. The hosts were asked whether they could mention some reasons that made their settlements and its surroundings attractive.

Table 1. Denomination of the counties

County	Number of hosts (person)	Number of hosts (%)
Jász-Nagykun-Szolnok	21	53,85
Békés	6	15,38
Szabolcs-Szatmár-Bereg	2	5,13
Heves	2	5,13
Csongrád	1	2,56
Hajdú-Bihar	4	10,26
Pest	2	5,13
Borsod-Abaúj-Zemplén	1	2,56
Altogether	**39**	**100**

Resource: surveys

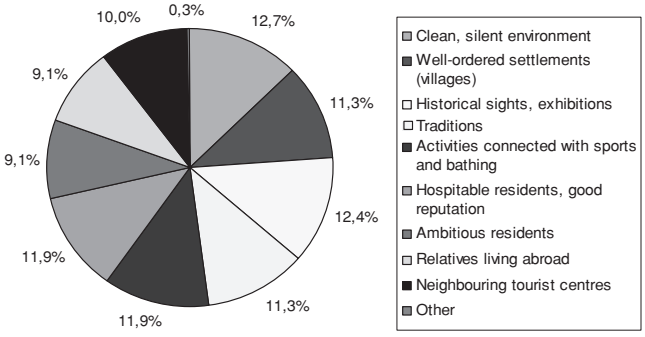

Figure 1. Attractive values of the settlements and their surroundings
Resource: surveys

Figure 1 shows that (in most cases the rural) settlements and their environment, the traditions and the existing tourist centres can be mentioned as the elements of the desirable tourist supply. It is obvious that a varied range of the natural environment and traditional activities, existing even in our days, could be involved in the tourism supply in the eastern part of Hungary.

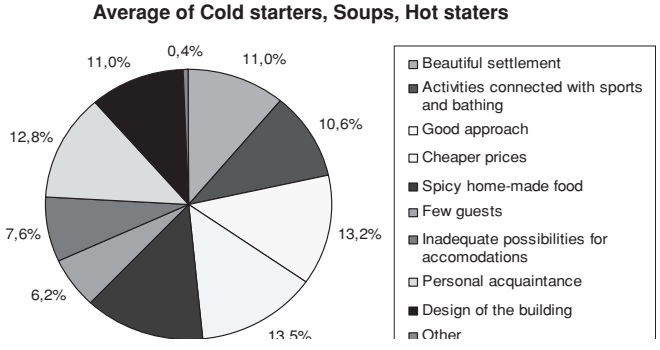

Figure 2. Reasons why tourists visit the settlements in question
Resource: surveys

Figure 2 gives information on the hosts'/tourist service providers' opinion on the reasons why tourists visit their settlements and choose the accommodation offered by them. Some elements of the region's values can be found as the most important factors (activities connected with sports and bathing, home-made food, beautiful settlements, etc.)

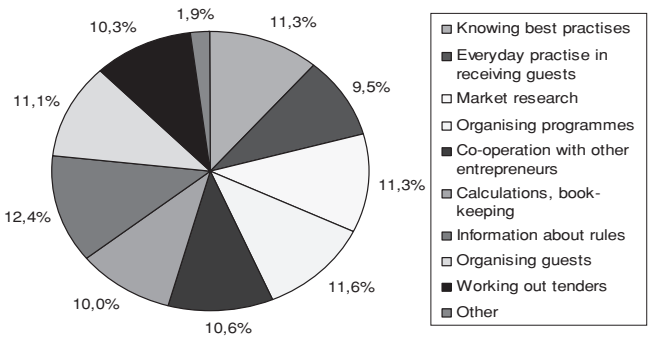

Figure 3. List of activities, hosts need help in
Resource: surveys

We wanted to get some information on the activities that they need help in. We got the list of the most common answers, like learning about the experiences of others in the given field, market research, organising programmes, co-operating with others etc. *(Figure 3)* The findings of this question prove the importance of networking and taking part in different training programmes (about getting the latest information on the legal regulations, best practises, tenders, etc.) in the future

2. Area description

2.1. The planned project

After all the answers of the survey have been analysed, we found an application for planning teaching programmes and tourism destination related to tourism hospitality in the North Hungarian and North Plain Regions.

In preparing the project for the application we used the results of the above-mentioned research work, while 76.92% of the surveys were completed in the counties, belonging to these two regions.

The regions forming the focal areas of the project are among the most depressed regions of Hungary in terms of social and economic levels. Several LHH small regions and settlements can be found in the regions.

2.1.1. Project objective

The basic objective of the project is the development of sustainable tourism – especially eco-, and rural tourism – and the enhancement of its weight and competitiveness in the given regions. The employees of these two areas obviously work in regional settlements, thus the project contributes to narrowing the economic and social disparities between the developing urban centres and the rural (peripheral regional) areas as well as between Hungary and the more developed countries of the EU in general.

The project fully fits into the international, national, regional, county, small regional and local development and touristic strategies. The most important of these are: National Strategic Reference Budget, National Tourism Development

Strategy, Development Concept and Strategic Programme of the North Plain Region, Eco-Tourism Strategy and the Strategy of Tourism of Lake Tisza.

Practically, all the above designate the development of eco-, and rural tourism as a priority / highlighted area including the development of attractions, infrastructure, services, marketing and the organisational framework. All activities to be completed within the framework of the project are included in the areas of development directly or indirectly.

Finally, the objective of the project can be summarised as the enhancement of sustainable development together with its economic and social dimensions. It shall enhance the participants' environmental awareness, the active protection of environmental and natural values, the possible access to and quality of environmental information; unemployment shall decrease in the region; the competitiveness of the region and the number of the participants in the field of tourism shall increase. Partners shall undertake the protection of the quality of environment, establishment and operation of co-operation forums, and effective social participation during their implementation.

2.1.2. Project description

All the above-mentioned facts justify that the service providers of tourism and the dispersedly operating economic actors should co-operate to become organised in a profession-specific cluster (mostly in the area of rural eco-tourism). Therefore the enhancement of the information level of the market actors is justified by means of the transfer of practical knowledge (trainings, e-learning, conferences, websites, etc.)

Tasks to be solved (with the participation of the students of Szolnok College):

- Mapping of elements existing in the two regions and linked to the utilisation of local natural resources and their involvement in the offer for tourists (in the form of cadastre to be elaborated) and the development of related methodology and standards.
- Introduction of services, display areas and programmes available in the rural regions, development of the basic technical infrastructure of rural events.
- Generalisation of the professional qualification of accommodations of rural tourism. Beyond the nationally accepted "sunflower" evaluation system the union of enterprises operating in the sector must be created within the regional framework by means of establishing a rural cluster for example. A regional quality assurance and evaluation system can be developed for the categorisation and specialisation of accommodation, such as a manor of craftsmanship, tradition preservation or organic farming.
- Strengthening of professional NGO-s and organisations facilitating sales, support of the establishment of an integrator system for selling products.
- Organisation of education, training, in-service training in the form of short courses (knowledge-transfer for hosts, vocabulary of terms in foreign languages, communication, etc.), as well as successful examples by sharing the mutual experiences of organisations operating in tourism and connecting to other training programmes (e.g. house of knowledge) to be built into school education (e.g. familiarisation with traditions and their preservation), etc.

2.1.3. Public relations

It is necessary to elaborate and implement a PR and marketing plan with the following activities:

- Continuous liaison with printed and electronic media in the region of the project. Targets are: introduction to the work of organisers, activation of service providers, exposition of the project result, exposition of donors and the programme.
- Press conferences are a substantial part of this work. Opening and closing conference are important elements of dissemination.
- Use of Internet accessible for the wide public is especially important (e.g. homepage, links to the partners).
- Forums must be organised for the service providers of tourism, the municipalities, the public at large, within the frame of which the results obtained during implementation can also be disclosed.
- The curriculum to be elaborated is suitable for disclosing new pieces of information both independently and by means of utilisation in education.
- Implemented systems, registers increasing competitiveness and serving the accomplishment of quality tourism / Completed evaluations (impact of the project, further activities, development possibilities)

2.1.4. Target groups

It is important to list the target groups that can make use of the project, e.g.:

- Touristic SME-s applying (or intending to apply) aspects of sustainability and ecological view in the focal area (e.g. landlords, programme organisers, tourism entrepreneurs), employees of attractions
- Colleagues of NGO-s and organisations of touristic profile acting in the focal area
- Actors of the market of tourism interested in sustainable aspects and ecological view (e.g. landlords, programme organisers, touristic entrepreneurs, hotels)
- Colleagues of touristic SME-s, NGO-s and organisations of touristic profile interested in cooperation
- Colleagues of SME-s, NGO-s and (e.g. educational) institutions who facilitate and wish to apply the systems serving the implementation of quality tourism.

3. Results

The paragraphs below show the most important results (activities that we want to implement) in the future:

- An attitude-forming complex communication campaign serving the conceptual and framework system of sustainable tourism that supports the objectives and dissemination of the project in details, not only on the sample area. Professional events (e.g. campaign, conference and presentation), marketing and communication plan (articles, publications and website) for the purpose of improving the professional knowledge and guest-friendly attitude of tourist service providers.
- Compilation of a specific appeal register for the six landscape centres (completed by a seventh one in the Pásztó Region) alongside the 120 km stretch of River Tisza (discovering and systemizing tourist spectacles based on local natural, landscaping and settlement values) that contains unique natural values that can be involved in the tourist supply and handicraft /economic activities (e.g. basket weaving, floodplain economy) that are or can be built on these natural values.
- The education material will be supplemented with other information currently missing such as those related to environment friendly economy and the legal context. The education material demonstrating the registers is going to be developed both in conventional and electronic form (eLearning, spatial IT display); its spatial IT appearance allows for special display on the Internet.
- Preparation of a pictorial English/German-Hungarian professional dictionary that lists the spectacles of landscape centres.
- Organization and accomplishment of an educational series and training both online (eLearning) and in the designated decentres using the education materials being worked on.
- Development of a methodology that allows for the adaptation of the method in other land units.
- Foundation of a new qualifying and benchmarking servicing system that serves the accomplishment of high-standard tourism and increases the competitiveness of tourist participants, and a new tourist trademark. Organization and implementation of a profession-specific tourist cluster, for tourist service providers, that strengthens network co-operation and controls practical and trainee exchange (domestic and international) and educational and consultation programmes.

4. Conclusion

One of the main results of the paper is to show the importance and effectiveness of involving students in research work and analysis. Their work is useful for their studies and practical training and can be used as a background (see above) for other development work.

The project itself enhances the offer portfolio of tourism service providers by revealing the provincial (natural, economic) values existing in the two regions (not yet used in tourism), by elaborating the utilisation of craftsmanship, increases the force of retaining guests, and stimulates their satisfaction by applying sustainable tourism. It may facilitate the involvement in tourism of a larger sphere of actors and enhance their competitiveness. The register, methodology and vocabulary can serve as a model due to its originality; its results can applied and adapted in other domestic and foreign regions as well. The cluster gives a real possibility for continuous networking.

We hope that having been completed the project can serve its general aim – in the field of tourism – of Hungary that (with the participation of well-trained experts) is to provide exclusive tourism supply for our present and potential guests.

THE UNDERSTANDING OF INTERNATIONAL TOURISM DEVELOPMENT

Marcus van der Wal

General Manager and Area Director Central Europe Kempinski Hotels

Abstract: Tourism is travel for recreational, leisure or business purposes. Tourism has become one of the major players in international commerce, and represents at the same time one of the main income sources for many developing countries. This growth goes hand in hand with an increasing diversification and competition among destinations (Unwto, 2010). Working and serving in this pumping industry means to understand and react to the needs of all these people moving around this "small" planet! Success is defined by those who understand these needs and fulfill them to the satisfaction. Unfortunately, our industry is rather slow and we can be characterized as reactive instead of innovative. We adapt too slow compared to other industries that define the needs of their costumers before the costumers actually calls for it!

Key words: tourism, motivation, market development, touristic services, destinations

Since there is Mankind there has been "tourism". Maybe we have called it with different words to explain e.g.: hunting, discovering, invading, immigrating, etc. But at the end of the day, moving from one place to the other is "traveling" and overall that is "tourism".

The fact is that on and around our planet the speed and ways to travel is developing and with it all the technology involved. With this development the cost of traveling is decreasing and ever more people have the financial means to do so. Our world is becoming smaller and smaller in sense of moving around. People are curious and continuously want to discover other places for business or vacation. Discover new destinations!

Tourism is travel for recreational, leisure or business purposes. The World Tourism Organization defines tourists as people who travel to and stay in places outside their usual environment for more than twenty-four (24) hours and not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity, remunerated from within the place visited. Today, the business volume of tourism equals or even surpasses that of oil exports, ýfood products or automobiles. Tourism has become one of the major players in ýinternational commerce, and represents at the same time one of the main income ýsources for many developing countries. This growth goes hand in hand with an ýincreasing diversification and competition among destinations (*Unwto,* 2010).

Working and serving in this pumping industry means to understand and react to the needs of all these people moving around this "small" planet! Success is defined by those who understand these needs and fulfill them to the satisfaction.

Unfortunately, our industry is rather slow and we can be characterized as reactive instead of innovative. We adapt too slow compared to other industries that define the needs of their costumers before the costumers actually calls for it! A good example is the automotive industry that invests high amounts of money in developments of new models. By this, they create the need of the costumer and educate what the clients would like to have in the future. They kick off the desire to have these new cars and make the costumer dream! Obviously the industry understands and takes other external factors in to account, e.g. the lack of raw oil in the world.

In our popular industry we have still failed to notice the two largest potential markets that are up coming. China and India with their huge population will develop and dominate the future tourism movements soon. The tourism market in India shows an enormous development according to statistical analysis (*Chaitip* et al., 2010). Actually, I strongly believe that they will surpass the US and Europe fairly soon, just out of the fact that the population numbers are as big as they are. Again, we are reactive and observe that there will be born a need to satisfy these emerging markets. Again, I have not seen strong developments to prepare for these very large tourism movements.

Coming to Hungary one has to admit that we are not doing enough to make our very attractive destination known. My criticism has always been, that we are simply not understanding how people are not aware of us here in the heart of Europe! Lack of investment from the side of the Government is one of the reasons for this tragedy! But, where there is not enough money from the tax payers, there can not be money to strongly invest in the attractiveness of the country. This is sad and unfortunately, I don't see a fast improvement in the coming years! Our neighbors have done their homework better. Croatia for example as past us with very high speed and we stand next to the highway and have

no idea why. During these two days of this conference you can listen to valuable presentations on the emerging trends of medical tourism in Hungary from the aspects of potential Western-European patients (*Simor,* 2010) and of the service providers and Hungarian subregions – destinations (*Kormosné Koch,* 2010). Another important topics also will be discussed such as the touristic programs – product development, considering the local traditions, e.g. gastronomy (*Tóth-Török,* 2010) and the rural toursim as a whole (*Tikász* et al., 2010). Considering the modern tourism section the importance of environmental awareness (*Kelemen* et al., 2010), the connection of IT and tourism (e.g. *Hering,* 2010) will also be in the pot.

At the end of these two days our business is simple! We have to develop guest satisfaction; we need qualified new products and services, all that we call a good destination! Understanding your clients and provide them what they need. Keep up the pace with innovation and make sure you talk about it. This seems rather simple, but is this most difficult combination you can imagine as it requires understanding, time and money to prepare the road to success.

At the end I would like to mention the most important player in all this: our people! We are living in a service industry that depends strongly and utterly on the skills and friendliness' of our staff. Over the past years it has become more and more difficult to find adequate staff that works for rather low salaries with a smile in the face. Motivation and treating these people professionally well seems difficult for many colleagues. Having them participate in success is not always financially possible. Nevertheless, do we all desperately depend on them, as they are the point of contact to our costumers at the end of the day!

References

1. **Chaitip P. – Balogh, P. – Kovacs, S. – Chaiboonstri, Ch.:** On tests for long-term Dependence: India's International Tourism Market. INTSM Conference, Debrecen, May 27–28., 2010
2. **Hering K.:** Turisztikai információs rendszerek fejlődése Magyarországon. INTSM Conference, Debrecen, May 27–28., 2010
3. **Kelemen K. – Piskóti M. – Hoffmeister Tóth Á.:** Környezettudatos fogyasztói magatartás a turizmusban. INTSM Conference, Debrecen, May 27–28., 2010
4. **Kormosné Koch K.:** Challenges for Hungary in Medical Tourism. INTSM conference, Debrecen, May 27-28., 2010
5. **Simor, R.:** Prospects for Growth in Medical Tourism. INTSM conference, Debrecen, May 27–28., 2010
6. **Tikász I. E. – Kiss J. – Szabó B.:** INTSM Conference, Debrecen, May 27–28., 2010
7. **Tóth Z. – Török L.:** Position of the Tourism and Gastronomy Sector in the Hungarian Economy. INTSM Conference, Debrecen, May 27–28., 2010
8. **United Nations Word Tourism Organization (UNWTO):** Why tourism? Tourism – an Economic and Social Phenomenon. http://www.unwto.org/aboutwto/why/en/why.php?op=1, April 21., 2010.

"TREASURES" OF DEBRECEN SELECTION OF AND ATTENTION TO SPORTS TALENTS IN THE SPORT SCHOOL OF DEBRECEN

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Place of employment: Debreceni Sportcentrum – Sportiskola Nonprofit Kft.

Abstract: The article is about a program selecting and attending sports talents in order to select and attend to the conscious sports talents so as to support convenient supply for the sections of the Sport School of Debrecen as well as for the adult sports organizations of Debrecen.

Key words: Sport, selecting talents, attention, choosing branch of sport

1. Introduction

"Sport is not only physical training but one of the most powerful tools of educating the soul. Sport opens our mind through our body."

Albert Szent-Györgyi

There is an apparent and exciting tendency, that appears in sport. More and more countries and sportsmen take part in the Olympic Games. Moreover, during the past years achievements in sports have progressively increased. So considering the leading international results, it is obvious that only youths with prominent, peculiar faculties can be prepared (*Harsányi,* 2000).

Nowadays it is not an easy thing at all to decide what sport the child should choose. It is a difficult question for parents to know if they chose the right sport to their child according to his conditions. Or are there any possibilities to direct a child to the best kind of sport for him before starting any branches of sport?

It is well known that achieving a record is possible only with the sportsman of best faculties, but obviously the quality and the quantity of training are decisive factors as well. Today's sport racing, international results require the continuous and objective measuring of sportsmen to help the process of selection and proving to be suitable of sportsmen (*Révész- Géczi- Bognár- Tóth,* 2005/ 4).

On the other hand, sport racing has to face more and more competitors just like television, computer, malls besides studying, furthermore in nowadays' educational systems PE is pushed into the background. Because of faster life, changed value systems former methods of selection are not effective enough.

Kincskereső program was called into life exactly because of this situation. According to the problems mentioned above we decided to select the ones with special, peculiar faculties and we initiate them into the planned, systematic training. There are many possibilities for parents and children to chose from the many-sided trainings, branch of sport specific trainings. The program gives an opportunity to the selected youths and to their parents to get acquainted with all the branches of sport of the sport school and then to decide – with the help of the experts of the sport school – which branch of sport stands closer to them in which they feel that they can be successful.

2. The theory of sports talent

According to *Frenkl* (2003) sports achievement is a human achievement refers to man as a biosocial being. The most accepted theory of talents in sports racing was created by *Mönks* and *Knoers* (1997). The multi-factor model emphasizes commitment for work, creativity and capacities above the average, contemporaneously these factors are influenced by the family, school and friends *(Figure 1.)*. According to these *Mönks* (1997) said that talent comes from the interaction of the three terms of personality. For healthy development tolerant, supporting social background is needed from the side of the family, school and friends. In other words the interaction of the six terms causes the appearance of talent (*Mönks–Boxtel,* 2000).

On the basis of their researches they came to the conclusion that there are primary and secondary influential factors of sports talent. Primary effective factors: genetic, psychological factor and the process of training itself, while secondary effective factors: socio-cultural factors and conditions in connection with the context of the branch of sport.

Two basic categories are accepted in defining sports talent: in one of the categories the general talents are placed,

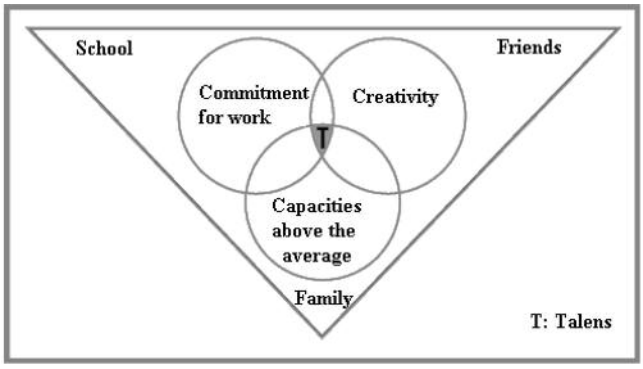

Figure 1. The multi-factor model of Mönks and Knoers (1997)

while in the other category there are the special talents. Sports activity is placed to the second category because all the sports activities take places in special surroundings, situations with special conditions (*Harsányi,* 2000).

2.1. Subject, definition and tasks of the sports talent theory

Sports talent is a person, whose state of health, mental, physiological, anthropometrical, motor and socialisational faculties – in a period of his development – are on a level and are developing in a rate during the periods of preparing, which – near convenient training and other, mostly social surroundings – possibly in his maximum output age lead to reaching high-level achievements in a branch of sports or on a sports event.

There are two big groups of the factors that influence sports achievements in interaction with each other:

- direct achievement-determining factors: level of conditional, movement-technical and tactical abilities and faculties
- indirect achievement-determining factors: physique, organ systems, functional level of informative and executive systems.

So sports talent theory deals with youths who have the characteristics mentioned above in their early ages. These achievement-determining factors are the results of partially heredity and partially the influences of the milieu.

Tasks of sports talent theory:

- measurement of hereditary facilities,
- measurement of the influences of the milieu,
- conformance of personality and branch of sport,
- organizational tasks,
- working out of tools and methods (*Harsányi,* 2000).

2.2. Choosing branch of sport, selection

One of the main aims of recognition and selection of talents is to recognize marks relating to talent and to train them satisfactorily (*Herskovits,* 2005). That's the main motto of Kincskereső program. The characteristics of the selection for leading sports had been examined since 1950's (*Harsányi–Sebő,* 1989). The aspects of selection are different and specific in every branch of sport, they contain physical characteristics, motor achievements, motion-learning and important mental and cognitive factors according to the branch of sport (*Baumgartner– Bognár–Géczi,* 2005).

The number of the choosers of a branch of sport and their motivation in choosing that branch of sport determine the success of selection. According to Gál's study (2003) more than the half of the asked students chose the given branch of sport because they wanted to reach a selected level or first class classification. It is an interesting fact that one third of the asked ones says that they started sporting as a hobby or pleasure to spend their free time.

With the development of technique and science the methods and procedures of selection have changed as well. The significant methods of selection can be put into four groups: (1) natural selection, (2) indirect selection, (3) selection based on success and (4) scientific selection. Nowadays first of all scientific selection is the fundamental type of selection (*Harsányi–Sebő,* 1989).

According to the opinion of *Rókusfalvy* (1986) it is obviously not enough for any branches of sport to have certain physical and antropometrical faculties, mental suitability to the characteristics of the chosen branch of sport is also needed. Relying upon these findings that can be told that complex examination is an essential requirement of modern selection, that measures social, physical, mental a biological conditions, faculties with pedagogical methods.

3. Kincskereső program

The target group of selection and attention: 3rd class (8–9 years old). This selection is based on mixture of the natural and the scientific selection.

3.1. The structure of Kincskereső program

The process of "treasure hunt"[1] has three parts:

1. Visiting elementary schools. Selecting sports talents, indentifying the talent.
2. Examining those kids, who appears to be talented. (examination of health suitability by a sports doctor, gauging physical faculties, psychological examination if necessary)
3. Development and attention of sports talents. This part has two more parts:
   a. The many-sided training
   b. The branch of sport specific trainings.

After eight months of both of the two types of the trainings our "treasures" choose a branch of sport and are transferred to the chosen section where their training continues.

During the development of sports talent over and above the development of special faculties, we try to develop general, basic faculties as well, in case the kid wants to change to another branch of sport.

[1] Treasure hunt in Hungarian is the name of the program: Kincskeresés

3.2. The realization of the program: – Information of schools

Before the process of selection some preparations always take place. We inform the principals, physical trainers, teachers of the elementary schools of Debrecen on a personal meeting about the program, its changes, so they get information about all the details of "treasure hunt". During the meeting we collect all the necessary information for the selection about the kids.

Necessary preparations for starting the selection:

- To find out the number of schools, that want to take part in the program. The students of the given classes get into the computerized database of the Sport School of Debrecen based on the data sheets made by their teachers.
- To establish contact with the principles, physical trainers, teachers.
- To fix the date of the first surveys.

Only after these preparations can the process of selection be started in the sport school.

– The three parts of selection:

1. According to the preliminary visit of the school and the applying to the program – we ask the opinion of the physical trainer about the students. During the first surveys in the schools we check the kids' motion and fighting faculties.

Selection is based on the actually reached results and personal experiences. We inform in a letter the parents of those kids who are qualified for the next round.

Considered points in the course of selection:

- good motion coordination,
- good physique,
- fastness, strength, staying power,
- fighting spirit, attitude,
- opinion, suggestion of the teacher.

2. The selected kids with their parents get into the Sport School. Here we talk to either the kids or their parents and we give them every necessary information. Then new surveys, examinations start, with the following parts:
   - testing physical faculties,
   - suitability examination by a sports doctor.

Considering the results we put the kids into groups (mixed groups, maximum 22 kids in each group).

3. This part does not contains only the selection of talents but their training, as well. A developing work takes place while the talents are selected by their own exercises, trainings.

It has two main parts:

a. the many-sided training, where fastness, staying power, capacity, power are developed, and
b. the branch of sport specific trainings, where coaches of our school introduces the branches of sport for students.

These are: athletics, judo, handball (for boys, for girls), football, badminton, ice-skate, swimming.

This third part is based on our own requirement system. Partially we imitate the "Finnish-model", so our goal is to ensure optimal development of faculties in every group, this is why we get approximately the same quality and intensity of work in every group.

Besides our students get experiences in our branches of sports, two other significant things are in the selection of the branch of sport: we take them under sports psychological examinations and we measure their tolerance of monotony. After these the sports anthropometrical exam takes place – where we can estimate the physique and height of the adulthood considering the 24 physical parameters. Finally on the basis of all this we make a proposal for the branch of sport.

4. Results

Kincskereső program was established in order to make it possible to us to chose kids from a wide circle. Our goal was to make the selection of talents conscious. From the 38 schools of Debrecen we asked 32 to cooperate with us. On Table 1. it is visible that the popularity and acceptance of the program increased year by year.

Table 1. Schools of Kincskereső program

school year	number of schools participating in the program-	number of 3rd classes	number of kids	"Treasures" put in Sport School
2007/2008	23	55	1252	120
2008/2009	28	60	1405	98
2009/2010	29	59	1403	Oct. 2010.

The successful past three years of the program shows that kids and parents need help in selecting a branch of sport.

We made a questionnaire to make a research among those parents, whose kids already pursue a branch of sport, and we get the following results:

- the program is attractive mostly because in the Sport School kids can try many branches of sport in the presence of coaches, physical trainers;
- kids and their parents get known the branch of sport and its coach as well during the program;
- kids and their parents like the swimming camp, where near swimming and other sports, there are many conversations, new friends;
- there are more point of views of the selection of a branch of sport: kid's interest in something, popularity of the branch of sport, personality of the coach, results of the anthropometrical examination;
- regular sports and the time spent with it have no negative effects on the student's school results.

When we talk about conscious, scientific selection of sports talent, it is necessary to mention sports anthropometrical examinations. During this examination we take 24

physical data and based on these data we can calculate the weight (kg) in an absolute value of the muscle, the bone, the fat and the residuum (internal organs), moreover the relative rate (%) of each physical components compared to the weight can be calculated. According to the constitution and the estimated weight of bones we can define the person's strengthening capacity. The expectable height can be estimated punctually with ± 2 cm.

We assume that kids and their parents will choose a branch of sport with the help of the coaches, trainers, examinations. There are many factors that participate in the selection of the branch of sport, in the first place there is the characteristic of the branch of sport, interest in the branch of sport, and the popularity of the branch of sport. Then comes the personality of the coach.

The development of sports talents takes place in mixed groups. Originally we wanted to make the groups according to the results of the members but it failed because parents preferred other factors, such as friends, schoolmates – so we based the groups on the model of Mönks.

Conclusion

The success of our program proves that in today's Hungary needs a global system selecting and training sports talents. Sport has a social and cultural and economical significance. According to some researches, nowadays 20% of the Hungarian population do sports regularly every week. This spells serious danger. The lack of sports is because of the lack of possibilities and the lack of purpose. This is what we want to change. This is a complex process. First of all a financial background is needed to support the employment of couches, use of sports tools. On the other hand the part of the parents in this process is very important as well, just like the ideals, successful sportsmen, teams are needed as examples to kids.

Our main aim is to train young sports talents but to continue their training in their adulthood as well, and to develop internationally successful sportsmen in Debrecen for the society of Hungary.

References

Baumgartner E. – Bognár J. – Géczi G. (2005): A tehetség fogalmának értelmezése: testnevelés szakos hallgatók álláspontja. *IV. Országos Sporttudományi Kongresszus Tanulmánykötet II.* 35-38.

BAKER, J. – HORTON, S. (2004): A review of primary and secondary influences on sport expertise. *High ability studies,* 15, 2, 211–228.

CZEIZEL E. (2004): *Sors és tehetség*. Urbis Könyvkiadó, Budapest. ISBN 963 9291 60 9

FRENKL R. (2003): Sporttehetség. *Magyar Sporttudományi Szemle,* 2. sz. 16

GÁL L. (2003): A sport iránti érdeklődés és a sportágválasztás indítékai szombathelyi tanulók körében. *IV. Országos Sporttudományi Kongresszus Tanulmánykötet II. 110–116*

Harsányi L. (2000): *Edzéstudomány I.* Dialóg Campus Kiadó, Budapest – Pécs. ISBN 963 9123 37 4 ö

Herskovits M. (2005): Mit kezdjünk a tehetséggel? *Iskolakultúra,* 4. sz. 25–36.

Harsányi L. – Sebő A. (1989): Módszer a kiválasztás és válogatás értékelésére. *Atlétika,* 5. sz. 3–7

Lénárt Á. (szerk.) (2002): *Téthelyzetben*. Sportpszichológiáról edzőknek és versenyzőknek. Sportkórházi sorozat, OSEI, Budapest. ISBN 963 206 1764

Mönks, F. J. – Knoers, A. M. P. (1997): *Ontwikkelingpsychologie.* 7th ed. Assen, Van Gorcum.

NÁDORI L. (1980): *Az edzés és a versenyzés pszichológiája*. Sport Kiadó, Budapest. ISBN 963 253 362 3

Révész L. – Géczi G. – Bognár J. – Tóth L. (2005): A sporttehetség megközelítési módja *Magyar edző 4.* 5-8.

ROKUSFALVY P. (1986): *A sport és testnevelés pszichológiája*. Sport Kiadó, Budapest. J 13 19.

http://www.citatum.hu/szerzo/Szent-Gy%F6rgyi_Albert

SAFETY AND SECURITY IN THE AGE OF GLOBAL TOURISM (The changing role and conception of Safety and Security in Tourism)

István Kővári – Krisztina Zimányi

Abstract: Safety and security have always been indispensable condition for travel and tourism. Research and education also has to face the issues of security and safety in tourism in order to prepare future specialists of the industry by incorporating new results of research to academic curricula.

Key words: Safety tourism, Security in tourism. Research and education

Safety and security issues in focus

Safety and security have always been indispensable condition for travel and tourism. But it is an incontestable fact that safety and security issues gained a much bigger importance in the last two decades in tourism. Changes in the World during the last two decades were enormous. Due terrorist acts, local wars, natural disasters, epidemics and pandemics, that we were witnesses to, security has significantly decreased.

The travel and tourism industry could not avoid the negative impacts and consequences of these events. Moreover some of these events manifested the vulnerability of tourism both on global and regional levels. Therefore this fact necessitates the research and study of the relationship between security issues and tourism, including the creation of a new, up to date definition of the notion "security and safety in tourism". Studying problems of safety and security became vital for the tourism industry.

Why did safety and security become so important in the Age of Global Tourism? What are the main factors influencing security issues? What are the key elements that are treated as belonging to security and safety problems and that are included nowadays in the notion "tourism safety and security"? How do safety problems influence the tourists when they are choosing their destination? What is the tasks and responsibilities of the actors in tourism – including tourists – in reducing menaces against tourists and their possessions as well as against people working in the industry and tourism infrastructure?

Answering these questions means not only satisfying the researcher's curiosity, but has very practical objectives, that is to give a management tools and working plans to all actors and levels of the tourism to parry and/or at least to reduce the risks.

The changing role, perception and concept of safety and security in the Age of Mass Tourism

Safety and security issues have been treated as important condition of tourism. It is a well known fact that the Ancient Olympic Games were so important to the Greek Polises that all warfare was suspended for its duration. (There is still something what we could learn from Ancient Greeks.) The great extent of risks contributed to the decline of travel in the Middle Ages.

Safety and security issues in travel and tourism came to the front by the evolution of the mass tourism from the beginning of the 1950s.The main reasons determining this evolution process are enumerated hereinafter:

1. Travel and tourism is not any more an activity of a narrow social stratum or class but the whole widening middle class is getting progressively involved into it. This is direct result of the growth of personal incomes and free time in the developed countries.
2. Tourism scope covers more and more countries and regions in the world and not only highly developed countries enabled to generate out-going tourism flows are getting involved in tourism but also countries of the so called third world. For them tourism is part of their economic development strategy.
3. The rapid and scenic development of transport (aviation, automotive industry) contributed to the rise of (geographical) mobility.

Due to these reasons the safety and security issues gained a bigger and bigger importance as the tourism itself became one of the largest industries in the world economy (contribution to the GDP, number of people employed in the sector, extent of investments into the tourism industry etc). Also the saying goes tourism is the industry of peace, which is true but there is a perceptible disparity and inequality in

Table 1. Compiled by the authors
The changing concept of safety and security in the tourism (1950–2010)

Period	*Main characteristic*	*Features, attributes*
Mass tourism/1. 1950-1970 Mass tourism/1. 1950-1970 (cont.)	Safety and security in tourism as one of the problems in tourism Simplified approach in the perception of safety and security issues in tourism	– Tourism security is a one or two-dimension notion – Only few elements of security issues are in focus (public safety, health safety, road safety etc) – Within the elements of safety and security only a small number of factors were given importance (e.g. heath and hygiene problems: 1. drinkable water, 2. necessity of vaccination, 3.cleanness of toilets) – Security problems are localized in time and space – Security problems may effect the image of a city or country but not the image of a whole region – Travel related risks and problems are not raised on the international level of tourism industry (excluding international transport regulations – Solving problems of security depends mainly on the regulations of the national authorities
Mass tourism/2. 1970-1990	Period of enlargement of security concept of tourism	– Additional risk factors appear in travel and tourism (airplane hijacking, terrorist actions as a tool of social struggle) – Threats on security reach regional level in some regions of the world (Middle East, Basque country etc.) – Beginning of a wider international cooperation related to security issues – Technical improvements in safety e.g. air transport) – WTO draws attention on safety, security of tourists (Hague Declaration on Tourism, 1989) – Compact but specific (that is to say not general) solutions are created (e.g. the case of El Al Israeli airlines)
Transition to Global Tourism 1990-	Period of complex perception of security and safety in tourism	– Numerous new elements appear within the tourism security issues due to the omnipotent factors of globalization meaning that national/regional economies, societies and cultures become integrated through a worldwide network of communication (internet!), mobility (tourism!), trade of goods and services. (personal data security, environmental security, natural disasters, pandemics etc) – Security of travel has become a global problem that we can not disregard – Number of destinations, situations and tourists affected by the lack of security is increasing – Lack of security causes regional stagnation or decrease in tourist flows and even on global level (9/11.) – Basic changes in security concept in travel and tourism, understanding the necessity of common actions

point of interactions and impacts. Despite of the facts giving evidence of the increasing importance of tourism, the impact of tourism on politics is minor than in the reverse way.

Political situation in a given destination or in the whole world always had a crucial effect on the tourism security and safety issues. The evolution of political situation in the world in the last decades of the 20th Century was determinative on the tourism including safety and security problems. In conjunction with this fundamental fact, a wide range of changes and challenges in the world influenced the content of notion "safety and security in tourism".

Towards a new approach and definition of safety and security in the Age of Global Tourism

Security and safety issues were treated by tourism researchers (named cognition based researchers or system approach researchers, such as Lengyel, Jaafari, Kaspar, Krippendorf, Cohen, etc) treated security as an element of supply in tourism. Michalkó characterized security as a fundamental condition of hosting tourists. Page and Connell realized the changes in global security. After the tragic terrorist actions of 9/ 11 a line of researchers not only began to study problems of safety and security but these problems become a differenciated area of research and field study in tourism. The authors of these studies are trying to not only to give theoretical insight of security problems but also managerial responses and possible marketing actions in crisis situations due to security problems in tourism destinations (Hall, Timothy, Duval, Prideaux, J. and P. Hunter-Jones etc).WTO has set up a guide of Practical measures for Destinations.

Security and safety has become a complex multidimensional notion with a wide range of components belonging to it: political security, public safety, health and sanitation, personal data safety, legal protection of tourists, consumer protection, safety in communication, disaster protection, environmental security, getting authentic information, quality assurance of services etc.

Security has undergone a significant change: from a more or less passive factor it is now an active element of tourism, an imperative to act in order to protect tourists and their belongings as well as all the achievements of the industry.

Despite the results in studying problems of security and safety in tourism, there are several challenges for tourism researchers specialized in this field:

– Consequences of indivisibility of security problems in the global world
– Security related problems created by Internet
– Security in travel and tourism versus human freedom and rights.

The tourism and hospitality research and education has to face the new issues of security and safety in tourism in order to prepare future specialists of the industry by incorporating new results of research to academic curricula. This could be done by introducing new subjects (e.g. Risk Management in tourism) or by complementing the content of already existing subjects by the new knowledge of security and safety (e.g. marketing, Consumer Relations, Tourism Destination Management).

Is it absurd that in the future "Safety sells in tourism" will be an important slogan in the travel and tourism industry?

References and further reading:

1. Current Issues in International Tourism Development (Edited by E. M. Ineson, Business Education publishers (2005)
2. Kővári István: A biztonság és a turizmus összefüggései (in: HFF Tudományos Közlemények, 1. szám, Budapest, 2007)
3. Kővári István: A turizmusbiztonság kutatásának és menedzsmentjének kérdései a különböző térségi szinteken (in: HFF Tudományos Közlemények, 4. szám, Budapest, 2008)
4. Michalkó Gábor: Turizmusföldrajz és humánökológia, KJF-MTA Földrajztudományi Kutató Intézet, Budapest-Székesfehérvár, (2005)
5. Safety and Security in Tourism, Relationships, Management and Marketing(Editors C.M.Hall,D.J. Timothy, D.T.Duval, The Haworth Hospitality Press)
6. Tourist Safety and Security, Practical Measures for Destinations, WTO (1996)

COMPARATIVE ANALYSIS OF MENUS IN THE NORTHERN AND SOUTHERN GREAT PLAIN TOURISTIC REGIONS

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Abstract: The background of the study is based on previous studies dealing with the areas of Transdanubia and Central Hungary. Those works have proved the hypothesis of author that local ingredients and dishes represent minimum role on menus. The question is how similar or different the choice of menus of Northern and Southern Great Plain is from the previously examined areas of Hungary. Additional questions may also arise in terms of the usage of local ingredients available near catering units.

This piece of work has studied several menus of Northern and Southern Great Plain, Hungary. The material was collected from different types of restaurants, 'csárda'-s and inns. The methodology was two-tier: data collecting on the one hand, and the detailed examination of differences between the catering units on the other hand: the number of dishes, the right order of dishes, the appearance of local ingredients and dishes, the consideration of seasonality, the usage of different cooking methods and group of dishes.

The study reflects the main problems of countryside restaurants in Hungary. Only a minimum number of dishes could be connected to local dishes out of more thousands. All in all, dishes are not as precise and perfect as the 'old ones' used to be; that is why it is important for every expert to keep traditions alive in daily routines and by way of strategic means too.

Key words: Northern and Southern Great Plain touristic regions, catering, local ingredients, traditions

1. Introduction

The relevance of the topic is given by the global advance in tourism highlighting the choice of dishes offered by catering units. Restaurants, small restaurants (vendéglő in Hungarian) and roadside restaurants (csárda in Hungarian) should preferably offer regional dishes – prepared at least partly from local raw material – in their menu.

The analysis of the studied topic is a current issue since, in accordance with a present hypothesis, one of the problems is that procuring raw materials is much easier and cheaper in hypermarkets. This is the reason why catering companies partly do their shopping in these commercial units and do not spend time on finding local products. Another problem is that local producers cannot always guarantee a constant level of quality and quantity of requested products. Lack of regional dishes appearing in the menu of catering units poses an additional problem.

Bases of the literature background 'Appearance of Regional Dishes in the Food Choice of the Southern Transdanubian Touristic Region' (*Sándor D.,* 2008) and 'Analysis of Transdanubian Supply of Dishes – local raw materials, dishes' (*Sándor D.,* 2009) provide proper ground for the present study focusing on the similar characteristics of the Northern and Shouthern Great Plain Touristic Regions. Earlier works covering the Southern Transdanubian region, the entire Transdanubia and the Budapest-Middle-Danube region verified the hypothesis of the Author that local raw materials and regional dishes play an insignificant role in the restaurant menus.

Present study tries to given an answer to the question how the choice of dishes in the hot cuisine catering units of Northern and Southern Great Plain regions differs from that in the previously studied ones. It is also a question whether catering people of the region take advantage of procuring and using locally grown fruits and vegetables. Hungary has gastronomic traditions we should take care of by including authentic local foods and dishes of the region in catering units' menus.

2. Material studied, area descriptions, methods, techniques

The study aims to present the menu supply of the Northern and Southern Great Plain Touristic Regions in the years 2005–2008 by a field research of a non-representative sample. The main goal is to survey the choice of dishes and then to evaluate the supply of diverse hot cuisine units – restaurants, small restaurants, and roadside restaurants – by professional aspects. Accordingly we may have a view of the quantitative and qualitative parameters of the dishes listed on the menus.

Among others, the analysis covers the logical dish grouping and listing system, the number of dishes, the

diverse use of raw materials and preparation methods, and the supply of local specialities, traditional foods, creative menu compilations and explanation of ambiguous denominations used in menus.

The analysis of the choice of dishes is based on the menus of 40 restaurants, 10 small restaurants and 22 road restaurants used in the years 2005–2008. Catering units were randomly selected by a non-representative sample of the Northern and Southern Great Plain Touristic Regions. *Figure 1* shows the distribution of studied catering units.

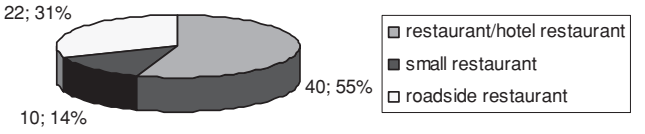

Figure 1. Distribution of studied catering units.
Source: own research

After electronically recording the names and quantity of dishes listed on the menus, meals of certain dish groups were aggregated. Next the average number of meals in each dish group was calculated with handling different types of catering units (restaurants, small restaurants, and roadside restaurants) separately. To provide a more efficient visualization, several diagrams are included to present different distributions and average values.

The average number of cold starters, soups and hot starters by types of catering units can be seen on *Figure 2*. In accordance with Hungarian traditions, dishes starting the meal (cold/hot starters and soups) are dominated by Soups.

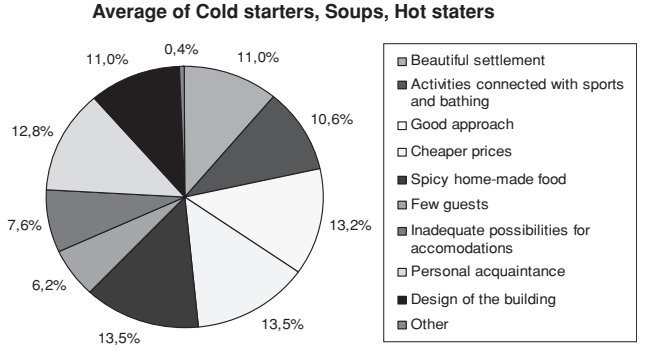

Figure 2. Average number of soups, cold and hot starters in the different hot cuisine units.
Source: own research

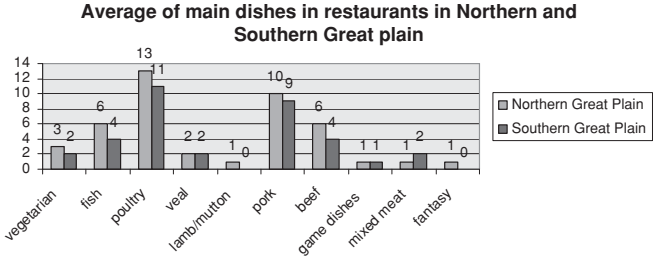

Figure 3. Average number of main dishes in restaurants.
Source: own research

Figure 3 shows the average number of main courses in restaurants in the Northern and Southern Great Plain. With regards to main courses in restaurants, the number of poultry dishes is the highest.

Figure 4 presents the average number of main courses in small restaurants in the Northern and Southern Great Plain. In small restaurants the pork dishes are the most popular.

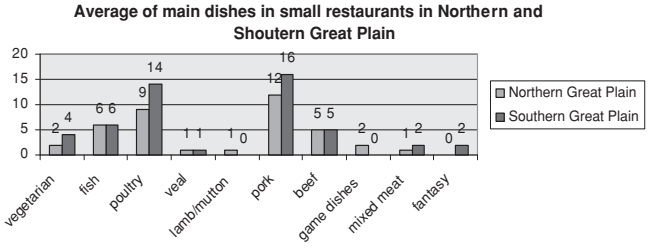

Figure 4. Distribution of main dishes in small restaurants.
Source: own research

Figure 5 shows the average number of main courses in roadside restaurants in the Northern and Southern Great Plain. In roadside restaurants the pork dishes are the most popular and in the Northern Great Plain the average number 19 which is extremely high.

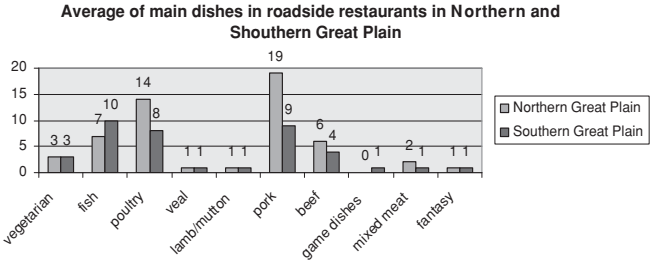

Figure 5. Distribution of main dishes in roadside restaurants.
Source: own research

The total amounts of garnishes, Hungarian type of vegetables, salads and sauces (40 restaurants, 10 small restaurants and 22 roadside restaurants) indicate that the average number of different garnishes is 6. (see *Figure 6*). The average number of Hungarian type of vegetables is 0 in restaurants, small restaurants and roadside restaurants. Average number in case of salads is 7. In accordance with

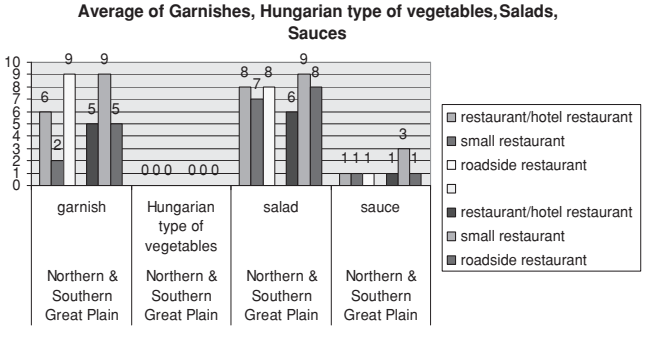

Figure 6. Average number of garnishes, Hungarian type of vegetables, salads and sauces in different hot cuisine catering units.
Source: own research

Hungarian traditions, offering 6–9 different salads, which includes also pickles, is typical. The average number of sauces is 1 in case of every type of units except small restaurants in Southern Great Plain.

The number of cheese appearing in menus is quite low, namely 1. The average number of cold desserts is 3 both in restaurants and roadside restaurants, and 2 in small restaurants in Northern Great Plain while 2 in every type of units in Southern Great Plain. This figure is rather low. The average number of warm sweets is 6. The average number of offered fruits and canned fruits is 1. These figures are quite meaningful. Concerning the already studied regions, offering 2 kinds of fruits in a restaurant has represented the widest choice so far. How can the customers taste the seasonal tasteful Hungarian fruits?

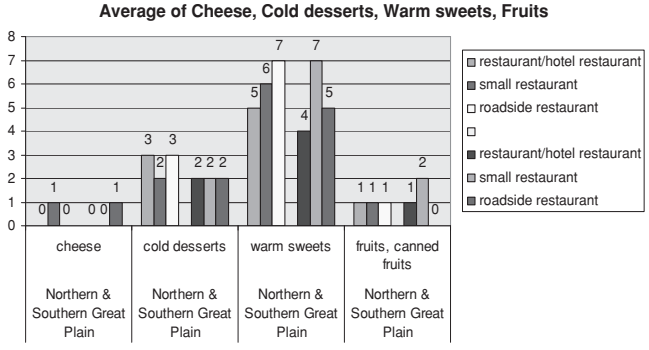

Figure 7. Average number of cheese, cold desserts, warm sweets, fruits and canned fruits in the different hot cuisine units.
Source: own research

3. Results and discussion

After processing the data from 72 menus, the primary goal of surveying the choice of dishes in the regions can be summarized as follows: the quality of menus in terms of their content reflects a quite diverse picture.

In some cases, dish groups are listed in menus in an order fashionable some decades ago. As a consequence of this, guests may encounter desserts earlier than main courses or salads.

It is also rather old fashioned to use the categories of readymade dishes and freshly made dishes. Foreign speaking guest may think in this case that the translated denomination of readymade dishes might refer to "meals not cooked at that time". At the same time, several hot cuisine units apply logical listing order of the meals – based on the timeline of consuming.

Fortunately, in Northern Great Plain nearly a hundred dishes prepared of Hungarian raw materials including goose liver, goose cracklings, ewe cheese, ewe curd, salami, sausage, bacon etc. can be found. Regional dishes appear on the menus only at an insignificant frequency. Out of the nearly 3000 dishes surveyed only 100 dishes can be somehow connected to a given region. Often only the denomination of the dish refers to its regional character e.g.: Nyírség Meat Ball Soup, Hen Soup Szatmár Style, Fish Soup of River Tisza, Pancake Hortobágy style, Catfish Tiszalök style, Stuffed Pork rib Szatmár style, Pork rib steak Kunság style etc.

In Southern Great Plain the same number and type of raw materials have been used as in Northern Great Plain. Unfortunately regional dishes appear on the menus only at an insignificant frequency as we could see in Northern Great Plain. Out of the 3000 dishes surveyed only 40 dishes can be somehow connected to a given region. Often only the denomination of the dish refers to its regional character e.g.: kecskeméti kakas rétes-béles, Bean Soup Szénás Style, Betyár Soup of Gyula, Hungarian Great Plain Soup with Dumplings, variations of chicken breast: Szatymaz Style, Maros Style, Félegyháza Style, Great Plain Style, Balástya Style etc.

In accordance with Hungarian traditions, dishes starting the meal (cold/hot starters and soups) are dominated first of all by Soups. With regards to main courses in restaurants, the number of poultry dishes is the highest, while in small restaurants and roadside restaurants the same stands true for pork dishes. Basic supply of vegetarian dish is still one-sided and quite limited (including most of the time only breaded cheese and mushroom).

The range of garnish covers 6 different types on the average, however, the question may arise why catering units don't offer directed main course-garnish pairs? As of international practise, main course is a complete dish including meat (or without meat), garnish and sauce. Fortunately, some of the surveyed menus included no separate garnish category. Strange and surprising, the number of Hungarian type of vegetables is less than minimal, that is zero in all the three types of units (restaurants, small restaurants, roadside restaurants). On the other hand, the average number of salads offered to main courses is 8. The range of sauces is not too extensive as well, with an average of 1 in almost every catering unit.

The average choice of cheese is 0; however, we can find 1 offer in small and roadside restaurants. The standard favourite of cold desserts are ice cream cups, sponge cake Somlo style and chestnut puree. Warm sweets are dominated by pancakes (60%) largely contributing to the base of this category. In roadside restaurants, cottage cheese pasta appears in the menu as the most frequent pasta. The choice of fruits, including also canned fruits, is rather narrow, the average figure being 1 in almost all catering units. Why are tasty Hungarian fruits missing from the menu?

There are some places where interesting fantasy names are given to these dishes, e.g.: Mistery of Kocsord, Chicken Breast as Marcsa likes, Hilly Shepherds' food, Women' dream, Favourite of Rózsa Sándor, Favourite of the Roadside Restaurant's Host, Jackals' Favourite.

In many cases there are formal mistakes in the menus, e.g.: the name of the place, the manager name or the name of the chef are missing, the word classification is used instead of categorization which was the terminology on force in the surveyed period, etc. Also spelling mistakes and misuse of terminology often appear in the menus, e.g.: "baconszalon-

na", caviar, tuna fish, Gordon blue, beafsteak, etc. The proper use of these terms is as follows: bacon (or "húsos szalonna"). Caviar is the roe of a certain species of fish, namely sturgeon; otherwise it should be named salted roe or salmon caviar in case of salmon. Frozen fillet of sea fish is often referred to as tuna fish but these are generally hake fillets. The proper name of the dish is Cordon Bleu, while it should be spelt as beefsteak in Hungarian menus.

4. Conclusion

The following conclusions may be made from the analysis of choice of dishes offered in the menus of 40 restaurants, 10 small restaurants and 22 roadside restaurants in the years 2005–2008:

- A too extensive range of dishes listed in the menu may have an adverse effect on preparing dishes in consistently high quality
- It would be practical to keep selection within reasonable limits at the same time providing outstanding quality dishes for the guests
- Applying international menu formatting experience would be useful
- The terms "Readymade dishes" and "Freshly made dishes" should not be used any more, instead dishes should be included among main courses based on their main raw material
- Range of vegetarian dishes should be extended and made more diverse, and tasty vegetables dishes should be prepared with less or no 'roux' (thickening agent of flour and oil)
- The category of garnishes and sauces is not necessary when garnish and sauce are added to all main courses
- Selection of cheese and fruits should be reasonably widened
- Range of cold desserts should be made more flexible, there should be other desserts in addition to the magic trio of ice cream cup, chestnut puree and sponge cake Somlo Style
- Pancake dominancy of restaurant warm sweets should also be weakened by expanding the choice of this category
- Fantasy dishes cause no problem when an explanation of the dish is added
- Range of regional dishes should be widened, since domestic and foreign tourists are mostly interested in local foods, accordingly it is a shame that out of nearly 6000 dishes only 140 can be attached to the region in any way
- Adding the name of a geographic location to that of the dish does not make the food an authentic local speciality in itself
- It is recommended to include traditional foods in the menus by applying professional literature and the related knowledge of local people
- Using local traditional and regional raw materials is an outstanding possibility for expanding the range of regional dishes. Some of the local traditional and regional raw materials can be seen in *Figure 8.*

Traditional and regional raw materials, products of the Northern Great Plain Region: Hungarian Grey Cattle, Hortobágy Sheep, Sausage of Debrecen, Plum of Beszterce, Apple of Szabolcs, Cabbage of Hajdúság, Acacia-Honey of Nyírség, Plum pálinka of Szatmár.

In Southern Great Plain Region we can see the following traditional products: goose liver of Orosháza, sausage of Csaba, sausage of Gyula, grey catfish of River Tisza, apricot of Kecskemét, peach of Szatymaz, garlic and onion of Makó, tomato sweet pepper of Szentes

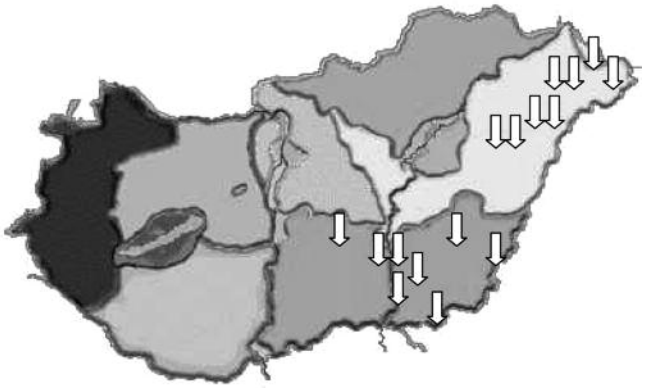

Figure 9. Traditional and regional raw materials and products in the Northern and Southern Great Plain Regions.
Source: http://www.utikonyv.hu/0-release-2/hp-terkep.php?id=104&nyelv=2&sablon=360&tipus=regio&map=0&x=80000&y=24600, Farnadi É. (szerk.) Hagyományok, ízek, régiók, 2002, and own

- A further possibility is to use local wines when preparing the dishes, however, it is not enough to indicate only 'wine' in the menu, it should be detailed e.g.: Venison Stew with paprika flavoured with 2007 Kunsági Zweigelt of Túri Cellar
- Areas to improve the most include the usage of an extremely limited range of raw materials and preparation methods, menu compositions often lacking creativity
- Therefore it would be practical to dismiss the most regular choice of dishes available in almost each and every restaurant and offer regional dishes prepared of local raw materials in the menus
- More attention should be paid to meeting the formal and spelling requirements of the menus
- All in all, current choice of dishes should be updated and a wider range of regional dishes should be offered; the above goals require the cooperation of all professionals in their everyday practise to observe our traditions in the future as well

References

A. Szigeti (2003): *Popular Cuisine Dishes of Transdanubia*. Agriculture Publishing Company, Budapest, 2003, 384 p.

D. Sándor (2002): *Food Knowledge.* Budapest Business School 2002, Budapest, 323 p.

D. Sándor (2008): *Appearance of Regional Dishes in the Food Choice of the Southern Transdanubian Touristic Region*. Scientific Yearbook, Budapest Business School 2008, Budapest, pp. 194–208.

D. Sándor (2009): *Analysis of Transdanubian Supply of Dishes – local raw materials, dishes*. College of Szolnok, Economica Scientific Publications, 1/2009, Szolnok, pp. 50–57.

D. Sándor (2009): *Appearance of Regional Dishes in the Food Choice of the Southern Transdanubian Touristic Region*. Hungarian Tourism Bulletin 1/2009, Budapest, pp. 14–18.

D. Sándor (2009): *Local ingredients and regional dishes in the Choice of the Middle Transdanubian Touristic Region*. Culinary Journal of Gastronomic and Hotel 2/2009, Budapest, pp. 28–29.

É. Farnadi, (2002, Responsible Editor) Cserhalmi, Zs. – Csoma, Zs. – Némethyné Uzoni, H. – Sipos, B. – Szabó, E. (Editors): *Traditions – Flavors – Regions Program*. Ministry of Agriculture, Centre of Agro Marketing, Budapest, 365 p.

N. F. Alsószopori (1926): *Culinary Cookbook of Transdanubia*. Pannon Publishing Company, Szombathely, 1926, 313 p.

Departmental Order: Category Rules of Catering Establishment 43/1998. Budapest. 1998.

http://www.utikonyv.hu/0-release-2/hp-terkep.php?id=104&nyelv=2&sablon=360&tipus=regio&map=0&x=80000&y=24600 access: January 26th, 2010.

ON TESTS FOR LONG-TERM DEPENDENCE: INDIA'S INTERNATIONAL TOURISM MARKET

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Abstract: There have been growing interest in studying behavior of long memory process in tourism market. In this research examine the behavior of India's international tourism market based on long-memory analysis. The international tourism market of India combined with nine countries: USA, UK, Canada, Germany, France, Japan, Malaysia, Australia and Sri Lanka. Moreover, three statistical tests for long-memory process such as R/S test, Modified R/S test and GPH-test are employed to test in these market. The empirical findings in general provide more support for no long memory process or no long-term dependence in international tourism market of India.

Key words: India, Long-memory process, Long-term dependence, International Tourism Market

1. Introduction

The international tourism industry in India is of great importance as it has positive impact on India's economy. Fore example, contributing to the nation's gross domestic product is 6%–7% in during period of 2003–2004, India's foreign exchange earnings through tourism is 5,731 million US. Dollar in 2005 and contributing to labor market is 9% of India's employment in during period of 2003–2004. Tourists to India spent $ 372 on their visa cards in the year of 2005. This is a 25% rise from the year 2004 thereby, making India the fastest growing Asia -Pacific market for the International tourist spending. According to the World Travel and Tourism Council, the Indian tourism demand will grow at an annual 8.8% over the next ten years, fueled by higher incomes and lower air fares. Moreover, In 2005 India earned US $ 6.9 billion from inbound foreign tourists, which is more than twice the US $3.1 billion earned during the year 2002. According to the latest balance of payments figures released by the *Reserve Bank Of India*, 2005 was the year of fastest growth in foreign inflows from foreign travel, during which inflows went up 36%. The above mentioned information has motivated us to understand the international tourism market behavior more and conduct the present research study.

Time series with long memory process was appeared in many contexts such as in financial economics, macroeconomics series, hydrology, cardiac dynamics, networks traffic, meteorology. Evidence of long memory process was first proposed by *Hurst* in 1951 when he testing the behavior of water levels in the Nile river. In 1971, Mandelbrot was among the first to consider the possibility of long range dependence or long memory process in asset returns. And in 1998, *Wright*, J. studied about the detection evidence of long memory in stock returns in many emerging market such as in Korea, Philippines, Greece, Chile and Colombia. Moreover, *Caporale and Gil-Ala* (2002), studied the S&P 500 daily returns and they found that the degree of dependence remains relatively constant overtime, with the order of integration of stock returns fluctuating slightly above or below zero. *Olan* (2002) studied the long memory in stock returns from an international market perspective and also found no evidence for long memory in UK, U.S., Hong Kong, Singapore and Australian stock markets. However, evidence for long memory can be found in the German, Japan's, South Korean and Taiwan stock market. In connection with international tourism the long memory process analysis was begun by *Gil-Alana* (2005). He examines forecasting properties of short-term arrivals at Auckland international airport and finds that the ARFIMA models outperform the non-ARFIMA ones in practically all case. After that *Chu* (2008) incorporates ARFIMA models into Singapore's tourism forecasting and compares the accuracy of forecasts with those obtained by earlier studies. Recently, *Sriboonchitta* et. al. (2010) used forecasting method based on both ARFIMA models and

ARFIMA-FIGARCH to forecast the number of international tourists arrival to Thailand and they also found that the long-memory process behavior in their model to forecast. In many articles authors have not yet tested the long memory process in international tourism market based on R/S Test, Modified R/S Test and GPH Test. For this reason this paper would like to apply tests of Long–memory in international tourism market of India based on data from the period of 1981–2007.

2. Research Aim and Objective

This research aims to test the long memory behavior in both the Indian and Thailand's international tourism market between 1981–2007.

3. Scope of this research

The scope of this research covers during period of 1981-2007 and mostly the data was secondary data. The countries were used for testing the long memory behavior are all the countries have impact on the international tourism industry of India such as USA, UK, Canada, Germany, France, Japan, Malaysia, Australia and Sri Lanka (*Ministry of Tourism, Govt. of India* 2009). The variables used in this research were the numbers of international tourist arrivals to India from the above mentioned countries during 1981–2007.

4. The research framework of Long Memory Tests

The concept of the long memory process was developed by Harold Edwin Hurst in 1906. He was a young English civil servant, came to Cairo, Egypt, which was then under British rule. As a hydrological consultant, Hurst's problem was to predict how much the Nile flooded from year to year. He developed a test for long-range dependence (Long Memory Test) and found significant long-term correlations among fluctuations in the Nile's outflows and described these correlations in terms of power laws. This statistic is known as the *rescaled range*, *range over standard deviation* or *R/S* statistic. From 1951 to 1956, Hurst published a series of papers describing his findings (*Hurst* 1951). Hurst's rescaled range (*R/S*) statistic is the range of partial sums of deviations of a time series from its mean, rescaled by its standard deviation. The definition of long memory process can be explained by the so called autocovariance function γ (k), where k is the lag parameter. The long-memory process can be defined as follows:

$$\lim_{k\to\infty} \gamma(k) \sim k^{-\alpha} L(k)$$

where $0 < \alpha < 1$ and L(x) is a slowly varying function at infinity. Because L(x) is a slowly function if lim x -> ∞ L(tx)/L(x) = 1 (see *Embrechts* et al., 1997). The degree of long memory is given by the exponent α; smaller α means longer memory. The long memory is also discussed in terms of the Hurst exponent *H*, which is simply related to α. For a long memory process $H = 1- \alpha/2$ or $\alpha = 2-2H$. The short memory processes have $H = 1/2$, and the autocorrelation function decays faster than k^{-1}. A positively correlated long-memory process is characterized by the Hurst exponent in the interval (0.5, 1).

4.1 Test for Long Memory: R/S Test

The Long Memory test based on R/S test has been developed by *Hurst* (1960) and *Mandelbrot and Wallis* (1969) method allows computing parameter *H*, which measures the intensity of long rang dependence in time series. The time series of length T is divided into *n* sub-series of length *m.* For each sub-series m = 1,…,n, we have to find the mean (E_m) and standard deviation (S_m), and subtract the sample mean using the formula below:

$$Z_{i,m} = X_{i,m} - E_m \text{ , for i = 1,…..,m.}$$

After that we could produce a time serie from the sample means as $W_{i,m} = \sum_{j=1}^{i} Z_{j,m}$ where i = 1,..,m and the range is calculated as the below given formula:

$$R_m = \max\{W_{1,m,\ldots..,}W_{n,m}\} - \min\{W_{1,m,\ldots..,}W_{n,m}\}.$$

The rescaled range is calculated by $\frac{R_m}{S_m}$ as well as in case of time series *R*, *S* and *H* can be defined according to the formulas below:

- where R is the distance covered by the variable, *k* is a constant and T is the length of the time.

$$R = k \times T^{0.5}$$

- where R/S is the rescaled range, m is the number of observations, k is a constant and *H* is the Hurst exponent, can be applied to a bigger class of time series.

$$\frac{R}{S} = k \times m^{H}$$

- The Hurst exponent can be calculated as:
  $\log(R/S)m = \log k + H \log m$

  and can be interpreted as:

- If *H* value = 0.5 then time series follow a random walk and are independent.
- If *H* value =(0, 0.5) then time series are anti-persistent, process covers only a small distance than in the random walk case.
- If *H* value =(0.5, 1) then time series are persistent series, process covers bigger distance than a random walk (long memory process).

4.2 Test for Long Memory: Modified R/S Test

The modified R/S test is developed from the classical R/S test which was proposed by *Hurst* (1951) while studying hydrological time series of the River Nile. For a return series $\{x_1, x_2, \ldots\ldots, x_T\}$, *Lo* (1991) refined the classical test by defining (see equation (1))

$$Q_T = \hat{R} / \hat{\sigma}_T(q) \quad (1)$$

where

$$\hat{R} = \underset{0\le i\le T}{MAX}\sum_{t=1}^{i}(X_i - \overline{X}) - \underset{0\le i\le T}{MIN}\sum_{t=1}^{i}(X_i - \overline{X})$$

$$\hat{\sigma}_T^2(q) = \hat{\sigma}^2 + 2\sum_{j=1}^{q} w_j(q)\hat{\gamma}_j,$$

$$w_j(q) = 1 - |j/q|,$$

and define that:

$\hat{\sigma}^2$ = the usual sample variance of data

$\overline{X}$ = the mean of data

$\hat{\gamma}_j$ = lag – j autocovariance for the data and the truncation lag q is determined by equation 2

$$q = \text{int}\left[((3T)/2)^{1/3}((2\hat{\rho})/1-\hat{\rho}^2)^{2/3}\right] \quad (2)$$

Where $\hat{\rho}$ is the first the first-order sample autocorrelation coefficient and int [ ] is the integer function. Under the null hypothesis of no long memory or no long rang dependence, *Lo* (1991) presented that the limiting distribution of the Q_T statistics in *equation 1* is given by the distribution function of the difference between maximum and minimum of Brownian bridge on a unit interval. Therefore, it can easily obtain the p-value of the test.

4.3 Test for Long Memory: GPH Test

The GPH Test for Long Memory process was developed by *Geweke.* and *Porter-Hudak* (1983) and they proposed to estimate of the OLS estimator of *d* from the regression: (*Equation 3*)

$$\ln[I(\xi)] = a - \hat{d}\ln[\sin^2(\frac{\xi_\lambda}{2})] + e_\lambda, \quad (3)$$

where

$$I(\xi) = \frac{1}{2\pi T}\left|\sum_{t=1}^{T} e^{it\xi}(x_t - \overline{x})\right|^2 \quad (4)$$

And the *equation 4* is the Periodogram (estimator of spectral density) of x at a frequency (ξ)

as well as the bandwidth v is chosen such that for

$$T \to \infty, v \to \infty \quad \text{but} \frac{v}{T} \to 0$$

Geweke and Porter-Hudak consider that the power of T has to be within (0.5, 0.6) and for the null hypotheses of no long memory process, the slope of regression d equals zero and the usual t-statistics can be employed to perform the test.

4.4 Data Description

Table 1 presents the number of international tourists arrived to India during 2003-2007. In 2003 the number of international tourists arrived to India was 2.7 million and in 2004 this number increased to 3.4 million comparing with last year. Moreover, in 2005 the number of international tourist arrivals to India also have increased continuously. In this year the number of tourists came to India was 3.9 million. Table 1 clearly suggests that the number of international tourist arrivals to India has increased from year to year. *Table 2* presents the foreign exchange earnings from international tourist arrivals to India during the period of 2005-2007. In 2005 Indian economy received foreign exchange earnings from international tourism industry was 1.5 thousand million US Dollar. Moreover, in 2006 the India's economy received 1.7 thousand million US Dollar as foreign exchange earnings from this industry. Finally. the foreign exchange earnings from this industry have increased 2.06 thousand million US Dollar in 2007 (*Table 2*). Based on these data we could clearly confirm that the international tourism industry of India will definitely become the potential industry for the future.

Table 1. Number of the international tourist arrivals to India between 2003 and 2007

Denomination	2003	2004	2005	2006	2007
January	274,215	337,345	385,977	459,489	532,088
February	262,692	331,697	369,844	439,090	498,806
March	218,473	293,185	352,094	391,009	444,186
April	160,941	223,884	248,416	309,208	333,945
May	141,508	185,502	225,394	255,008	267,758
June	176,324	223,122	246,970	278,370	310,104
July	225,359	272,456	307,870	337,332	377,474
August	204,940	253,301	273,856	304,387	360,089
September	191,339	226,773	257,184	297,891	325,893
October	260,569	307,447	347,757	391,399	440,715
November	290,583	385,238	423,837	442,413	510,987
December	319,271	417,527	479,411	541,571	575,148
Total	2,726,214	3,457,477	3,918,610	4,447,167	4,977,193

Sources of data: *Ministry of Tourism, Govt. of India,* 2010

Table 2. Foreign exchange earnings from international tourist arrivals to India between 2005 and 2007

Unit: US $ Million

Months	2005	2006	2007
January	532.19	632.43	744.58
February	536.07	594.67	680.41
March	505.74	547.17	636.05
Total	1,574.00	1,774.24	2,061.04

Sources of data: *Ministry of Tourism, Govt. of India,* 2010

5. The results of various tests for Long Memory Process or Long-term dependence process

Table 3 shows the results of various tests for long memory process regarding R/S Test, Modified R/S Test and GPH Test of India's international tourism market between 1981and 2007. Several countries are international tourism markets of India. For instance, USA, UK, Canada, Germany, France, Japan, Malaysia, Australia and Sri Lanka (*Ministry of Tourism, Govt. of India,* 2009).

Table 3. Results of Various Tests for Long Memory based on R/S Test, Modified R/S Test and GPH Test

Country	R/S Test	Modified R/S Test	GPH Test
USA	2.010*	1.2659	1.4874
UK	2.0402*	1.2838	1.3577
Canada	2.0219*	1.2784	1.5063
Germany	1.1541	1.1392	0.6048
France	1.7879	1.1729	1.0971
Japan	2.1268**	1.3809	1.2209
Malaysia	2.0735*	1.294	1.6528
Australia	2.0369	1.323	1.2145
Sri Lanka	2.1529**	1.4117	1.3119

Sources of data: computed
Null Hypothesis: no long-term dependence or no long memory process.
For GPH test, Null Hypothesis: **d = 0**.
* : significant at 5% level, ** : significant at 1% level

The test results are summarised in *Table 3*. For each test, the test statistics and the corresponding significances are given. If the value of R/S Test, Modified R/S Test and GPH Test are significant at 1% level or at 5% level then there is a long-term dependence or long memory process in the time series data. Otherwise no long-term dependence or no long memory process exists in the time series data. The empirical results of long memory process analysis based on both Modified R/S Test and GPH Test proved that all the international tourism markets of India have not a long-term dependence in themselves. Otherwise, based on R/S Test we can claim that most of the international tourism markets have a long memory process in themselves On the other hand we could not decide on direction of the arrival changes. However, the Modified R/S Test and GPH test have already confirmed that the international tourism markets of India have not a long-term dependence process in themselves, only the R/S Test has already confirmed that the international tourism markets of India have a long-term dependence process in themselves except Germany, France and Australia.

6. The conclusions of research and policy recommendations

This research provides various tests for long memory process (R/S Test, Modified R/S Test and GPH Test) to study the international tourism markets of India during the period 1981–2007. The empirical results of this research concluded that most international tourism markets of India are not long memory processes. The Long Memory or Long range dependence means that the information from "today" is not immediately absorbed by the price in the market and investors react with delay to any such information (*Bardos,* 2008).

This fact implies that the international tourism markets of India are effected by any information immediately or quickly. This result was different from the results of previous empirical studies of long memory process in international tourism market (*Gil-Alana*, 2005; *Chukiat and Prasert*, 2009).

If these results can be generalized for future years, then it suggests that both the Indian government sector and the private tourism industry sector of India need to protect the bad information of this industry and information can not go outside from India to other country. Otherwise, experts should develop tourism market of India more and further develop tourism product in India too. In terms of the tourism market development, experts need to launch an active marketing campaign, promoting India's exclusive culture and natural beauty through every channel especially the internet, and keep high quality of accommodation, restaurants, and services in tourism market of India as well. In terms of tourism product development, experts need to keep on improving both the quality and management of tourist products in India. Fore example, to develop tourist destinations in India, provide educational of tourism to people in the tourism industry of India and decrease the negative image of tourist destinations in India. Moreover, keeping tourist destinations clean, keeping tourist destinations beautiful, keeping tourist destinations safety and to protect the environment of tourist destinations. The private tourism sector and the India government tourism sector should maintain good management of tourist destinations in India. Such as maintaining the amenities of the tourism products, keeping good accessibility to the tourism products, keeping a good image of tourism products, keeping the right price of tourism products and keeping the competitiveness of tourism products (*Chaitip and Chaiboonsri*, 2009).

References

Baillie, R.T. (1996): Long memory processes and fractional integration in econometrics. *Journal of Econometrics*, Volume 73, Issue 1 , July 1996, Pages 5–59.

Bardos, S. (2008): "Academy of Economic Studies – Bucharest Doctoral School of Finance and Banking *DOFIN"*, *Bucharest, July 2008*

Campbell, J.Y., Lo, A.W., & Mackinlay, A.C. (1997): The Econometrics of Financial Markets. *Princeton University Press.*

Caporale & Gil-Allana, (2002): "Fractional integration and mean reversion in stock prices", *Quarterly Review of Economics and Finance* **42** (2002), pp. 599–609.

Chaitip, P. & Chaiboonsri, C. (2009): "Down Trend Forecasting Method With ARFIMA: International Tourist Arrivals to Thailand", *Annals of the University of Petrasani, Economics,* 9(1), 2009, 143–150.

Deboeck, G.J. (ed.) (1994): Trading on the Edge: Neural, Genetic, and Fuzzy Systems for Chaotic Financial Markets, John Wiley & Sons, Inc.

Embrechts, P., Klüppelberg, C. & Mikosch, T. (1997): "Modelling Extremal Events for Insurance and Finance", Springer, Berlin.

Geweke, J. & Porter-Hudak, S. (1983): "The estimation and application of long memory time series models*", Journal of Time Series Analysis*, Vol. 4 pp. 221–238.

Gil-Alana, L.A. (2005): "Modelling international monthly arrivals using seasonal univariate long-memory processes", *Tourism Management*, Volume 26, Issue 6, December 2005, Pages 867–878

Gil-Alana, (2005): "Modeling international monthly arrivals using seasonal univariate long-memory processes", *Tourism Management* **26** (2005), pp. 867–878

Giraitis, L., Kokoszka P. And Leipus, R. (2001): Testing for Long Memory in the Presence of a General Trend, *Journal of Applied Probability*, Vol. 38, No. 4. (Dec., 2001), pp. 1033–1054.

Henry, (2002): "Long memory in stock returns. Some international evidence", *Applied Financial Economics* **12** (2002), pp. 725–729.

Hurst, H.E. (1951): Long-term storage capacity of reservoirs. *Transactions of the American Society of Civil Engineers*, Volume 116, Pages 770–799.

Kirman, A. & Teyssiere, G. (2002): Bubbles and long range dependence in asset prices volatilities. *forthcoming in Hommes C., R. Ramer and C. Withagen (eds.).*

Lebaron, B., (2001): Empirical regularities from interacting long- and short-memory investors in an agent-based stock market, *IEEE Transactions on Evolutionary Computation*, Volume 5, Issue 5, October.

Lo, A.W. **(1991):** Long-term memory in stock market prices. *Econometrica* 59, pp. 1279–1313.

Mandelbrot, B.B. & Wallis, J.R., (1969): Robustness of the rescaled range R/S in the measurement of noncyclic long-run statistical dependence. *Water Resour. Res.* 5, pp. 967–988.

Mandelbrot, B.B. & Wallis, J.R., (1969): Some long-run properties of geophysical records. *Water Resour. Res.* 5, pp. 321–340.

Mandelbrot, B.B., (1997): Fractals and Scaling in Finance, Springer New York.

Mandelbrot, B.B., & Wallis, J.M. (1969): "Robustness of the rescaled range R/S in the measurement of noncyclic long run statistical dependence", *Water Resources Research*, 5:967–988.

Ministry of Tourism, Government of India. **(2010):** Retrieved January 25, 2010 from http://tourism.gov.in/

Montanari, A., (2003): Long-range dependence in hydrology. *Theory and Applications of Long-Range Dependence, edited by*

Peters, E.E., (1996): Chaos and Order in the Capital Markets: A New View of Cycles, Prices, and Market Volatility, New York: John Wiley & Sons, Inc.

Robinson, P.M. (ed.) (2002): Time Series with Long Memory, Oxford University Press.

Simonsen, I., Hansen, A. & Nes, O.M. (1998): Determination of the Hurst exponent by use of wavelet transforms, *Physical Review E*, Volume 58, Number 3, Pages 2779–2787, September 1998.

Sriboonchitta, S., Jittaporn, Chaitip, P. & Chaiboonsri C. (2010): "International Tourist Arrivals in Thailand Forecasting with ARFIMA-FIGARCH Approach", *The Third Conference of Thailand Econometric Society, Chiang Mai, Thailand, 7–8 January 2010.*

Taqqu, M.S., Teverovsky, V. & Willinger, W. (1995): Estimators for long-range dependence: An empirical study, *Fractals*, Vol. 3, No. 4 (1995) 785–798.

Wright, J., (1998): "Testing for a Structural Break at Unknown Date with. Long-Memory Disturbances," *Journal of Time Series Analysis*, 19, 369–379.

ANALYSIS OF THE OBJECTIVE INDICATORS OF QUALITY OF LIFE IN HAJDÚ-BIHAR COUNTY

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Abstract: The rate of unemployment in Hajdú-Bihar County is several percent higher than the national average and the actual number of unemployed people is the highest, resulting in considerable social problems. The majority of families living under the minimum subsistence level cannot cover their housing maintenance costs. These costs include the rents of tenement flats, public charges, water, electricity, gas and district heating charges. Cutting the number of unemployed people and stimulating economic activity is a high priority. Important tools towards achieving these goals include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism and support for traditional arts and crafts. As for general subjective well-being, although its average value is positive, merely 50% of the population is contented. Naturally it does not mean that we are unhappy. 4 respondents out of 5 claim that they are rather happy. This may suggest that the picture is not so pessimistic as it is revealed by questions about living conditions.

Key words: Unemployment, Quality of life, Rural development

I. Introduction

On what bases can a nation's quality of life be assessed, and in making such an assessment, how should one gauge the current state of affairs and developmental history of e.g. such a relatively small environment as that of Hajdú-Bihar County? Are conclusions from such an assessment drawn unconsciously on the basis of findings with the help of a mathematical formula or is a single "indicator" simply chosen (e.g. income, number of friends, professional accolades) to help us in the assessment of quality of life?

We might agree that it is much easier to answer the question as to why one even bothers measuring the quality of life, than to find an answer to the question as to how this should be measured. Accordingly, one should perhaps begin by answering the easier question. Quality of life should be measured because life is much more than survival. On the one hand, any improvement of public health is judged in terms of any increase in a population's average lifespan, while on the other hand, it is equally judged in terms of the improvement of overall life quality (e.g. quality of palliative care, improvement in the ability to of health care professionals to function properly).

Today, policy-makers have started to realize that the effectiveness of economic and social policies preaching slogans, such as "job creation", "GDP growth" and "motorway construction" to alleviate the resentment at their failure to improve the nation's quality of life are running out. Increasingly, Hungarians feel that more meaningful decisions will also be needed to make them contented enough to give their votes to any political party, than has been the case since 1990. But what does this actually mean? To answer the question, many use the measuring sticks of life quality and contentment to recalibrate political for the future. In other words, the level of the quality of life of the citizens of a nation, and especially its improvement, is the gauge by which one should distinguish between good and bad governance. The way forward, which leads governments responsible for the realization of the "public good" by adopting quality of life-centred economic and social policies, appear necessary. Of late, interest in the analysis of life quality has increased and the idea of life quality-centred planning has already emerged in Hungarian public administration. (*Kovács-Horkay-Michalkó,* 2006)

II. Assessment of the quality of life

Research on well-being consistently reveals that the characteristics and resources valued by society correlate with happiness. For example, marriage (*Mastekaasa,* 1994), a comfortable income (*Diener & Biswas-Diener,* 2002), superior mental health (*Koivumaa-Honkanen* et al., 2004), and a long life (*Danner, Snowdon, & Friesen,* 2001) all appear as factors in reports of high happiness levels. Such associations between desirable life outcomes and happiness have led most investigators to assume that success makes people happy. This assumption can be found throughout the literature in this area. For example, *Diener, Suh, Lucas, and Smith* (1999) reviewed the correlations between happiness and a variety of resources, desirable characteristics, and favourable life circumstances. (*Diener, King, Lyubomirsky,* 2005)

In this decade, empirical studies related to subjective well-being have been made with particular attention paid to

developing economies. Some of the key publications on this topic include the work of *Graham and Pettinato* (2001, 2002), *Gough and McGregor* (2007), *Kingdon and Knight* (2006), *Rojas* (2008) and *Pradhan and Ravallion* (2000). When dealing with rural areas in emerging economies, studies must take into account differences in the determinants of subjective well-being between people from developed and developing economies.

There are subjective and objective sides in life quality researches. The two significant life quality research models are the Scandinavian, starting with the availability of resources and their possession, thus laying emphasis on objective factors; and the American, which rather finds subjective perception and evaluation important. A kind of mixture of these two is the life quality approach used by Erik Allart. Following Maslow's model, he also created a hierarchy of needs and distinguished 3 levels:

"Having, loving, being" (material–environmental and social needs and needs for personal development as well). Moreover, he differentiated objective factors and the related subjective attitudes on all the three levels. In the present study the level of "having" is the most relevant, so objective and subjective indicators will be highlighted at this level:

- Objective: objective measurement of the standard of living and environmental conditions
- Subjective: contentment with the standard of living, the feeling of contentment (*Utasi,* 2007)

Inglehart and Klingemann claim that the communist past of certain countries or their democratic conditions looking back to previous traditions are significant factors in the assessment of the subjective quality of life.

In formerly socialist countries, the evaluation of individual welfare is lower than in traditional democracies; moreover, it is often far below the level of those of presently communist systems. *Veenhoven* (2003) finds the reasons for this state of affairs in the fact that the more equal distribution of happiness is rather characteristic of those countries where income differences are low and social security is high. *Lengyel and Hegedűs* (2002) suggest that the economic crisis and the ensuing political transformation in itself exerted a negative influence on citizens' well-being in post-socialist countries. This situation has been further aggravated by – immediately or at least quickly developing – disappointments in the fulfilment of expectations related to the transformation, decreasing social security and its concomitant uncertainty of existence. (*Inglehart – Klingemann,* 2000)

1. Factors influencing the quality of life

The precise determination of our quality of life and living standard is a complicated task. However, the following figure *(Figure 1.)* attempts to summarize those areas (based on existing research findings) which exert the greatest influences on our living standard.

The first highlighted area is health. Unfortunately, Hungary lags behind the European Union in this respect. In the past three decades, the health of the Hungarian population has deteriorated significantly and showed a markedly unfavourable picture in international comparison.

The physical or man-built environment primarily includes infrastructure and housing circumstances. The relevant viewpoints in their assessment are the accessibility of residences, the reliability and headway of transport modes, the quality of road networks, public lighting, coverage of telephone network and shopping facilities. Personal relationships and security must also be mentioned, as these two factors are closely linked. Personal relationships primarily refer to the family and security provided by it. However, priority will be given to individuals' secure livelihood as well. Families' secure livelihood is determined by the degrees of accumulated wealth and whether stable job opportunities are available for family members in the vicinity of their residences, in accordance with their qualifications and skills and also, of course, by the public security of their residential area.

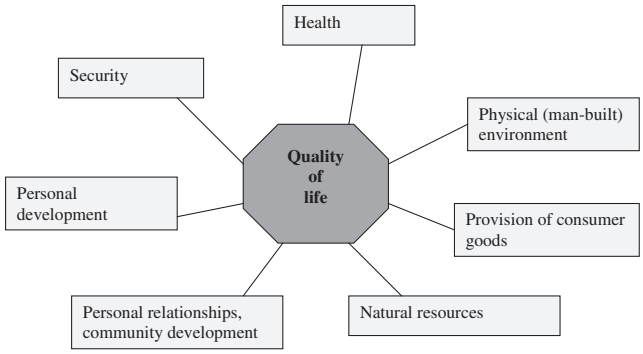

Figure 1. Factors influencing the quality of life (Source: Author's own work)

2. Contentment with the quality of life in Hungary

In Hungary, the rate of contended citizens lags well behind the average measured in all the EU member states (78%) by the Eubarometer. The positive attitude of Denmark (98%), Luxemburg (96%), Sweden (96%), the Netherlands (95%), Finland (95%) and the United Kingdom (91%) are worth mentioning. In the spring of 2009, 56% of the respondents in Greece were pessimistic, but their rate decreased to 42% within 6 months, whereas the rate of contented citizens grew from 44% to 58%. (Eurobarometer 72, 2010)

Almost all the Hungarian respondents claim that the state of economy (97%) and employment are definitely poor (96%). Somewhat fewer people think that the state of the world economy (77%) and the European economy (76%) are far from being ideal. Three quarters of the respondents worry about the state of the environment as well.

EU citizens can compare the state of their countries with that of the European Union. As for Hungarians (96%), the states of our economy and labour market are worse than in EU countries in general (2009). The same percentage of

respondents say the cost of living also tends to be unfavourable. Almost the same amount of people think that the quality of life (95%), energy prices (92%) and the state of the environment (81%) show a much worse picture in our country than in other EU member states. Compared to the above respondents, the number of those who claim that the life of Hungarian children could be better if they immigrated to other countries (31%) might seem to be low. This statement is not accepted by 45% of Hungarians and one-fifth of the respondents believe that the successful life of the youngest generation abroad depends on several other factors as well. (Eurobarometer 72, 2010)

Interestingly, in the light of the above, young people between the ages of 15–24 are included in the largest range (67%), or those who feel fine in their current situation. The least happy are people between 40–54: 70% of them thinks that their current circumstances are far from being ideal. This means that on average, approximately double the number of the current domestic income would be needed for families to have no worries – by their own admission. Average respondents are rather contented with their jobs than with their income, whereas contentment with their life standard is between the two. As for general subjective contentment, although its average value is positive, merely 50% of the population is contented. Naturally, this does not mean that we are unhappy. 4 respondents out of 5 claim that they are rather happy. This may suggests that the picture is not as pessimistic as is revealed in their responses about living conditions. (*Utasi,* 2007)

III. location of the studied county

Hajdú-Bihar County is located in the northern frontier of the North-Great Plain Region, including 82 settlements, with its population living in 21 towns and 61 townships *(Figure 2)*.

Figure 2. Counties in Hungary (Source: Central Statistical Office)

To expedite efficient operation, the settlements of the country have formed 9 small regions. Their natural endowments are rich; they are invaluable in respect of nature protection, recreation and environmental protection.

The county *(Figure 3)* plays a leading role in the Eastern-Hungarian region. Its county seat is Debrecen, which has been the centre of scientific and cultural life of the Great Hungarian Plain and the East Tisza Region for centuries. Debrecen is the economic, intellectual and cultural centre of North-eastern Hungary, as well as a favoured destination for tourists.

Browsing central statistical data and databases of questionnaire surveys, it immediately becomes evident that data in the region actually show improvement in some areas; however, they do not reveal the decrease in inequality. As it is well-known, inequality (wealth and income differences, differences in the supply and demand for different types of work) may be one of the primary reasons of discontentment. Hajdú-Bihar County is a good example for regional inequality, as several disadvantageous and cumulatively disadvantageous small regions and settlements are located here. However, economically and socially speaking, a number of settlements feature the characteristics of developed towns.

Figure 3. Hajdú-Bihar County

IV. Objective indicators studied in Hajdú-Bihar County

In the analysis of living standard and living conditions, objective indicators include primarily earnings, labour-market status, the availability of consumer goods and other similar, material indicators. In general, per capita GDP and various indices, mainly those formed from national economic indicators, may also be analysed.

The present study investigates solely objective indicators, as subjective ones (which may be mainly determined from questionnaires) will be published as part of a doctoral dissertation in a future study.

1. The varying number of population

In Europe, the major reason behind critical demographic conditions is not the diminution, but rather the ageing of, the population. Consequently, the burden of maintenance grows gradually and cyclically. The cyclic character is induced from generation to generation by the cyclic life course of the

"baby-boom" generation born after World War II. These demographic conditions are general throughout Europe (also in Hungary); and although the levels of ageing are markedly different, in sum, they are extremely high in certain member states. The core of the process of ageing is the transformation of the entire age structure, a shift towards an elderly population, i.e. the elongation of the age tree. All these shatter the existing economic, social and welfare systems substantially.

Demographic processes followed a similar trend in Hajdú-Bihar, as well. According to data from 2007, 543,802 people live in the county. The figure below *(Figure 4.)* demonstrates that the population has dropped in the past 10 years. This downward tendency is not merely characteristic of Hajdú-Bihar County, but unfortunately, of the whole country.

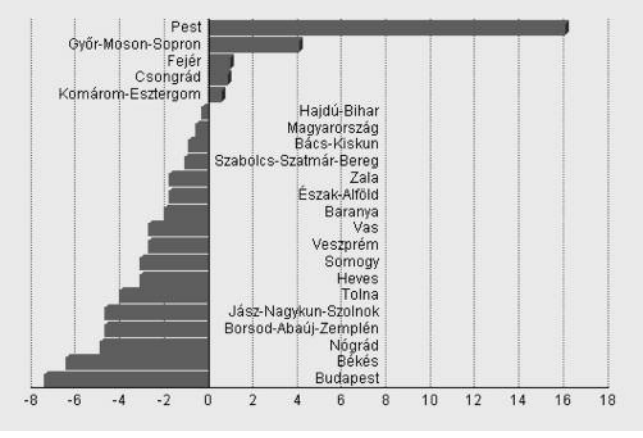

Figure 4. Changes in population in the past 10 years
Source: KSH TSTAR, 2009

An ageing society poses a grave problem for social security schemes and age exerts a significant influence on the quality of life, as well. The Eurobarometer concludes that people over 50 are the most contented with their quality of life.

2. Labour market

Out of the objective indicators of life quality, our study focuses primarily on the labour market, as it is a major problem not only in the country as a whole, but particularly in Hajdú-Bihar County. Recalling the data of the Eurobarometer 72 (2009) survey, it can be stated that unemployment is the primary problem for the Hungarian population. Access to jobs and adequate employment is essential for contentment and positive assessment of life quality.

Table 1. General features of the labour market

County	Rate of unemployment	Unemployed people	Employed people	Inactive people	Rate of employment	Rate of activity
Hajdú-Bihar	13.39 %	26680	172538	212191	41.9%	48.4%

(Source: Public Employment Service)

The summary of the general features of the labour market in Hajdú-Bihar County are demonstrated in *Table 1.* This will bring us to the next point, the analysis of selected indicators, as compared to other counties.

In Hajdú-Bihar County, the rate of agricultural employees is high; we are the fourth as compared to other counties. This is not surprising, as the Great Hungarian Plain has good quality and spacious production areas. This is a serious problem in the present economic situation. The significance of agriculture has diminished and production has fallen, as is the case in other economic sectors. More significantly, agriculture as a sector has lost its crucial role in county employment. Unfortunately, agriculture fails to provide a secure source of personal income. It has largely become a kind of supplementary activity and it proves to be more significant for self-sufficient farms. Therefore, the III. pillar of the New Hungary Rural Development Program is of great significance, as it strives to improve the quality of rural life, focuses on the diversification of rural economy and provides the necessary funds for such activities.

To relieve employment stress and to extend earning opportunities, rural economic potentials are to be enhanced which contribute to the improvement of employment by creating jobs beyond agriculture in rural areas. The most significant means towards achieving this goal include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism, traditional arts and crafts.

If the rate of unemployment is investigated on county level, unfortunately we take a leading position. The county average was 13.39 % in 2009 *(Figure 5.)*. This is due to the economic crisis, which also affected our country. The most conspicuous sign of the crisis was and still is soaring unemployment as a result of increased company wind ups and cost cuts expected from lay-offs.

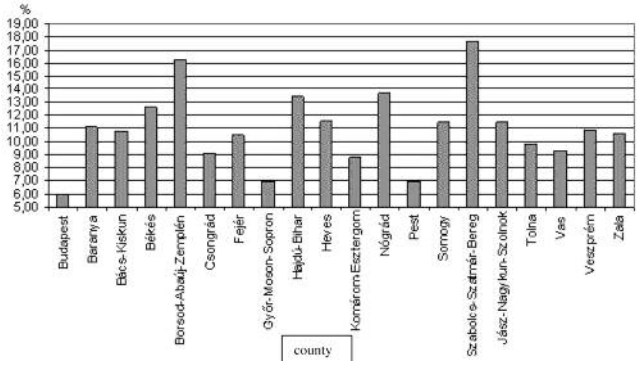

Figure 5. Rate of unemployment on county level (2009) (Source: Authors' own work based on ÁFSZ data)

According to the definition used by the International Labour Organization (ILO), the rate of unemployment published recently by KSH is **11.8%,** showing **national data** for the 15–74 year-old population for March 2010, on the basis of a national survey. As compared to data published a month earlier, this data shows an increase of 0.4% and exceeds the

2009 level by 2.1%. (KSH, 2010) The rate of unemployment in Hajdú-Bihar County is several percent higher than the national tendency. The reason for this trend lies in the fact that both Hungarian and international capital arrives here in lower than average volumes, so the number of unemployed people *(Figure 6.)* is the highest here and in the northern counties, resulting in critical social problems. These social problems also negatively influence the assessment of life quality.

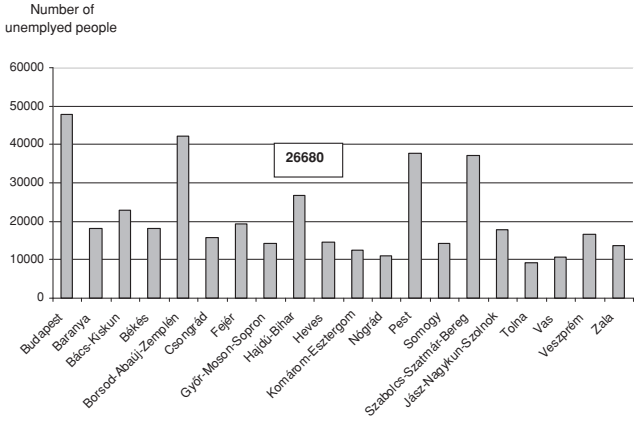

Figure 6. Number of unemployed people on county level (2009) (Source: Authors' own work based on ÁFSZ data)

Figure 7. presents one of the most critical problems on the labour market: the high rate of inactive population. This category includes people with a partial incapacity for work who suffer from physical or mental deficiencies or whose opportunities to find employment decreased radically after medical rehabilitation. A focal problem is that equal opportunities are not ensured for disabled pupils/students in education and training either. In Hajdú-Bihar County, the rate of people incapable of working is approximately 8–10% of those registered as being unemployed, whereas the rate of offers for jobs which would be appropriate for them is merely 1–2%, mostly in the social sphere. Support opportunities are further restricted by their low willingness to receive training and the fact that they need special forms of cooperation from the employment organization. They rather prefer easy physical work and the Piremon Non-profit Ltd. plays a significant role in their employment. These people have to cope not only with the loss of income as a result of their unemployment, but with social inclusion and their disabilities as well. This everyday struggle may induce the negative assessment of their life quality.

The group of inactive people also includes dependants who generally do not have earnings or income and their living is provided by private individuals or institutions. Numerically, this means 212,191 people, i.e. 39% of the population in the county. The rate of activity is not any better, it is merely 48%. The formation of this ratio is largely due to the gypsy population. Low school qualifications are the key factors behind the social and

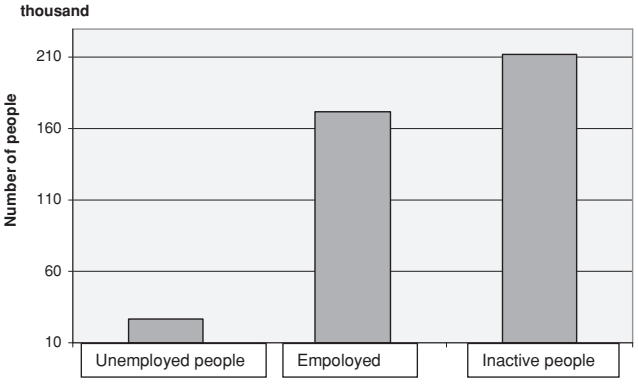

Figure 7. Selected labour market indicators in Hajdú-Bihar County (2009) Source: Authors' own work based on ÁFSZ data

economic backwardness of the Roma population; therefore, short and long term programs targeting the improvement of conditions for gypsies identify education as the most highlighted priority.

3. Income

GDP is the most often used macro-economic indicator in every country and international business organization. A good example for this is that economic, social and territorial cohesion policies (i.e. The Structural Funds) are used for the classification of regions receiving EU co-financing on the basis of GDP per capita.

However, GDP has been increasingly and harshly criticized as to whether it is capable of correctly representing the social-economic conditions of territories and regions.

One should remember that the formation of GDP per capita in some regions might be affected by commuters. The inflow of workers can raise production to a level which would be impossible to reach through the local active population. Consequently, GDP per capita can be overestimated in areas attracting labour force and in those ones where labour outflows, underestimated.

Table 2. Formation of basic wages and earnings in 2010

	Basic wages (HUF/person/month)				Earnings (HUF/person/month)			
	physical	intellec-tual	man	woman	physical	intellec-tual	man	woman
Hajdú-Bihar County	98865	183747	142622	135041	118320	227844	177028	162612
Hungary	108519	226530	176907	157373	132415	275025	218041	188147

(Source: Authors' own work)

Income and material goods predominantly determine the quality of life. Without money, it is difficult to satisfy our demands. Statistical data show and long years' experience suggest, not surprisingly, that the earnings of those living in the nation's capital are much higher than the national average. Szabolcs-Szatmár-Bereg County ranks last, with its income only 65% of those living in Budapest. Moreover, this

figure is significantly lower than average per capita GDP. The analysis of per capita GDP shows that the situation is somewhat better in Hajdú-Bihar County *(Figure 10.)*, as the county exceeds the regional value, but basic wages and monthly earnings *(Table 2.)* lag behind the national average. An intellectual worker earns 227,844 HUF in Hajdú-Bihar County, whereas the national average is almost 50. 000 HUF higher. The difference between the earnings of men and women producing equal quality work also raises various questions. This constitutes discrimination, which induces discontentment, and discontentment triggers the negative assessment of life quality.

4. State of health

Our state of health clearly affects our quality of life and relationships. The following factors influence our state of health fundamentally:

1. **Individual factors**
   - Congenital genetic endowments
   - Acquired characteristics
   - Age, gender
2. **Lifestyle, way of life**
   - Dietary habits
   - Physical activity
   - Consumption of luxury products
3. **Living environment**
   - Physical characteristics of built environment (noise, radiation)
   - Town-village
   - Availability of services
4. **Working environment**
   - Physical and psychological stress at work
   - Physical factors
   - Chemical factors
5. **Social and economic factors**
   - Migration, unemployment, impoverishment, crowded residential areas without proper hygienic conditions
   - Globalization of food industry
6. **Health care and social system**
   - Quality of health care and availability of medicine
   - Availability of care

The health of the population exerts a fundamental influence on the quality of human resources. It has already been established that Hajdú-Bihar County, similarly to the whole country, has an ageing social structure and on the grounds of current demographic tendencies the health care system faces increasing challenges in the future.

Due to gradually increasing environmental loading and generally characteristic unhealthy lifestyle the number of inhabitants affected by the "ills of civilization" (cardio-vascular diseases, diabetes, malignant tumours etc.) is permanently high. Similarly to the ills of civilization, addictions affecting increasingly wide circles of the population also cause crucial problems.

Although in Hajdú-Bihar County, the number of live births is higher (10.2/thousand inhabitant) and mortality is lower (12,300 inhabitants) than in the North-Plain region or in Hungary, the shrinking of the (natural) population is typical, numbering -2,000 inhabitants according to data published in 2009. Most deaths in the country are caused – both in men and women – by circulatory diseases. Mortality caused by ischaemic heart diseases here is more unfavourable than in the country as a whole. The second most frequent cause of mortality in both sexes are cancers; the third most common cause for men is accidents or suicide, while this is diseases of the digestive tract for women.

It is noteworthy in the analysis of general mortality in the region that the Püspökladány and Hajdúhadház sub-region, belonging to the catchment area of Kenézy Hospital, located in Debrecen, is highly at risk. The results of Hajdú-Bihar County in diminishing mortality are outstanding because, in terms of employment, education, earnings, family structure and the high level of Roma population, it belongs to the category of less-favoured areas.

(Information on the health of the population in the county, 2009)

V. Conclusions and recommendations

The above-mentioned data suggest that politics and social sciences should really focus on the harmonic, long-term improvement of life quality and the development of personalities capable of creating real human relationships and evolving communities.

The rate of unemployment in Hajdú-Bihar County is several percent higher than the value of the national tendency. The reason lies in the fact that both Hungarian and foreign capital is channelled here in a lower than average quantity, therefore the number of unemployed people (Figure 8.) is the highest here and in the northern counties, resulting in considerable social problems. To cut the number of unemployed people and to stimulate the activity of inactive labour force the following measures are to be taken:

- incentives to seek gainful employment,
- development of job-hunting services,
- improvement of employability for disadvantaged people,
- incentives for access to employment,
- preservation of employment activity,
- development of an integrated employment and social service-provider system,
- support for life-long learning.

As already mentioned before, the high rate of inactive people is a crucial problem. Besides the deficiencies of their qualifications, the key reasons of the underemployment in the roma population are the following:

- Drawbacks in settlements (the majority of romas live in small settlements)
- Lifestyle strategies originating from the poverty trap (welfare policy supports often exceed the volume of earnings, there is no motivation to work)
- Newly established enterprises primarily prefer qualified workforce

- Employment discrimination is continuously present, but difficult to prove.

The analysis presented above suggests the clear and evident priority that Roma children should graduate from secondary schools to have opportunities in the labour market. Another solution could be to link the payment of family allowance to children's school attendance or to spend part of the allowance to cover the costs of schooling or to receive some allowances in kind (transport, catering, hostel accommodation in senior classes). The driving force of these measures is worth investigating.

The majority of families living under the minimum subsistence level cannot cover their maintenance costs for housing. These costs include the rents of tenement flats, public charges, water, electricity, gas and district heating charges but these fail to cover the actual running expenses. The Law on Social Welfare states that the amount of support shall be a contribution to the preservation of dwelling conditions. In practice, this amount is excessively low. A national, guaranteed and uniform system of housing allowance should be introduced in the framework of the Law on Social Welfare.

The alleviation of employment stress in rural areas, the expansion of income potentials can merely be realized through strengthening rural economic potentials which may improve employment by creating jobs outside agriculture in rural areas. Highly important tools in achieving these goals include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism, traditional arts and crafts.

Furthermore, the competitiveness of the investigated county is to be enhanced, local economy is to be invigorated, local communities should be prepared for the acquisition of EU and other available funds which expedite the support of sustainable social, environmental and economic development.

References

ÁFSZ (2009): Állami Foglalkoztatási Szolgálat http://www.afsz.hu/engine.aspx?page=full_AFSZ_KOZOS_Statisztika

Danner, D. D., Snowdon, D. A., Friesen, W. V. (2001). Positive emotions in early life and longevity: Findings from the nun study. Journal of Personality and Social Psychology, 80, 804–813.

Diener, E., Biswas-Diener, R. (2002). Will money increase subjective well-being? Social Indicators Research, 57, 119–169.

Diener, E., King,L., Lyubomirsky, S. (2005): The Benefits of Frequent Positive Affect: Does Happiness Lead to Success? Psychological Bulletin. 2005, Vol. 131, No. 6, 803–855

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. Psychological Bulletin, 1999, Vol. 125, No. 2, 276–302.

Eurobarometer 72 (2009): http://ec.europa.eu/public_opinion/archives/eb/eb72/eb72_hu_hu_nat.pdf

Graham, C. and Pettinato, S. (2001): Happiness, Markets and Democracy: Latin America in Comparative Perspective. Journal of Happiness Studies, 2, 2001, 237–268.

Graham, C. and Pettinato, S. (2002): Frustrated achievers: winners, losers and subjective wellbeing in new market economies. Journal of Development Studies, 38(4), 2002, 100–140.

Gough, I. and McGregor, A. (2007): Wellbeing in developing countries: From theory to research. Cambridge: Cambridge University Press. 259–280

Inglehart, R. – Klingemann, H.-D. (2000): Genes, Culture, Democracy and Happiness. In: Diener, E. – Suh, E. M. (eds.): Subjective Well-Being across Cultures. Cambridge MA, MIT Press, 165–183.

Kingdon, G. and Knight, J.(2006): "Subjective well-being poverty vs. Income poverty and capabilities poverty?," Journal of Development Studies, 42(7), 1199–1224.

Koivumaa-Honkanen, H., Koskenvuo, M., Honkanen, R. J., Viinamaki, H., Heikkilae, K., & Kaprio, J. (2004). Life dissatisfaction and subsequent work disability in an 11-year follow-up. Psychological Medicine, 34, 221–228.

Kovács B. – Horkay N. – Michalkó G.(2006): A turizmussal összefüggő életminőség-index kidolgozásának alapjai. Turizmus Bulletin X. évf. 3. szám

KSH (2010): Központi Statisztikai Hivatal http://portal.ksh.hu/pls/ksh/docs/hun/xftp/gyor/nep/nep21002.pdf

Lengyel Gy. – Hegedűs R. (2002): A szubjektív jólét objektív tényezői nemzetközi összehasonlításban. In: Lengyel György (szerk.): Indikátorok és elemzések. Műhelytanulmányok a társadalmi jelzőszámok témaköréből. Budapest, BKÁE

Mastekaasa, A. (1994). Marital status, distress, and well-being: An international comparison. Journal of Comparative Family Studies, 25, 183–205.

Rojas, M.(2008): Experienced Poverty and Income Poverty in Mexico: A Subjective Well-

Being Approach. World Development , 36(6), 1078–1093.

Pradhan, M. and Ravallion, M.(2000) Measuring poverty using qualitative perceptions of consumption adequacy. The Review of Economics and Statistics, 82(3), 462–471.

Tájékoztató a megye lakosságának egészségi állapotáról, az egészségromlást előidéző okokról, a szükséges tennivalókról (2009): A Hajdú-Bihar megye közgyűlés elnöke, Debrecen

Utasi Á. (szerk.) (2007): Az életminőség feltételei. MTA Politikai Tudományok Intézete. Budapest. pp. 251-276.

Veenhoven, R. (2003): Happiness. The Psychologist, March 2003.

AGRI-PRODUCT EVALUATION AND BIODIVERSITY MEASUREMENT

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Abstract: This paper is meant to be the first part of a two part unit that will be published next. The objective of this paper is to be an introduction of agri-product evaluation, within which a short summary of essentials of diversity measurement is given and to share experience on evaluation of environmental friendly agri-product. For biodiversity measurement and extern effects, literature of related publications was processed and experience gained over experimental projects on environmental-friendly technologies was summed up. Methods applied were based on influence-response approach which guided us all through the research work.

It can be stated that one diversity measure or one diversity function fails to describe communities of living beings; therefore, at least two methods should be used in parallel. Scale-dependent description of diversity is necessary, which provides us with new information that can not be revealed by traditional methods. To identify external effects, we have to take influences of use of a specific product into account and the responses generated by use of that product. Influences might appear in parallel or can build up one another, similarly to the generated responses of environment. To be as precise as possible, it is suggested that we take into account only clear responses. Influence-response relations are shown here using terms and concepts in broad sense and in general. More sophisticated application of terms and concepts is needed to evaluate properly and in monetary terms. We will make efforts to clarify terms and their use in the future.

Key words: biodiversity measurement, agri-product, external effects, influence-response

1. Introduction

External effects of any product or applied technology stemming from operations intervening ecosystems have been getting more in focus, but they are far not stressed upon. A lot of troubles have been identified so far which are very difficult to handle. A well known trouble is the wetlands in danger all over the world (*Kerekes* et al., 1994; *Kerekes and Szlávik,* 1999). Biodiversity is a real challenge to measure, since it is very difficult to look into, being so complex and dynamic. Nowadays expressing the value of biodiversity is also calculated in monetary unit, but it also demands efforts because of value factors independent of use. There are tools developed and used, but they differ in applicability. Evaluation of such tools by *Pearce* et al. (1999) is available in order to embed them in practice. At the same time evaluation of agri-products has not embedded properly in practice, but some reports related to the theme are available (*Felföldi,* 2008a; 2008b).

This paper is meant to be the first part of a two part unit that will be published next. The objective of this paper is to be an introduction of agri-product evaluation, within which a short summary of essentials of diversity measurement is given and to share experience on evaluation of environmental friendly agri-product.

2. Material and method

Influencing biodiversity as an external effect might be a characteristic of any product or intervention, which is highly true for a production technology. For biodiversity measurement and extern effects, literature of related publications was processed and experience gained over experimental projects on environmental-friendly technologies was summed up. We processed relevant data of two experimental projects such as environmental friendly soil cultivation and its effects on diversity of weed communities, and usage of mixture of seeds as multifunctional agri-product. The first is technology centered, focusing on effects on diversity of weeds by variants of soil cultivation as an operation within the technological process of crop production. The second is focusing on the use of an agri-product that is a final product meant to be applied e.g. in game management. To evaluate the effects of this final product of agricultural origin we applied influence-response approach which guided us all through the research work. There were two experimental spots with relatively small-sized plots for mixtures differing in ingredients of seed. Vegetations of different mixtures were left on the spot for all year round. Year round monitoring provided us with data to be processed from many aspects, covering biodiversity, too.

Experience on diversity measurement and the place of diversity as field from which responses can be identified are presented in chapter 3.1. and 3.2., respectively.

3. Results and discussion

3.1. Diversity measurement

Researchers noted that there was need to work out measures and functions in order to make comparisons between species, taxons, ecological systems etc. Total number of species (ST) as a diversity measure is to determine the pool of species. This measure fails to reflect status of mass, furthermore, this does not allow us to compare communities. The methods besides the components take into account status of mass and structure of dominance. These methods use such measures as those of which rise when being an increase in the number of species, as well as being more even distribution of status of mass.

There are texture examinations based on distribution and not based on distribution. These latter ones are called diversity indices (*Whittaker,* 1972,). Methods based on distribution could represent textural relations but failed to give structural relationship. Diversities not based on distributions concern abundance (N) in the sample. Disadvantage of ST/N ratio is the low value we often get and that non-linearity which often occurs between number of species and abundance. *Therefore, Gleason* (1922) and *Menhinick* (1964) advise to use S/logN and S/√N, respectively.

Table 1. Basic statistics of diversity for variants of tillage (summer time)

SUMMER	Direct drilling	Field ploughed by disk-ripper	Shallow ploughed field	Traditional tillage
Species Total (ST)	22,0	9,0	15,0	10,0
Average species (S_{aver})	8,4	4,6	6,0	2,8
Median of species	7,0	4,0	7,0	2,0
Number of individual plants (N)	191,0	179,0	197,0	157,0
Average number of individual plants (N_{aver})	38,2	35,8	39,4	31,4
ST/N	0,115	0,050	0,076	0,063

Note: figures in the table only as examples here

There are some often used diversity measures and basic statistics in *table 1*. Figures belong to 3 variants of an environmental friendly operation and the control operation, being here as an example only. It is the number of species that naturally refers to diversity. The total number of species informs on total of species on research area. If it is the ST/N ratio that we use to measure diversity, then we might get different result in ranking diversity.

The next group of diversity measurement is represented by classical diversity functions *(table 2.)* that are based on abundance- dominance structure of a community. Thus, it is taken into account how many individuals of a genus exist in the community. They are common in ordering functions rareness /R(i;p)/ to genus i. of the (S;p) community (*Patil and Taillie,* 1979).

Classical diversity functions reasonable to use are Shannon-diversity sensible to rare species, Simpson diversity and Berger-Parker diversity sensible to dominant species.

Table 2. Classical diversity functions for variants of tillage (summer time)

SUMMER	Direct drilling	Field ploughed by disk-ripper	Shallow ploughed field	Traditional tillage
Shannon diversity (HS)	2,5836	1,7153	2,3219	1,9476
Evenness	0,8358	0,7807	0,8574	0,8458
Simpson diversity (DQ)	0,8906	0,7791	0,8786	0,8267
Evenness	0,9330	0,8765	0,9413	0,9186
Diversity by Berger-Parker	4,0445	3,0675	4,4204	3,4602

Note: figures in the table only as examples here

Tóthmérész (1997) stated that examining the same community with using different diversity functions could result in contradictions. Solving the contradiction, *Alfréd Rényi* (1961) published the generalisation of Shannon-function which was followed by a study by *Patill and Taillie* (1979). They suggested that diversity profiles should be used to describe diversity and to compare communities. In case the profiles of communities to be compared with do not cross, the communities can be ordered by diversity and the one is more diverse, which has the profile running higher. If the curves do not cross, then the communities cannot be ordered by diversity. This is because one community is more diverse for rare species than the other, and opposite is the case for dominant species. The -ordered entropy by Renyi *(Figure 1.)* is only one of the one-parametric diversity functions that are discussed by *Tóthmérész* (1997).

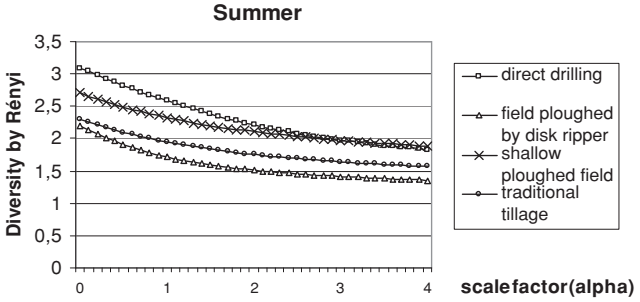

Figure 1. Diversity ranking by Rényi of variants of tillage (summer)
Note: figures in the table only as examples here

Our experience assists the suggestion that a community should be examined by more functions in parallel in order to avoid failures. If these diversity functions result in doubtful ranking, therefore, it is reasonable to do diversity ordering.

3.2. External effects

External effects of agricultural origin can be generated by mainly two ways. One is production of food and non-food produce, and the other one is doing activities with purpose of agro-environmental protection. For food and non-food production, external effects are generated as indirect (connected) outputs. For activities with special purpose of environmental protection they are direct outputs, which are mainly common goods, so is the biodiversity, too.

Table 3. Influence-response relations

Influence	Response								
	scene	soil-life	air	bio-diversity	wild life dynamics	harm	tourism	agric. production	human environment
More diverse environment	+	+	+		+		+		+
Life-place				+	+	+	+		
Shelter				+	+		+		
Source of feed				+	+				
Arable land reserved								–	

Source: Felföldi, 2008a

To identify external effects, we have to take influences of use of a specific product and the generated responses by use of that product. In our case the product is an agri-product as input for non-food activity. To express external effect in monetary term, the beginning step is to be aware of the influence-response relations. Influences might appear in parallel or can build up one another, similarly to the generated responses of environment. To be as precise as possible, it is suggested that we take into account only clear responses (*Felföldi,* 2008a). The use of an agri-product can be described by influence-response relations in general from aspects of external effects. A specific agri-product is described from this aspect in *Table 3*.

The influence-response relations shown here is to present the fields from which responses can derive, but we used terms and concepts in broad sense and in general. More sophisticated application of terms and concepts is needed to evaluate properly and in monetary terms.

For the agri-product examined, we found more diverse environment, life-place, shelter, and source of feed for wild life, and field reserved as main influences. The latter one refers to croplands tied up instead of production such as for example the set-aside.

As responses we found more scenic environment, richer and better soil-life and air, and more diverse life. At the same time, wild life dynamics can get better, but harms caused by the wild can decrease. More scenic environment, diverse wild life and better wild life dynamics – including game dynamics – will attract tourists, furthermore, travellers and people during activities of recreation will be happy with them too, considering game in abundance e.g.. They can generate good feeling and better atmosphere among people, which can be considered as better human environment.

Lands used for application of these agro-products will decrease agricultural production, whatever food or non-food production they are. It might not be considered to be a reasonable decision from profit oriented view.

4. Conclusions

Diversity profiles should be used to describe diversity and to compare communities. It is established that using only one diversity measure or one diversity function fails to describe communities of the living beings, therefore at least two methods should be used in parallel. Scale-dependent description of diversity is necessary, which provides us with new information that can not be revealed by traditional methods. Classical diversity functions reasonable to use are Shannon-diversity sensible to rare species, Simpson diversity and Berger-Parker diversity sensible to dominant species. If these diversity functions result in doubtful ranking, it is reasonable to do diversity ordering.

To identify external effects, we have to take influences of use of a specific product and the generated responses by the use of the product. Since influences might appear in parallel or can build up one another, similarly to the generated responses of environment, it is suggested that we take into account only clear responses.

Influence-response relations are shown here using terms and concepts in broad sense and in general. More sophisticated application of terms and concepts is needed to evaluate properly and in monetary terms. We will make efforts to clarify terms and their use in the future.

References

1. **Gleason, H.A. (1922):** On the relation between species and area. Ecology 3. pp.156–162.
2. **Felföldi J. (2008a):** External effect examination In: Szűcs I. (ed.): Development of agri-product to conserve biodiversity. EA_KUTF_05-BIODIVER, Interim report, 2008
3. **Felföldi J. (2008b):** Adaptation into AKG. In: Szűcs I. (ed.): Development of agri-product to conserve biodiversity. EA_KUTF_05-BIODIVER, Interim report, 2008
4. **Kerekes, S. – Kindler, J.– Csutora, M. – Koloszár, M.– Péter, S. – Zsolnai, L.(1994):** Economic evaluation of the Gabcikovo-Nagymaros Project, Centre for Environmental Studies, Budapest, November.
5. **Kerekes, S. – Szlávik J. (1999):** A környezeti menedzsment közgazdasági eszközei. KJK, Budapest. Második kiadás.
6. **Menhinick, E.F.(1964):** A comparison of some species-individuals diversity indices applied to samples of field insects. Ecology 45, pp. 859–861.
7. **Patil, G.P. and Taillie, C. (1979):** An overview of diversity..In: Grassle-Patil-Smith-Taillie: Ecological diversity in theory and practice. pp. 3–27. International Cooperative Publishing House, Fairland, Maryland.
8. **Pearce, D. – Moran, D. – Krug, W. (1999):** The global value of biological diversity. Final report to UNEP. CSERGE, London, September
9. **Rényi, A. (1961):** On measure of entropy and information. Proceedings of the 4th Berkeley Symposium on mathematical statistic and probability (vol 1.) pp. 547–561. University of California Press, Berkeley.
10. **Tóthmérész, B. (1997):** Diverzitási rendezések. Scientia Kiadó, Budapest.
11. **Whittaker, R.H.(1972):** Evolution and measurement of species diversity. Taxon 21:pp 213–251.

MORAL HAZARD PROBLEM FOR POOR UNDER JOINT FOREST MANAGEMENT PROGRAMME EVIDENCE FROM WEST BENGAL IN INDIAN CONTEXT

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Abstract: This study explores policy framework on current JFM programme, which secures traditional right of local need subject to the carrying capacity of forest, but face moral hazard problem in which Government cannot legally monitor actions against JFM households- which live below poverty line and that extract TFPs for their livelihood, and thereby threatening to sustainability of forest, whereas the incentive work opportunities that Government provides them is insufficient for their subsistence. A good incentive fee dependent on their work **plus** a lump sum fee (subsidy) are required for their livelihood sustenance and sustainability of forest resources.

JEL. Classification: Q23, Q56, Q01, Q58**.**

Key words: Non-Timber Forest Products, Timber Forest Products, Forest wage work, Poor JFM households

Abbreviations used

JFMP	Joint forest management programme
JFM	Joint forest management
TFPs	Timber forest products
NTFPs	Non-timber forest products
TFPs	Timber forest products
FPCs	Forest Protection Committees

It seems to be an important area of research for social scientists to provide policy prescriptions on the current JFM programme, that tries to secure the tradition right of local need of poor forest fringe communities from degraded forest resources by providing their requirements of fuel wood, fodder, minor forest produce , small timber and the share subject to the carrying capacity of forest, which deal with the moral hazard problem for Government ,the owner of the JFM forest , because the latter , cannot legally monitor actions against the poor JFM households- which live below poverty line and that extract TFPs for their livelihood sustenance, and thereby threatening to the sustainability of forest resource, whereas the incentive work opportunities provided by Government to those poor JFM households is insufficient for meeting up the bare minimum level of subsistence. This study is an attempt to explore this issue based on a field study in West Bengal state in Indian context.

What is the importance of JFM in Indian Forestry? Several strands have contributed to the present emphasis on community involvement in forest protection in the context of Indian forestry. JFM emerges as the latest in a long history of policy changes, attempting to create a new relationship between 'state' and 'community'. The old custodian forest management systems were rendered ineffective due to various reasons, mainly traditional emphasis on production of commercial wood and disregard for local needs (*Sarmah and Rai,* 2001:213; *Poffenberger,* 1995:342-50). To secure the right of local need of poor forest fringe communities from forest resources, the 1988 forest policy of the Government of India recognized the need to fulfill the requirements of fuel wood, fodder, minor forest produce and small timber of rural and tribal people, and emphasized the need to create a massive people's movements for protection and development of forests. But the benefit-sharing arrangements between states and forest communities differ widely between states within the country. But empirical evidence from across the world now confirms that community-based regimes are a viable option for the management of local common property resources (*Baland and Platteau,* 1996; *Berkes,* 1989; *Bromley,* 1992; *Correa,* 1999; *Martin,* 1992; *Naik,* 1995;).

Hence the relevant issue might be: does these benefit-sharing arrangement between states and forest communities under community forest management programme meet up the survival need of poor forest communities from forest and thereby restricting the latter's illegal collection of Timber Forest Products (TFPs)? It is argued that the survival of community needs of poor communities should be recognized on a priority basis as pillars for strengthening community participation (*Mukherjee,* 1995). The most important factors motivating massive local peoples' participation for

protection and development of forests is the expectations of immediate returns via wages and incomes from sale of old plantation and local consumption need to fill the requirements of fuel wood, fodder, minor forest produce and small timbers (*Mukherjee,* 1995; *Naik,* 1997). The Arjuni (an area under JFM programme) experience in JFM of West Bengal shows that unless survival needs of food and livelihood are met, participation in natural resource management would always remain threatened (*Mukherjee* 1995: 3132). This experience goes a long way to show that survival needs are of prime importance and can easily destabilize community rights and benefits to resource management. The findings of *Naik* (1997), based on two case studies in Gujarat, help identify the critical factors (survival needs for food and livelihood) in making JFM successful and controllable. Any JFM which does not recognize the significance of creating strategies for sustaining livelihood – basic food security – at the local level has a doubtful future (*ibid*).

The study of *Sarker and Das* (2006), based on the study of some FPCs under western Midnapore division in West Bengal, shows that for the maintenance of regular consumption needs of the local FPC-households, NTFP is the main source of money income because income from the share of government's timber revenue and wages from forestry work constitute a small part of their total income (p.279–280). Consequently, the NTFP is bound to provide the main and stable source of forestry income and it plays the major role for sustenance of JFM programme (ibid:286). This study also signifies that only government's timber share (without any other share of the forest resource, namely NTFPs) was insufficient to meet the immediate survival needs of poor JFM households. It caused large illicit felling (illegal timber extraction), mainly, by the poor forest communities due to the urgency of meeting immediate seasonal livelihood needs and food insecurity, which plagued the area and led to conditions of semi-starvation among the poor people (p.279).It also implies moral hazard problem for government, the owner of the forest resource, for poor forest communities in particular, because such an illicit felling (illegal timber extraction) might be threatening the sustainability of forest resources.

There are also evidences that despite successful achievements of the JFM programme in West Bengal which safeguards the traditional rights and concessions of the forest fringe communities on forestland by providing them with timber share and the share of NTFPs , Government, the owner of forest resources, also has to face a moral hazard problem for all categories of JFM households in general and for marginal and small categories of one joint FPC village(Baragari JFM village) in particular who engage in the JFM programme as agents of government (*Das and Sarker,* 2009a: 326–330; 2009b:60). Their study reveals that Government, the principal, cannot legally control the major illegal felling of TFPs by these poor households of Baragari JFM village. Consequently, despite the fact that most of the JFM households decrease their illegal extraction of timber forest product after JFM they practiced before JFM situation, households below poverty line in the said joint FPC village((Baragari FPC village) increase their illegal extraction of TFPs. This is mainly because, their study reveals, the change of income from legal forest products of the poor categories of households of Baragari JFM village after JFM is much lower than that of same categories of households in other FPCs. In all FPCs, except Baragari, the change of income from legal sources of forest is highly positive ranging between 42.91 percentage point and 117.17 percentage point; in Baragari, this change is negative (-12.92 percentage point).Also important is that alternative source of income other than forest source for the poor JFM households is insignificant. It clearly indicates, they argue, that force or law cannot effectively control the illegal collection of TFPs of the poor categories of households, which live below poverty line, until and unless a considerable income from legal forest source meets up their bare minimum level of subsistence (ibid).

One may argue that a good incentive fee dependent on the work (output) would be required for livelihood sustenance of the poor categories of households of Baragari FPC and sustainability of forest resource and thereby reduce the moral hazard problem of Government. But the study of *Das and Saker* (2009b: 68; 2008:40-1) reveals that the only work opportunity Government provides to JFM households in these areas is forest wage work .Significantly, the number of working days for poor JFM households as wage labour under forest department (Government) is more or less fixed at a fixed wage rate of Rs. 67.50, which is about a double of the prevailing average local wage rate for usually eight hours of service from 8 a.m. to 4 p.m. One person of each JFM household with a family size of five or less gets the opportunity of forest work from 35 to 40 days per year. If the size of member of a household is greater than five, usually, two persons get the opportunity of forest work for 70 to 80 days in total per year from the same family (ibid).Also important is that the increase of opportunity of forest work by forest department (Government) depends on new plantation programme, which is usually long term in nature. The study of *Sarker* (2009) shows that the production of NTFPs the poor JFM households legally collect from forest do not usually increase within the short period (pp80-1).

In these perspectives one of the vital issues is: if the incentive work opportunities provided by Government to the poor JFM households- which live below poverty line and that extract TFPs for their livelihood sustenance in which government , the owner of the JFM forests, cannot legally monitor actions against them(or force or law cannot effectively control the illegal collection of TFPs) – can hardly be increased in the short period in the JFM forests ,how , then, Government should deal with such a moral hazard problem which is threatening to the sustainability of forest resources. In such a situation a good incentive fee dependent on their work (output) might not be sufficient for livelihood sustenance of poor people and sustainability of forest resources. There seems to be two ways to tackle the situation

by the Government, the owner of the JFM forest– one is to increase the production of NTFPs, fuelwood etc. so that the very poor households may increase their legal collection of those products; the other is to execute a good incentive fee dependent on their work (output) plus a lump sum fee (subsidy) independent of their production for livelihood sustenance of those people and sustainability of forest resources. But the production of forest products (like NTFPs) the very poor households legally collect from forest do not usually increase within the very short period. Then the alternative source to increase the income of the poor households (who live below poverty line and that extract of TFPs for their livelihood sustenance in which government, the owner of the JFM forests, cannot legally monitor actions against them) should be to execute a good incentive fee dependent on their work (output) plus a lump sum fee(subsidy) for livelihood sustenance of those people and sustainability of forest resources by the government.

This study, however, both theoretically and empirically seeks to explore policy framework for dealing with a moral hazard problem for Government who cannot legally monitor actions against poor JFM households, which live below poverty line and that extract Timber forest products, which is threatening to the sustainability of forest resources, for their livelihood sustenance under JFM programme in a situation where the incentive work opportunities provided by Government to those poor JFM households is insufficient for meeting up the bare minimum level of subsistence. The underlying hypothesis is that a good incentive fee dependent on forest wage work (output) for JFM households plus a lump sum fee(subsidy) independent of forest work are required for livelihood sustenance of JFM households and sustainability of forest resources.

This paper proceeds as follows. Section II presents the importance of the study. Section III provides a simple theoretical model based on the hypothesis of the study. The data set and methodology appear in section IV. Section V presents the key results of the empirical study in keeping with the objective of the study. Conclusions are contained in section VI.

Section II

An optimal contracting arrangement by the government – JFM household framework – can be defined as follows: A contract is optimal if it maximizes the expected utility of the government for an expected utility of the JFM household subject to the condition that the JFM household finds it worthwhile to participate in the contract. As is well known, government is the owner of forest land and under JFM programme government employs JFM household (agent) to work under the former for the management of forest resources. Let us suppose that there are only a finite number of output levels (q_1, q_2, q_3, … q_n). Let v and r be two efforts that can be chosen by the JFM household (agent) out of some set of feasible efforts. These efforts influence the probability of occurrence of different output levels. Let us suppose that the probability that the output level q_i will occur if the agent chooses effort v(r) by π_{iv} (π_{ir}). Let $x_i = x(q_i)$ be the amount that the government pays the JFM household if output level q_i is observed. We denote the lump sum fee (subsidy) k, the minimum subsistence level of JFM household, independent of q_i. Then the expected profit of the principal (government), if agent (JFM household) chooses action v, is

$$\sum_{i=1}^{n}(q_i - x_i)\pi_{iv} - \sum_{i=1}^{n} k_i \qquad (1)$$

The expected profit is assumed to be linear in q_i. It implies that the principal is risk-neutral[1]. We assume that the agent is risk-averse[2] and maximizes the expected utility from the payment. We also assume that the JFM household (agent) finds efforts costly, and write c(v) be the cost of effort v. The cost enters into JFM household's utility function linearly. If JFM household chooses effort v, his/her expected utility less cost is given by

$$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v)$$

, where u is the Von Neumann-Morgenstern utility function of the JFM household (agent).

Two types of constraints are imposed on JFM household in this self-enforcing contract (non-enforceability in the courts does not make contracts valueless. The contract acts in such a way that each party chooses to adhere to its term) – participation constraint and incentive comparability constraint.

Since the JFM household is a utility maximiser, he/she will choose action u if

$$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) \geq \left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(r) \qquad (2)$$

and will choose effort r otherwise.

This constraint is referred to as the incentive compatibility constraint. The second type of constrain says that the JFM household may have other alternatives available that give him/her some utility $\bar{u}$. Then the participation constrain is

$$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) \geq \bar{u} \qquad (3)$$

The expected utility the JFM household gets from this job must be at least as great as the utility he/she could get elsewhere.

If the payment is based on effort rather than on output, then the government is to determine the expected profit from each effort by the JFM household and then induce the effort that minimizes government's expected profit. But as the efforts of the JFM household are hidden, payment to him/her can not be a function of the unobservable effort (v, r). It can be made contingent on the observed output q_i. Attempt has been made to develop results along this line. Suppose that there is no incentive problem. However under the risk-neutrality assumption the government is indifferent to risk and thus there is no need to trade off incentives for risk-sharing. In such a case the principal's (government's) optimization problem is

$$\sum_{i=1}^{n}(q_i - x_i)\pi_{iv} - \sum_{i=1}^{n} k_i$$

subject to $$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) \geq \bar{u}$$

where maximization is taken place over x_i.

In general, government will want the JFM household to choose xi to just satisfy the constraint so that

$$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) \geq \bar{u}$$

The Lagrangian for this optimization problem is

$$L = \sum_{i=1}^{n}(q_i - x_i)\pi_{iv} - \lambda\left(\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) - \bar{u}\right)$$

where λ is the Lagrange multiplier.

Government is risk-neutral because her expected profit is linear in x_i. Differentiating L partially with respect to x_i and λ, and setting the derivatives to zero, we have the first order conditions as

$$-\pi_{iv} - \lambda u'(x_i)\pi_{iv} = 0$$

$$\left[\sum_{i=1}^{n}\{u(x_i)\pi_{iv}\} + \sum_{i=1}^{n} k_i\right] - c(v) - \bar{u} = 0$$

The first of the above conditions states $u'(x_i) = 1/\lambda$, a constant. i.e., x_i must be independent of i (x_i is a constant).

The model assumes that that the wage rate for each individual of JFM household, who work under forest department as forest wage labour, is fixed (*Das and Saker* (2009b: 68; 2008:41). What it implies that x_i is independent of i. The wage rate does not depend on the return (high or low) of forest wage work of JFM household.

This theoretical model tries to explore that a good incentive fee dependent on their work (output) might not only provide livelihood sustenance of poor people living below poverty line and ensure sustainability of forest resources; rather a good incentive fee dependent on their work (output) plus a lump sum fee (subsidy) are required for livelihood sustenance of those people and sustainability of forest resources. This theoretical model is important in that moral hazard problem that appears from asymmetric information is a trade – off between risk bearing and incentives; but such a trade-off cannot provide livelihood sustenance to poor people living below poverty line under JFM programme, because the potential financial and economic liabilities the government have to bear for their agents (poor JFM households) is more than the former's expected return(i.e., the return of the incentives) they expect to receive from their agents- work (output).

Section III

As is well known, The Forest Conservation Act of 1980 and the 1988 National Forest Policy in India marks a major departure from the earlier policies which emphasis on production of commercial wood and disregard for local need (*Poffenberger,* 1995; *World Bank,* 2006: xvi; *Sarmah and Rai,* 2000: 213), because Government of India, then, could understand that until and unless the benefit of forest fringe communities is secured, neither forest resources nor forest management can be sustainable. In order to execute sustainable forest management system, the active participation of local forest communities in forest management for conservation and development plans of forest resources and the participatory forest management on usufruct sharing basis for safeguarding their traditional rights subject to the carrying capacity of forest was first introduced and implemented by the National Forest Policy of 1988.

If we look into the historical perspective of Joint Forest Management programme in West Bengal in particular, we find that, in keeping with the other parts of India, the local forest fringe communities of West Bengal have also mobilized repeatedly from long past against the custodian forest management system (commercial need either of the government or of the rulers of India) to protect their traditional right on forest (*Poffenberger,* 1995). With regard to the south West Bengal *(Midnapore, Bankura, Purulia Burdwan and Birbhum)*, including our study area, is concerned, *Santal, Bhumij* and *Mahato* tribal, with some low caste Hindus, mobilized repeatedly against *Mughal* and *British* rulers to protect their traditional rights on forestland from long past. *Chur Rebellion* (from 1767 to 1805), *Naik Revolt* (1806–16), *Hul Rebellion* (1855) are the glaring examples of the history in south West Bengal where forest fringe communities organized resistance against rulers of India to protect their own right in forestland.

However, far-reaching developments in the historic, demographic, economic, social and environmental fields have resulted in the revision of the National Forest Policy in 1988. But despite the fact that successful examples of joint forest management in India were beginning to emerge in the Arabari Hill in Midnapore district of West Bengal during the early 1970s (*Sundar and Jeffery,* 1999:28), the JFM movement gathered momentum when in 1989 a programme of resuscitation and reestablishment of *moribund sal* and other hardwood forests in the districts of Midnapore, Bankura, Purulia, Burdwan and Birbhum in south West Bengal was initiated by the government with the active participation and involvement of the local people. In keeping with the JFM movement in India, West Bengal government's resolution was also issued in 1989, declaring the principles of sharing of duties, responsibilities as well as the usufructs from the forests to the participant local people living in the fringe of the forests. The procedures for establishment of the institution called Forest Protection Committee (FPC), comprising of these participants as members, were also defined.

The foundation of an innovative forest protection system and the participatory forest management was thus laid for the forests of south West Bengal which covers approximately 38 per cent of the total forest area of the State. While explaining the achievements of JFM programme in West Bengal, West Bengal State Forest Report (2000) clearly mentions:

"*As a result of participatory and joint forest management activities in south West Bengal the vast tract of scattered,*

over-exploited and degraded forests containing mainly the sal were resuscitated and restored to productivity with great improvement in quality and density " (SFR, 2000:47).These participatory activities are now progressing in other areas of the state as well.

Government report (SFR, 2000) reveals that the overexploitation of trees for timber was so severe that thousand and thousand hectares of forest lands in the south West Bengal except *Sundarban* were almost treated as bare plain land, when the JFM was established; but such lands are almost secured after JFM programme. Secondly, government revenue from the degraded forest was almost nil when the JFM was established, but it has significantly increased after JFM (*Das and Sarker,* 2008: 82–91; *Sarkar and Das,* 2008:22; *Das and Sarker;* 2009a: 324).

Despite such a successful achievement of JFM programme in West Bengal, some poor JFM households have higher incidence in the illegal extraction of Timber Forest Products (TFPs) to meet up their bare minimum level of subsistence in which law or force cannot effectively control the illegal extraction of TFPs of these poor JFM households, which live below poverty line (*Das and Sarker,* 2008:91; *Sarker and Das,* 2008:35; *Das and Sarker,* 2009a:59; 2009b: 326–330; *Sarker,* 2009:78). It is, no doubt, a moral hazard problem for the Government because such an illegal extraction of TFPs by the JFM household might be threatening the sustainability of forest resources. Moreover, the pressure of population on forests in the long run might lead to substantial damage of forest resource, causing acute environmental damage for West Bengal in future.

This empirical study, however, tries to explore policy framework as to how both livelihood sustenance of poor JFM households and sustainability of forest resources can attained simultaneously. This empirical study is important in that it might help us examine whether the 1988 Forest Policy of India and thereafter West Bengal Government' JFM resolution in June 1989, which for the first time specifies the rights of the protecting communities with the help of establishing Forest Protection Committees/Village Forest Committees over forest lands, has been effective on meeting the local needs in particular of the tribal and the poor living near the forests and in safeguarding their traditional right and concession subject to the carrying capacity of forests .

Section IV

In order to examine our stated objectives based on both female and joint FPCs, we mainly depend on field survey in Midnapore and Bankura districts of West Bengal. The inclusion of Midnapore district under our field survey is due to the fact that the key precursor to JFM from the managerial perspective was a local level initiative, which was started from the Arabari hills under Midnapore district of West Bengal during the early 1970s. Moreover, as we attempt to examine the stated objectives in both the female and joint FPCs, some female FPCs are also in operation along with joint FPCs in Midnapore district. The main argument behind the inclusion of Bankura district under our study may be judged by the fact that female FPCs were first established in Bankura districts in West Bengal during early 1990's and the majority of female FPCs are now running in Bankura district. As per the official records (State Forest Report, Government of West Bengal 2000) 17 female FPCs are in operation in Bankura district – 4 in Bankura North, 9 in Bankura South and 4 in Panchet forest divisions (Sarker and Das, 2002:4410). However, during the first year of my UGC Minor Research Project entitled "How to execute the Joint Forest Management Programme with Sustainability?" a study of Joint FPC and Female FPC in four divisions under Midnapore and Bankura districts in West Bengal, we conducted our field survey in four FPCs based on stratified random sampling method from different forest ranges under two forest divisions – one in West Midnapore (Midnapore district) and the other in North Bankura (Bankura district). First, forest divisions and then forest ranges were selected by purposive sampling, but the selection of sub-samples- FPCs- from within the selected ranges depends purely on chance. Two FPCs were selected from Gidini Range and one, from Hatibari Range under West Midnapore division. Two Female FPCs are in operation in Gidini Range under West Midnapore district – Kherajhore Female FPC and Depudanga Female FPC. Kherajhore Female FPC was randomly selected from them for our field study. We also randomly selected one Joint FPC based on the total Joint FPCs under Gidini Range. Under Hatibari Range in West Midnapore division, no Female FPC is in operation. However, we randomly selected one Joint FPC (Goulbur Marshal) from out of all Joint FPCs under Hatibari Range. One Joint FPC was also randomly selected from Gangajalghati Range under North Bankura division (Bankura district) as there is no female FPC in this range. However four FPCs – one Female FPC and three Joint FPCs – were selected based on stratified random sampling method. Firstly, districts, forest divisions and then forest ranges were selected by the purposive method. Finally, the selection of sub-samples of FPC from three forest ranges depends purely on chance (Simple Random Sampling Without Replacement). The subdivision of the population into strata is done by the purposive method, but the selection of sub-samples within the final strata (forest ranges) depends purely on chance. However, our final survey considers all units of households (134 in number) – Kherajhore (32), Khatgeria (17), Goulbermarshal (59) and Amjuri (26) – in four FPCs. The data of these four sample FPCs were considered for two situations – before JFM and after JFM. The period of collecting data for 'after situation' in all FPCs is same- between February and October 2005. But the period of data for 'before situation' was not same to all FPCs. JFM programme in Kherajhore, Khatgeria, goulbermarsha and Amjuri was started on March 1994, August 1995, May 1994 and July 1995 respectively. 'Before situation' for each FPC is considered for the preceding one-year period from the starting of JFM programme in the respective FPC. For

example, 'before situation' in Kherajhore FPC was between March 1993 and February 1994. It is worth mentioning that each FPC was formed in the respective village; so the FPC/village is synonymous in this study. They will be referred to as 'JFM village 'in the section of the' key results of the empirical study'.

In the empirical part this study considers simple technique of measurement like arithmetic mean, proportions, paired t test for equality of two means for examining our stated objectives, and tabular analysis for examining our stated objectives.

Section V

All sample villages fall into the semi-arid agro-climatic category with red soils, insufficient rainfall and not good in terms of moisture retention. The socio economic profile of the sample villages is presented in *Table 1.* It shows that all households belong to either very poor or poor category in two (Goulber Marshal and Amjuri) out of four villages. Out of the remaining villages the incidence of very poor and poor category in Kherajhore and Khatgeria works out to about 93.75 and 70.59 per cent respectively. Although more than two-fifths of the households are landless in all JFM villages, the incidence of landless households is relatively high in Amjuri (73.07 per cent) and Goulbur Marshal (57.62 per cent). Worthwhile to mention that both very poor and poor income group in all JFM villages live below poverty line. These classifications (very poor, poor and medium) have been taken from *Bezbaruah* (2004). Also important is that , one may calculate real income after deflating the money income by cost of living index; but there would be, hardly, any change in the money income for the classification of households (very poor, poor and medium) that appears from *Bezbaruah* (2004) during the period of our survey(between February and October 2005). As regards the caste status is concerned, all the households in two (Goulber Marshal and Amjuri) out of four villages belong to ST category and the average size of household members in these two

Table 1. Socio – Economic Characteristics of the Sample FPCs/Village

FPC/ Village	No. of HH	Average size of HH	Average size of Land Holding (acres)	HH belonging to Wealth Category			% of H H belonging to		% of FPC member	
				Very Poor*	Poor**	Medium***	SC	ST	Illiterate	Primary Edn.
Kherajhore	32	4.30	3.25(24)	18[14]	12	2	6.25	3.13	56.25	37.50
Khatgeria	17	4.68	3.52(18)	7[7]	5	5	-	14.18	58.82	29.41
Goulber Marshal	59	6.38	2.65(49)	38[34]	21	-	-	100	66..10	20.34
Amjuri	26	6.02	1.35(14)	23[19]	3	-	-	100	69..23	26.92

Note: HH=Households. Figures in ( ) indicate percentage of area under Wastelands. Wastelands include private as well as common lands that are not being cultivated. Figures in [] indicate number of landless labour households.

* Indicates per capita annual income within the range of Rs.0-8500;

** implies per capita annual income within the range of above Rs.8500-11000;

*** represents per capita annual income within the range of above Rs.11000-13000. Both very poor and poor income groups live below poverty line. These classifications (very poor, poor and medium) have been taken from *Bezbaruah* (2004).

Source: Sample Survey.

Table 2. Change (%) in the Availability of Fodder (per standard cattle per day)

FPC/ Village	Category of HH (Wealth)	Fodder availability (Kg/Day/Standard Livestock) in the sample Households		
		Before	After	% Change*
Kherajhore	Very Poor	4.8(3.8)	8.2(6.4)	70.83(2.6)
	Poor	6.3(5.4)	9.5(8.6)	50.79(3.2)
	Medium	12.6(10.6)	16.8(14.8)	30.33(4.2)
Khatgeria	Very Poor	5.3(4.2)	12.6(9.6)	137.74(5.4)
	Poor	8.5(6.3)	12.5(10.8)	47.06(4.5)
	Medium	12.5(9.4)	16.4(13.8)	31.20(4.4)
Goulber Marshal	Very Poor	6.5(5.6)	11.6(10.4)	78.46(4.8)
	Poor	9.8(7.4)	12.8(10.6)	30.61(3.2)
Amjuri	Very Poor	5.3(4.8)	12.6(11.4)	137.73(6.6)
	Poor	8.2(6.3)	13.8(90.6)	68.29(4.3)

Note : Standard livestock is arrived at by converting small livestock on a 3:1 ratio to big livestock.

Figures( ) indicate average number of standard cattle unit per household

* Indicates that the difference is statistically significant at 5 per cent level.

Source: Sample Survey.

Table 3. Change (%) in Fuelwood collection per day

FPC/ Village	Category of HH (Wealth)	Quantity of Fuelwood (Quintals)		
		Before	After	% Change*
Kherajhore	Very Poor	21.00(1.17)	40.00(2.22)	19.00(1.05)
	Poor	9.00(0.75)	18.5(1.54)	9.5(0.79)
	Medium	0.30(0.15)	0.35(0.18)	0.05(0.03)
Khatgeria	Very Poor	5.00(0.71)	14.5(2.07)	9.5(1.36)
	Poor	2.00(0.40)	7.5(1.50)	5.5(1.1)
	Medium	-	-	-
Goulber Marshal	Very Poor	28.00(0.74)	43.5(1.14)	15.5(0.4)
	Poor	10.00(0.48)	19.5(0.92)	9.5(0.44)
Amjuri	Very Poor	15.75(0.68)	42.00(1.83)	26.25(1.15)
Poor	1.25(0.42)	4.20(1.40)	2.95(0.98)	

Note : * Indicates that the difference is statistically significant at 1 per cent level.

Figures in ( ) indicate average quantity of fuelwood(Quintals) per household.

Source: Sample Survey.

Table 4. Change (%) in the Non-Timber Forest Products (NTFPs) collection by the Sample Households per day.

FPC/Village	Category HH (Wealth)	Quantity of NTFPs (KG)								% Change of total*
		Before				After				
		Sal Leaves	Kendu Leaves	Others	Total	Sal Leaves	Kendu Leaves	Others	Total	
Kherajhore	Very Poor	42	15	10	67 (3.72)	128	69	22	219 (12.17)	226.87 (8.45)
	Poor	20	08	06	34 (2.83)	69	37	14	120 (10.00)	252.94 (7.17)
	Medium	02	-	-	02 (1.0)	-	-	-	-	-100 (-1.0)
Khatgeria	Very Poor	16	10	07	33 (4.71)	47	25	18	90 (12.86)	172.73 (8.15)
	Poor	07	08	06	21 (4.20)	28	19	11	58 (11.60)	176.19 (7.40)
	Medium	-	02	-	02 (0.40)	-	05	-	05 (1.0)	150 (0.60)
Goulber Marshal	Very Poor	80	64	32	176 (4.63)	92	106	67	265 (6.97)	50.57 (2.34)
	Poor	38	28	16	82 (3.90)	47	45	36	128 (6.10)	56.10 (2.20)
Amjuri	Very Poor	72	-	11	83 (3.61)	167	-	32	199 (8.65)	139.76 (5.04)
	Poor	07	-	02	09(3.0)	20	-	07	27 (9.0)	200 (6.0)

Note: Figure in ( ) indicate average quantity of NTFPs (KG) per household per day.
*Indicates that the difference is statistically significant at 1 per cent level.
Source: Sample Survey.

FPCs/Villages is relatively high in relation to the rest ones. The majority of households in other two villages belong to general category. In fact, agriculture and its allied activities are the main source of income of the households in our sample villages. A considerable portion of land in each village is under wastelands, which are not cultivated. Therefore, dependence on forest resources under JFM programme is expected to have a substantial impact on the livelihood of most of these households.

But the dependence of forest resource for JFM households in the area we surveyed is measured in terms of changes in access to fodder, fuelwood, NTFPs and TFPs (Timber Forest Products) that act as a flow input into livelihood activities of household as well as community level in the study. Livestock rearing is an important livelihood strategy in the sample JFM villages. The availability of fodder on a sustainable basis is the key for the sustainability of livestock rearing. *Table 2* shows that fodder availability has made a significant increase in all the sample villages for JFM Programme, the rate of increase being more prominent among the households of very poor category, and medium category is the least beneficiaries by these shifts. This is also true in terms of changes in access to daily fuelwood collection *(Table 3)*, daily collection of NTFPs *(Table 4)*, which are also a key to the livelihood security for households we surveyed. But with regard to the changes in the collection of timber forest products (TFPs) per day by the sample households are concerned, *Table 5* shows that the rate of change of quantity of TFPs (Kg) per day has significantly

Table 5. Change (%) in Timber Forest Products'(TFPs) collection per day

FPC/ Village	Category of HH (Wealth)	Quantity of TFPs (Kg) per day		
		Before	After	% Change*
Kherajhore	Very Poor	65(3.11)	6(0.33)	-90.77(-2.78)
	Poor	16(1.33)	4(0.33)	-75.00(-1.0)
	Medium	5(2.50)	-	-100.00(-2.50)
Khatgeria	Very Poor	24(3.43)	5(0.71)	-79.17(-2.72)
	Poor	13(2.6)	2(0.40)	-84.62(-2.20)
	Medium	12(2.40)	-	-100.00(2.40)
Goulber	Very Poor	42(1.11)	162(4.26)	285.71(3.15)
Marshal	Poor	19(0.90)	35(1.67)	84.21(0.77)
Amjuri	Very Poor	30(1.30)	10(0.43)	-66.67(-0.87)
	Poor	5(1.67)	2(0.67)	-60.00(-1.0)

Note : Figures in ( ) indicate average quantity of TFPs(Kg) per household .
*Indicates that the difference is statistically significant at 1 per cent level.
Source: Sample Survey.

decreased in three JFM villages except one (Goulber Marshal) for the execution of JFM Programme. The significant decrease of the collection of TFPs in most of the JFM villages is desirable because law forbids the collection of TFPs by the households other than Forest Department/Government. Rather the members of the JFM village are entitled to have a fixed share of TFPs (usually 20 to 25 per cent of total income from TFPs) from forest department/government. Despite the fact that law prohibits the collection of TFPs, very poor and poor households under our

Table 6. Incremental Annual Net Revenue (Rs.) from All Sources of Sample Households.

FPC/Village	Category HH (Wealth)	Before			After			% Change		
		Net Return from Forest sources	Net Return from other sources	Net Return from all sources	Net Return from Forest sources	Net Return from other source	Net Return from all sources	Net Return from Forest source*	Net Return from other sources*	Net Return from all sources*
Kherajhore	Very Poor	314079 (17448.83)	177427 (9857.06)	491506 [63.90]	517608 (28756)	132664	650272 [79.60]	64.80	-25.23	32.30
	Poor	191253 (15937.75)	227945 (18995.42)	419198 [45.62]	293522 (24460.17)	228773 (19064.42)	522295 [56.20]	53.47	0.36	24.59
	Medium	20623 (10311.50)	70216 (35108)	90839 [22.70]	18972 (9486.00)	86060 (43030.00)	105032 [18.06]	-8.01	22.56	15.62
Khatgeria	Very Poor	114247 (16321)	80383 (11483.29)	194630 [58.70]	195727 (27961.00)	14592 (2084.57)	210319 [93.06]	71.32	-81.85	80.61
	Poor	79024 (15804.80)	103776 (20755.20)	182800 [43.23]	117865 (23573.00)	97579 (19515.80)	215444 [54.71]	49.15	-5.97	17.86
	Medium	42340 (8468)	186165 (37233)	228505 [18.53]	49805 (9961.00)	245597 (49119.40)	295402 [16.86]	17.63	31.92	29.27
Goulbur Marshal	Very Poor	687328 (18087.58)	430805 (11336.97)	1118133 [61.47]	1275764 (33572.74)	252136 (6635.16)	1527900 [83.50]	85.61	-41.47	36.65
	Poor	341093 (16242.52)	532992 (25380.52)	874085 [39.02]	659358 (31398.00)	534940 (25473.33)	1194298 [55.21]	93.30	0.37	36.63
Amjuri	Very Poor	475577 (20677.26)	293027 (12740.30)	768604 [61.88]	837200 (36400.00)	289315 (12578.91)	1126515 [74.32]	76.04	-1.27	44.67
	Poor	51284 (17094.67)	620114 (206704.66)	671398 [7.64]	86625 (28875.00)	70407 (23469.00)	157032 [55.16]	68.91	-88.65	-76.61

Note: Figures in ( ) indicate average net return from forest/other sources per household.
Figures in [] represent percentage net return from forest sources of net return from all sources.
* indicates that the difference is statistically significant at 1 per cent level.
Source: Sample Survey.

sample JFM villages are engaged in illegal collection of TFPs[3], although the quantity of collection has significantly decreased in JFM villages after JFM Programme in relation to their past when the programme was not in operation. But, more importantly, the illegal collection of TFPs has substantially increased to one(Goulber Marshal) out of four JFM villages by both very poor and poor categories of households *(Table 5)*. This is, mainly, because the rate of increase of the collection of other legal Forest Products (FPs) –like Fodder *(Table 2)* Fuelwood *(Table 3)*, NTFPs *(Table 4)*. – which are also one of the main sources of livelihood security for very poor and poor categories of households, in the particular village (Goulber Marshal) by both the categories of households is substantially lower than that of the collection of same type of other legal FPs by same categories of households(very poor and poor)in other three villages. What it implies is that if the NTFPs ,Fodder and Fuelwood (which are allowed to collect legally under JFM programme) are more (less) available in the JFM forests ,the forcible extraction of TFPs (which are illegal under JFM programme and that are threatening to sustainability of forest resource) by the poor and very poor categories of households significantly decreases (increases) in the JFM forests. It seems to imply that law cannot forcibly control the illegal collection of TFPs of the very poor and poor categories of households, who are almost dependent on FPs for their livelihood security, until and unless they are guaranteed with minimum livelihood security by other sources.

If we consider the break-up of net annual income (in Rs.) of JFM households, the legal and illegal income from JFM forests by JFM households will be clearly demarcated. First, we consider annual net return (in Rs.) of sample households from all sources, Table 6 shows that while the JFM Programme is in operation the contribution of net return (in Rs.) from forest sources out of the net return (in Rs.) from all sources works out to the major source of income for very poor and poor categories of households in all sample villages. It is also observed that the forest source was the major source of net income (in Rs.) particularly for very poor category of households before the execution of JFM Programme when the forest was mainly used for commercial purpose and the forest fringe communities were not legally allowed to use forest resources for their livelihood security. Despite the fact that the incidence of forest income for poor and very poor JFM households has considerably increased after JFM. as may be seen from Table 6, the net annual income (in Rs.) and net annual average household income (in Rs.) generated from forest resources for very poor and poor categories of households in sample villages have significantly increased due to JFM Programme compared with the past when the programme was not in operation, the rate of net increase for very poor and poor being in the range of 64.80-85.61and 49.15 -93.31 respectively. On the other hand, the rate of increase in net return (in Rs.) is around 18 per cent for medium category of households in one JFM Village (Khatgeria), whereas in another JFM village(

Table 7: Incremental Net Return (in Rs.) from Forest Sources of Sample Households Per Year.

FPC/ Village	Category of HH	Before						After						% Change of net return*
		NTFPs, Fuelwood Fodder		Return from Timber sale	Return from Timber Share	Wage income from forest	Net Return from all Forest source	NTFPs, Fuelwood Fodder		Return from Timber sale	Return from Timber Share	Wage income from forest	Net return from all forest source	
		Consumption	Sale					Consumption	Sale					
Kherajhore	Very Poor	105120 (5840)	197100 (10950)	11859 (659)		6324 (351)	314079 (17449)	124830 (6935)	315360 (17520)	39420 (2190)	6498 (361)	31500 (1750	517608 (28756)	64.80
	Poor	91980 (7665)	96360 (8030)	2913 (243)		2175 (181)	191253 (15937)	100740 (8395)	157680 (13140)	17520 (1460)	4332 (361)	13250 (1104)	293522 (24460)	53.47
	Medium	16060 (8030)	3650 (1825)	913 (457)		-	20623 (10312)	18250 (9125)	-	-	722 (361)	-	18972 (9486)	-8.01
Khatgeria	Very Poor	38325 (5475)	71540 (10220)	4382 (626)		2728 (390)	114247 (16321)	48545 (6935)	114975 (16425)	12775 (1825)	5852 (836)	13580 (1940)	195727 (27961)	71.32
	Poor	36500 ((7300)	40150 (8030)	2374 (475)		925 (185)	790241 (15805)	43800 (8760)	62050 (12410)	3650 (730)	4180 (836)	4185 (837)	117865 (23573)	49.15
	Medium	40150 (8030)	-	2190 (438)		-	42340 (8468)	45625 (9125)	-	-	4180 (836)	-	49805 (9961)	17.63
Goulbur Marshal	Very Poor	235790 (6205)	443840 (11680)	7698 (203)		1476 (39)	687328 (18088)	177400 (4668)	268670 (7070)	817650 (21517)	3724 (98)	8320 (219)	1275764 (33573)	85.61
	Poor	158297 (7538)	176295 (8395)	3833 (183)		2668 (127)	341093 (16243)	191625 (9125)	222285 (10585)	229950 (10950)	2058 (98)	13440 (640)	659358 (31398)	93.31
Amjuri	Very Poor	111888 (4865)	352590 (15330)	5457 (237)		5642 (245)	475577 (20677)	142715 (6205)	562465 (24455)	100740 (4380)	-	31280 (1360)	837200 (36400)	76.04
	Poor	19470 (6490)	30660 (10220)	914 (305)		240 (80)	51284 (17095)	32995 (10998)	50180 (16727)	2190 (730)		1260 (420)	86625 (28875)	68.91

Note: *Indicates that the difference is statistically significant at 1 per cent level.
Figures in ( ) indicate average net return from forest/other sources per household. Source: Sample Survey.

Kherajhore) this change is negative for medium category. It might suggest that very poor and poor categories of households are more dependent on income from forest resources; but medium category of households is more dependent on their income from non-forest sources.

As regards average household annual net forest income from legal wage work is concerned, Table 7 shows that the average household wage income under forest department for poor and very poor households after JFM is considerably higher in all JFM villages except one (Goulber marshal). It is important to mention that government wage rate for forest wage labour is fixed at Rs. 67.50, which is about a double of the average local wage rate. But the number of working days as wage labour under forest department for the poor forest fringe communities under JFM programme is more or less fixed. Usually, one person from each poor household gets the opportunity of forest work from 30–40 days per year. Moreover, significantly, the opportunities of legal wage income under forest department for the poor forest fringe communities in Goulber marshal JFM village is much lower than other JFM villages, because unlike the other JFM forests, the expansion of scope of wage work opportunities for the poor and very poor JFM households by the Forest department(Government) in Goulber marshal JFM forest depends on the new plantation programme, which seems to be not viable in the very short period,

As regards average household' annual net forest product income from legal and illegal source is concerned, *Table 7* reveals that the legal average household income that income from the share of government's timber revenue and wages from forestry work constitute a small part of their total income, whereas income from the sale of NTFPs,Fuelwood and Fodder constitute the significant part of their total income. But, the legal average household income that appears from the sale of NTFPs ,Fuelwood and Fodder is significantly higher in all JFM villages compared with the rest (Goulber Marshal) for poor and very poor households after JFM , whereas the illegal average household income that appears from the sale of TFPs is significantly lower in all JFM villages compared with the rest (Goulber Marshal) for poor and very poor households during the same period. It might suggest that if the NTFPs, Fodder and Fuelwood (which are allowed to collect legally under JFM programme) are more (less) available in the JFM forests, the forcible extraction of TFPs (which are illegal under JFM programme and that are threatening to sustainability of forest resource) by the poor and very poor categories of households decreases (increases) significantly in the JFM forests. It clearly seems to indicate that force or law cannot effectively control the illegal collection of Timber Forest Product (TFPs) of the very poor and poor categories of households until and unless a considerable collection of legal forest products like fuelwood, NTFPs meet their minimum livelihood security.

Section VI

Can IFM Programme sustain rural livelihoods, and thereby ensure sustainability of forest resources? The JFM Programme based on the National Forest Policy of 1988 in India lays emphasis on meeting local needs by supporting them fuelwood, fodder, food, NTFPs and limited use of TFPs

for self consumption, prohibiting the free collection of TPs by the local people to maintain the carrying capacity of forest. Instead of free collection of TFPs by the local people, they are given a 25 per cent of share from the sell of timber by the forest department/government. But despite forbidden by law regarding the free collection of TFPs, the very poor and poor categories of households in one FPC/Village have substantially increased their collection of TPs after JFM Programme, mainly, because the other source of forest income – legal collection of fodder, fuelwood, NTFPs and wage income etc. – is substantially low for them in relation to the same categories of households in other three FPCs/Villages. Clearly, it implies that force or law cannot effectively control the illegal collection of TFPs for the households living below poverty line, which mainly dependent on forest resource for livelihood security, until and unless a considerable increase in the collection of legal forest products – NTFPs, fuelwood etc. – and wage income from forest meets their minimum livelihood security.

What are the probable policy prescriptions in order to overcome this situation? There seems to be three ways to tackle the situation . As regards the issue is concerned, as the production of forest products (like NTFPs) the very poor households legally collect from forest do not usually increase within the very short period. Regarding the second issue, as appears from this paper, a good incentive fee dependent on poor households' work (output) might not only provide livelihood sustenance of those poor living below poverty line and ensure sustainability of forest resources because the number of working days as wage labour under forest department for the poor forest fringe communities under JFM programme is more or less fixed and, and cannot be increased considerably within the very short period due to production constraints. Also important is that unlike the other JFM forests, the expansion of scope of work opportunities for the poor and very poor JFM households by the Forest department(Government) in Goulber marshal JFM forest , which witnessed high incidence of the forcible extraction of TFPs for bare minimum level of subsistence for very poor and poor JFM households, which consist of about 44 per cent of total households under survey (59 out of 134 cases) ,depends on the new plantation programme; but such a programme seems to be not viable in the very short period .However, the third- a good incentive fee dependent on very poor and poor JFM households' forest wage work (output) under forest department plus a lump sum fee – might be the immediate viable option for livelihood sustenance of those JFM households and sustainability of forest resources. Together with it, more pro-poor programmes under both Government and non-Government initiatives that complement the benefit of JFM Programme need to be introduced.

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Notes

1. JFM household is risk-averse because they prefer a certain given forest income either from legal source or from illegal source to maintain minimum subsistence needs to a risky income with the same expected value.
2. Government is indifferent between a certain given income and an uncertain income with the same expected value. It may be judged by the fact that SFR (2000) clearly mentions "as a result of participatory and joint forest management activities in south West Bengal the vast tract of scattered, over-exploited and degraded forests containing mainly the sal were resuscitated and restored to productivity with great improvement in quality and density" (p. 47). Thus due to execution of JFM programme the large scale illicit felling of TFPs, which destroys the sustainability of forest resource, have been largely stopped mainly due to free access of NTFPs by the poor forest communities in most of JFM forests. However, the impact of little illicit felling does not seem to make any significant change between a certain given income and an uncertain income with the same expected utility.
3. Never did the respondents say that their source of income was illegal; rather, while examining the answers from the respondents regarding the break-up of their source of income, the distinction between legal and illegal source was clearly demarcated.

Reference

Baland, J. M. and J. P. Platteau (1996): *Halting Degradation of Natural Resources: Is there a Role for Rural Communities*, Clarendon Press, Oxford.

Berkes, F. (ed.) (1989), *Common Property Resources. Ecology and Community Based Sustainable Development*, Belhaven Press, London.

Bromley, D.W. (ed.) (1992), *Making the Commons Work: Theory, Practice and Policy*, Institute for Contemporary Studies Press, San Francisco.

Bezbaruah, D . K. (2004): 'Socio-economic Traits of the Kaibartas in the Brahamaputra Valley: An Empirical Study in Nalbari District, IASSI Quarterly, Vol. 22(3), pp. 102–129.

Correa, M. (1999), The Need for Emancipatory Research: Experiences from JFPM in Uttar Kannada, in R. Jeffery and N. Sundar (eds.) *A New Moral Economy for India's Forests? Discourses of Community and Participation* (pp. 216–234), Sage Publications, New Delhi.

Das, N. and D. Sarker (2008), Reforms in Forest Management in West Bengal: A Game of Strategic Profile, in D. Sarker (ed.), *Second Generation Reforms* (pp. 79-101), Allied Publishers Pvt. Ltd., New Delhi.

Das, N. and D. Sarker (2009a): 'Impact of Moral Hazard Problem in the Joint Forest Management Programme : a study from forest-dependent households in West Bengal', *Journal; of Economic Policy Reform*, Vol. 12 , No. 4, December 2009, pp 323–331.

Das, N. and D. Sarker (2009b): 'The framework of Household Model under the Joint Forest Management Programme: a study on forest-dependent household', *The Indian Economic Journal*, Vol. 57, No.3, October-December, pp 44–71.

Martin, F. (1992), 'Common Pool Resources and Collective Action: A Bibliography', *Paper presented to the Workshop on Political Theory and Policy Analysis*, Bloomington, Indiana.

Mukherjee, N. (1995), 'Forest Management and Survival Needs: Community Experience in West Bengal', *Economic and Politically Weekly*, Vol. 30, No. 49, pp. 3130–132.

Naik, G. (1997), 'Joint Forest Management: Factor Influencing Household Participation', *Economic and Politically Weekly*, Vol. 32, No.48, pp. 3084–3089.

Poffenberger, M. (1995), The Resurgence of Community Forest Management in the Jungle Mahals of West Bengal, in D. Arnold and R. C. Guha (eds.) *Nature, Culture and Imperialism: Essays on the Environmental History of South Asia* (336-69), Oxford University Press, Delhi.

Sarker, D.N. and N. Das (2002): 'Women's Participation in Forestry – Some Theoretical Issues', *Economic andPolitical Weakly,* October 26: P. 4407-12.

Sarker, D. and N. Das (2008), 'A Study of Economic Outcome of Joint Forest Management Programme in West Bengal: The Strategic Decisions between Government and Forest Fringe Community', *Indian Economic Review*, Vol. 43, No. 1, pp.13–30.

Sarker, D (2009): Sustain Rural Livelidhoods under Joint Forest Management(JFM) Programme: some evidence from West Bengal, India, *Artha Vijnana*, Vol. LI, No. 1, March, 59–84.

Sarker, D. and N. Das (2006), 'Towards a Sustainable Joint Forest Management Programme: Evidence from Western Midnapore Division in West Bengal', *South Asia Research*, Vol. 26, No. 3, pp. 269–289.

Sarmah, D. and S. N. Rai (2001), Forest Resource Management in India: Role of the State and its Effectiveness, in S.N. Chary and V. Vyasulu (eds.) *Environment and Management* (206–220), Macmillan: New Delhi.

SFR (2000), *State Forest Report*, Office of the Principal Chief Conservator of Forest, Directorate of Forest, Government of West Bengal, Kolkata.

Sundar, N. and R. Jeffery (eds.) (1999), *A New Moral Economy for India's Forests? Discourses of community and Participation* (pp.15–54), Sage Publication, New Delhi.

World Bank (2006): 'India: Unlocking Opportunities for Forest-Dependen

METHODOLOGICAL AND INTEGRATION ASPECTS OF ABC-METHOD APPLICATION IN TRADE ORGANIZATIONS

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Abstract: In conditions of declining consumer demand and deficit of credit resources more and more managers of Russian companies think of necessity of introducing effective methods and systems of cost management. One of the most relevant is method of "Activity Based Costing" (ABC-method). Since, in western experts' opinion sectors of service and trade are adjusted to use of ABC-method even more than production, we should refer once more to the main methodological and integration aspects of ABC-method application and consider it from position of trade organization.

Key words: ABC-method, ABB-method, allocation of costs, managerial accounting

ABC-method in trade – is the variant of forming reliable information about prime-cost of selling goods, customers in service and taking place in organization business processes (*Vakhrushina M.A.,* 2004), exercised by means of previous distribution of consumed resources between organizations and following transference of operation cost to terminal object of calculation (goods, sales channels, etc.) (*Atamanov D.Y.,* 2003) Schematically ABC-method can be represented in the following way *(Fig. 1)*.

According to fig.1 all direct, relative to subjects of calculation expenses immediately referred to prime cost of respective goods, orders, clients etc., and indirect costs – go through the system of drivers, in the framework of which their distribution goes on.

After distribution of indirect costs between operations, there appears an ability to count the cost of accomplishment of each of them. As intended all operations, made in trade organization can be divided to main, service, and management. Main operations depend directly on the level of sales turnover and itself can affect on it, which conditional upon existence of between them and terminal subject of calculation (delivery operations, packing, setting out on shop window, cash services, etc.). The absence of this operations leads to work stoppage in organization (*Sokolov Y. V.,* 2004).

Service operations are meant for creation conditions, providing normal accomplishment of main operations of the organization (equipment repair, security, stuff recruitment etc.). Presence of management operations conditioned by their interconnection with all service and main operations, since that on any area of work there is a hierarchic subordination of some employees to the others. With the application of the given classification there is a necessity in appropriation of the cost of service and management operations either on main operations or directly on subjects of calculation, for this purpose three methods can be applied (*Ivashkevich V.B.,* 2003; *Horngren C., Foster G., Datar Sh.,* 2007):

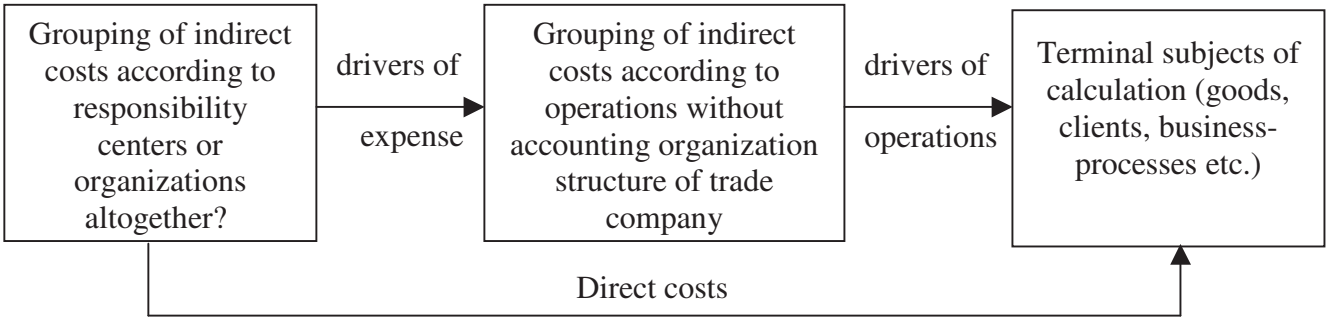

Fig. 1. General scheme of ABC-method.

1. Method of direct distribution: expenses of service and management operations are attributed with the help of drivers to terminal subject of calculation by-passing the main operations and each other.
2. Method of step-type distribution: First, we distribute cost of service operations, accomplished in unilateral manner for the purpose of uninterrupted accomplishment of main and management operations. Then the cost of main and management operations are distributed between terminal subjects of calculation. The variety of step-type distribution is method, implying previous distribution of cost not only service, but management operations, the result of which is full attribution of costs of non main operations on main ones, the cost of which, then transferred on terminal subjects of calculation.
3. Method of mutual distribution is based on definition of the system of multitude linear equations, describing difficult circular interconnections between non main operations. with that we consider situations when:
   a) service operations provide services to each other,
   b) service operation provides services to management operation, which, in its turn affects on service operation.

Sometimes for the purpose of simplifying of ABC-method the cost of service and/or management operations is not attributed neither on terminal subjects of calculating nor on main and service operations, but by analogy with the method of developed direct-cost is placed on decrease of the financial result in the end of accounting period. It is motivated by that the given expenses are "non-relative" i.e. they cannot be reasonably attributed or distributed between intermediate or terminal subjects of calculation.

Calculation of prime cost of terminal subjects of calculation in retail trading presupposes dividing into two groups: product-oriented (item, lot of goods, type of item, group of similar goods) and client-oriented (order, client, group of clients, (market segment), trade channel). In wholesale organizations enumeration of prime cost of subjects of calculation only by goods and clients is unreasonable because front office of trade organization needs to full assessment of expenses. For example, to assess profitability of selling certain lot of goods it is necessary to add prime cost of sold lot to the cost of servicing the client which has purchased that lot. Thus wholesale organization using ABC-method, compound subjects of calculation, such as "goods –clients" and "clients – goods".

Introduction of ABC-method can be implemented on the basis of its integration with other methods and systems, for example, with elements CVP-analysis, traditionally used in trade organizations. Focal point in the process of integration of ABC-method with the elements of CVP-analysis is allocation of variable in the cost of each operation i.e. variable depending on goods turnover, and constant, i.e. part independent from goods turnover. Then goes distribution of variable cost, using driver "Turnover volume", with it it's necessary to take into account interconnection of main and non main operations with terminal subjects of calculation. For example operation of pre-packing relates to only certain list of goods. Distribution of constant cost of accomplishment of each operation goes with the help of standard for ABC-method drivers. With that it should be appreciated that chosen as drivers of operations indexes must, firstly, set interconnection with terminal subjects of calculation, secondly they mustn't imitate the driver "Turnover volume". Thus, the conclusion can be made that as a result of integration with elements of CVP-analysis the methodology of ABC-method keeps being the same to a large extend, because in fact there goes additional detailing of indirect expenses, as a result of which the process of their further redistribution between terminal subjects of calculation goes on in turn – at first for the variable, then for the constant cost of each operation. *(see fig.2)*.

After distribution cost of operations, there comes the stage of calculation of prime cost of terminal subjects of calculation. Since in the process of integration of ABC-method with elements of CVP-analysis there takes place detailing of costs into constant and variable, forms of consolidated and pay-roll records must be added by columns, registering such detailing. Upon completion calculating accounts the analysis is carried on, the results of which are processed as a report to principal officers of trade organization. With that the analysis can be carried out both on the basis of ABC-method data, and on the basis of dividing of expenses into constant and variable (CVP-analysis), the basis of which is finding marginal profit, rate of coverage and breakeven point.

Besides more detailed analysis of the achieved results, integrated variant of ABC-method has other advantages. For

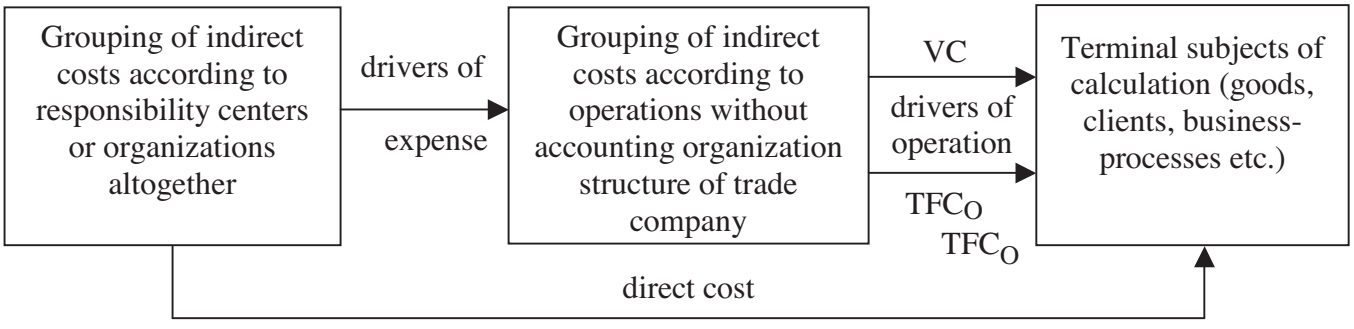

Fig.2. Scheme of ABC-method integrated with elements of CVP-analysis, where VC – variable part in operation cost, TFC – constant part in operation cost.

instance it provides more precise calculation of prime cost of terminal subjects of calculation, in comparison with the simple ABC-method. It can be explained by that, the simple ABC-method does not take into account the variable part of cost of service and management operations, which could be distributed between terminal subjects of calculation proportionally to company's turnover. Thus the level of "irrelevance" of the given operations would be lowered. Along with that, the integrated variant of ABC-method has an ability of previous forecasting cost of operations and terminal subjects of calculation, depending on probable increase/decrease turnover both altogether and in layout in groups of similar goods. Suppose that in the following period, expected increase in organization's total turnover on 7%, which is conditioned: increase in sales volume the first group of goods on 2%; increase in sales volume of the second group of goods on 6%; decrease in sales volume n-group of goods on 1%.

Percent terms of increase/decrease are calculated relatively to the current volume of total turnover of organization. In such case we can apply the following technique of expenses forecasting:

1. Factual variable part in the cost of each operation multiplies by coefficient 1, 07. Thus we find forecasted cost of variable part in the cost of each operation for the next month (VC_{pl});
2. Factual constant part in the cost of each operation remains unchanged ($TFC_f = TFC_{pl}$);
3. We find total forecasted cost of each operation for the next month ($VC_{pl} + TFC_{pl} = \Sigma_{pl}$);
4. We find difference between forecasted and factual cost of each operation ($\Sigma_{pl} - \Sigma_f$);
5. We calculate consumption factor of operations driver by terminal subjects of calculation (d_{pl}/D_{pl}). With that for the common value (D_{pl}) we take 7% forecasted increase of total turnover, and for indexes of consumption of driver by the subjects of calculation (d_{pl}) – percentage value of forecasted increase/decrease of goods turnover, calculated relatively to index of the total turnover of organization of the current period;
6. We find increase/decrease of variable expenditures by the terminal subjects of calculation: $(\Sigma_{pl} - \Sigma_f) * d_{pl}/D_{pl}$;
7. To the increase/decrease of variable indirect expenses, which was found by the terminal subjects of calculation, we add the sum of factual indirect expenses which was found by the terminal subjects of calculation in the accounting month. Integration of ABC-method with elements of CVP-analysis is able to give organization other advantages. For example, it is an ability to calculate breakeven point for service operations i.e. assess efficiency of their accomplishment. Thus we can determine the level of breakeven condition, for instance for legal department, accountants office, security department, repair service, etc. If the results of carried out analysis show that efficiency of accomplishment of service operation is lower than breakeven level, then principal office of trade organization needs to refuse to accomplish that operation or pass its accomplishment over to subcontractors.

In conditions of integration of ABC technique with the system of budgeting (ABB-method) budgets of commercial and administrative expenses of trade organization are replaced by multitude of budget operations, which allows forming indexes for the upcoming period more reasonably. To our opinion we can distinguish four main stages, connected to forming of budget operation indexes:

1. preparatory: finding of preliminary budget cost of operations with the help of rate of operations' drivers, calculated on the data of the past budget period, and also values of the drivers of operations of the next period.. For example, if, according to the results of trade budgeting process there was determined that sales turnover (D) of pre-packed goods will amount in January – 128473 rubles, in February – 119394 rubles, in March – 207491 rubles and so on and annual rate of the driver of operation (r_0), calculated according to the data of the past period, is 0,12 rubles/rubles, then preliminary budget cost by months will comprise:

in January: 128473 * 0,12 = 15417 rubles.;

in February: 119394 * 0,12 = 14327 rubles.;

in March: 207491 * 0,12 = 24899 rubles and so on.

2. analytical: forming and specification of cost items by each operation for the budget period. Technology of forming items of operation budgets in general view can be the following:
   a) determination (specification) of the list of items of expenses, included in the cost of each operation;
   b) determination of drivers for each item of expenses (drivers of expenses;
   c) items of expenses are divided into dependant and independent from driver of operation, determined during the preliminary stage;
   d) determination of norms of spending of drivers of dependant expenses in reliance operation driver unit;
   e) the norm of spending of dependant expenses driver is multiplied by budget value of the driver of operation, as a result of which we find natural term (sometimes – at a time monetary) expression of budget item. Then natural expression of budget item is multiplied by presupposed rate of driver of expenses (hourly wages of an employee, cost of one liter of gasoline, cost of one item of packing material etc.) as a result of which we find its ruble equivalent.
   f) determination of overrun or undershoot of driver of dependant expenses and its matching with the other operations, with the purpose of lowering of its overrun or undershoot. With that, for the reasoning of overrun or undershoot it's necessary as in paragraph "e" to use rates of drivers of dependent expenses;

g) values of independent from the drivers of operations, items of expenses are determined in organization altogether, or by divisions, and then are distributed between operations proportionally to drivers of expenses (sq. meter, unit of similar equipment, etc.);

3. Calculated: finding of the final budget cost of operation accomplishment, and also finding rates of drivers of operations for the next budget period with the help of matrix form table, where horizontally is the information about items and groups of expenses, vertically – about accomplished operations in organization. If trade organization has several divisions it makes corporate-wide matrix of budget cost of operations;
4. Conclusive: calculation of the budget prime cost of the terminal subjects of calculation. The budget of prime cost consists of two parts, the first of which is made for showing the process of distribution of the budget cost of service and management operations on main operations. If distribution goes on with the help of step-type method, then the first part of budget may consist of two and more forms, since their quantity directly depends on quantity of "steps", provided by the technique of distribution (*Dobrovolskiy E., Kabanov B., Borovikov P.,* 2006). The second part of the budget is designed to show the process of calculation of terminal subjects of calculation prime cost. With that budget cost of main operations, distributed with account of secondary expenses is added to budget value of direct cost on corresponding positions of subjects of calculation. By analogy with developed direct-cost the form of the second part of budget may have step structure which can be explained by the presence in ABB system different levels of expenses(item, installment, sort, group of goods.)

Thus ABB – method has specification, distinguishing it from traditional approach to budgeting. With that given specification affects the budget structure, ways of forming the budget indexes, and also on method of analysis and form of budgets. However, changes, necessary for the transformation of traditional system of budgeting to ABB-method do not have global character, because they accomplished only in a part of indirect (administrative and commercial) expenses, for which planning, account, control and analysis must be accomplished in another way.

References

Atamanov D.Y. (2003): Distribution of expenses at cost price accounting by the traditional and operational-focused method; Marketing in Russia and abroad. volume 3., p. 3–17.

Ivashkevich V.B. (2003): Managerial accounting. /V.B. Ivashkevich. – M.: Economist, ISBN 5-98118-033-1, p. 618.

Vakhrushina M.A. (2004): Sphere of services: the account of expenses on business processes. The accounting appendix, 2004, volume 40. p. 19–22.

Dobrovolskiy E., Kabanov B., Borovikov P. (2006): Budgeting**:** step by step, St. Peterburg: PITER publisher, ISBN 5-469-00712-X, p. 248

Sokolov A. Y. (2004) Managerial accounting overhead costs. Moscow: publisher Finance and Statistic, ISBN 5-279-02720-0, p. 448.

Horngren C., Foster G., Datar Sh. (2007): Managerial accounting, 10th edition. – in translation– St. Peterburg.: Publisher PITER,. ISBN 5-94723-174-3, p. 1008.

KNOWLEDGE NEEDS IN RURAL TOURISM IN CZECH REPUBLIC

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Abstract: Rural tourism has gone through an important development, but in the Czech Republic has only been possible to run a private business only in last 18 years. In Czech Republic that form of tourism is not very widespread, although there is great potential in it and the neighboring countries such as Austria or Germany are on a much higher level. For more intensive development and better competitiveness on the marker a proper education is necessary especially on the secondary level. An inquiry investigation has been provided. The responders were owners and operators of small businesses in rural tourism. The first part of the questionnaire was focused on the matters of ownership, running the business, promotion, internet services, etc. The subsequent part of the questionnaire gathered the information about the capacity of the places, the types and prices of accommodation, and the facilities. It also surveys the surroundings of the place – both natural and cultural sights. The survey has brought interesting facts about the level of the rural tourism of selected regions. The inquiry investigation was made by trained persons who gathered much information above the framework of the questionnaire. Many demands and complains were concerned with lack of specialized education, needs of new study programs and branches. There are many specifics of this branches, the most important is that there are more than 90% of micro firms. If we want to keep the special features of the rural tourism we have to prepare future entrepreneurs and employees in completely different way than those for big hotels, spas or congress centers. The contribution deals with the present status of rural tourism in Czech Republic and the educational need of the people involved.

Key words: Rural Tourism, Inquiry Investigation, Knowledge Needs, Micro Business

1. Introduction

The rural tourism is not a completely new issue. The interest in this type of recreation was recognized since 19th century and is connected with the period of Romanticism. The modern form of rural tourism came into existence in the second half of the 20th century.

The political and economical situation in Czech Republic was not favorable to any kind of private business including tourism.

The development of rural tourism in all countries is closely connected with the development of small private farms and other small freeholders in countryside.

Czech agriculture after 1948 went through a forced nationalization. The result was the constitution of a small number of big state or co-operative farms. Many qualified people moved out (sometimes unwillingly). Even worse was the situation in border regions which have the best natural conditions for tourism. The original German population was displaced after World War II; the incomers were often not able to take care of the farms. Large acreage was taken over by state farms or there were constituted military areas with agriculture land and forests under control of a huge company "Military farms and forests".

In this period many city people acquired their own recreation facilities. In these weekend houses they spent majority of their free time often as an escape from bounded life in socialist reality.

Many firms also owned their own recreation facilities. During holidays they gave them up to their employees for recreation; in the rest of the year they used them for meetings, seminars, etc.

After 1989 part of the agriculture land and other facilities went through privatization and in ideal cases (there were many legal problems) was returned to the original owners or their children. Only a small part of these old-new owners were able and willing to run a small farm. Many farms remained of the same size; there was only change in the ownership and legal status of the firm (change from state or co-operative farms into joint stock companies). The whole agriculture sector went through industrialization and concentration to improve the effectiveness of the production and profitability of the companies (*Houška, Beránková,* 2008).

The few private farmers who started their own business in small private farms have gone through very difficult times. Those who survived are now more stabilized (some of them with the help of the EU) and many of them are trying new methods of farming especially production of ecological products and home made foodstuffs. These small farms have the best potential for rural tourism and some of them really have started the business in this sector.

The customers´ demand has also changed. The majority of the firm recreation capacities were sold because the firm did not take care of them or the firms themselves became extinct. All Czech people were excited by the possibility to travel abroad which they did not have before 1989. They began to travel to seaside places abroad; highly popular have become trips to well known places in Europe and overseas. The possibilities for recreation at home country were neglected. Moreover, people preferred to stay in their own recreation houses if they decided to spend holidays in the Czech Republic.

On the other hand the Czech Republic opened its borders for tourists from abroad and the interest was really high, much over the disposable capacities (*Šimková,* 2000). Sad to say, the interest of investors concentrated only to high standard hotels mainly in Prague. The Czech countryside has been discovered latter in remarkably lower scale.

The rural tourism has been growing only in several recent years when the domestic demand raised unfortunately probably due to deterioration of global economical situation and lowering incomes of Czech citizens.

Because the rural tourism in Czech Republic has gone through non-continuous development and for many years was in fact only a part of a shadow economy there are not enough information in this field. It is necessary to map the situation in order to get effectual support from local, state and European institutions.

2. Goals and methods

The goal of this contribution is to determine the status of rural tourism in chosen regions of the Czech Republic. This will be followed by showing the imperfections, problems and potential possibilities of this form of tourism.

The information was gained in a questioner investigation focused on owners or operators of the object of rural tourism.

The questioner investigation is very effective method which enables the researches to get answers from many respondents with relatively low costs. The authors choose a method of a standardized interview with a question form. The method guarantees that the information from all responders are of the same type; all responders are asked the same questions in the same order.

The research file consisted from objects of rural tourism in chosen regions of Czech Republic. In the first phase the regions were chosen and than the object by random selection. This method makes possible to generalize the results.

The total number of respondents was 77, resp. 75 because two forms were not properly filled in. The data collection was realized by interviewers which led to better validity of data and higher percentage of returned filled in forms.

After collection of the question forms the open questions were encoded and than all answers were processed. The formal and factual check of the data was implemented. The data was prepared for analysis.¨

An explorative analysis was realized as a first. This analysis is useful for detail investigation of the data structure. In the second step the relative frequencies of answers were calculated for basic orientation in the data file. In the third step marks with possible dependencies were defined. The analysis of contingency tables was applied for investigation of possible relations. A test of dependency was carried out in these tables. If the marks were proved as dependent the tightness of the dependency was verified.

3. Results and discussion

3.1. Business and labor

In most cases the object is owned by the responder and a member of his/her family (45%). The majority of respondents (90%) has a trade license and run a business as a physical person. The average time being in business is 9 years that means the sector is very young. The hypothesis: „Women do majority of works connected with touristic services" was proved – see *Tab. 1.*

Tab. 1. Share of men and women in touristic services

Who works	Relative frequency
Women	53,3
Men	26,7
Both	6,7
Answer missing	13,3

The number of women employed is very important because nearly all of them are able to combine work in the tourist service with care of small children, families, seniors, handicapped people, etc. The rural tourism is a great opportunity for them to find a job close to their homes.

3.2. Services and specifications

The tourism somehow connected with agriculture production is in 27% of objects but only in 16% there are homemade products for sale. Eco agro tourism is 27% in of object and the firm tourism in 22%. Only about one half of object offer also some form of boarding. – see *Tab. 2.*

Tab. 2. Food services

Type of service	Relative frequency
Cold and hot meals	45,1
No	47,9
Supply of foodstuffs	8
Answer missing	5,3

It is often possible to park near the house (95%) and bring pets (80%). In some objects there are also some specific facilities as:

- ✓ ski store – 34%,
- ✓ children's playground – 39%,
- ✓ table tennis – 31%,
- ✓ outside swimming pool – 24%.

The accessibility of the objects by public transport is good. The average distance to a bus stop is 1 km and 6 km to a train stop. Many localizers are ready to pick up their guests (68%) or at least transport their luggage (48%). The distance to the nearest post office, medical center, fast food and restaurant is 5 km in average.

In following question the accessibility of various recreation capacities as an open air pool, ski lift, roofed swimming pool, spa, ski and bicycle rent, ski school and golf course was investigated. The important distance was 20 km. If the capacity is within this distance it is rated as available. The percentage of positive answers (it means it is available) was 60%. Nearly the same result (60%) was with availability of cultural amenities, cultural and natural places of interest and doings as: natural preservation, castle, ruin, observation tower, chateau, cinema, theatre, concert, festival, ball, discotheque, etc.

3.3. Promotion, reservations and payments

The promotion is very important for getting customers. Some object are in catalogues of travel agencies but majority of customers is gained through the Internet (82% respondents). The other successful ways are personal contacts, friends and repeated visits (57%), information centers (40%), travel agencies (21%), hangers (15%) and insertion in newspapers (13%).

Communication with customers is also important. 91% of responders has own mail address, 87% has own WebPages and a link placed on some touristic portal exists for 83% of objects. Remarkably lower number are connected with on-line reservations (38%) and on-line

payments (17%).The providers are not much interested in these services and also automatic reservation systems are not very popular – see *Tab. 3.*

Tab. 3. Reservation methods

Method	**Relative frequency**
Hand made remark in calendar	45,3
Send post money order, a deposit must be paid in advance	4
Purchased a professional system	2,7
Own system	28
Other	10

3.4. Dependency measures

The dependency between answers was studied for several questions. A pivot table was always created for these questions and the dependency of marks was investigated by statistical tests (*Řezanková,* 2005; *Hindls* et al.,1999).

In the cases when the dependency was proved the contingency coefficients were calculated. Some more detail descriptions of dependency follows.

There is a dependency between opinion that the object is situated in a recreation area and tourism is a main source of income. The dependency is medium with the value of the contingency coefficient is 0,458. The source of main income is also in correlation with natural and cultural places of interest. The dependency is again medium; the correlation coefficients are 0,445 and 0,414.

The following *Table 4* shows the dependency of income from tourist services on other factors.

Tab. 4. Dependency between income and chosen factors

Question	Dependency exists	Contingency coefficient	Cramer´s V
Offer of firm tourism	Yes	0,487	0,558
Plans for changes in services	Yes	0,383	0,415
Plans for further equipment	Yes	0,384	0,415
Offer family celebration, sport events, etc.	Yes	0,520	0,430
Rental of sports equipment	Yes	0,466	0,320

The dependency was proved for all factors; the dependency is medium or mesoscale.

Another investigated dependency was the existence of an income from an agriculture production and other chosen questions. A mesoscale dependency was proved for sale of the own products (contingency coefficient 0,505) and for operating agro-tourism (contingency

coefficient 0,445). There is a medium dependency with usage of the object for a whole year (contingency coefficient 0,332) and operation of firm tourism (contingency coefficient 0,323).

The following *table 5* shows the dependencies between tourism connected with agriculture production and other chosen questions.

Tab. 5. Dependency between tourism combined with agriculture and chosen factors

Question	Dependency exists	Contingency coefficient	Cramer´s V
The object is used whole year	Yes	0,260	0,269
We sell own products	Yes	0,305	0,320
Eco-agro-tourism	Yes	0,603	0,759
I am interested in education activities	Yes	0,398	0,430
Offer of foods	Yes	0,408	0,447
Organization of firm seminars	Yes	0,332	0,352
Rental of sports equipment	Yes	0,392	0,426

The results in the *Tab. 5* show that running a touristic object in combination with agriculture widen the offer of the objects and makes the object more interesting and possibly also the occupancy and earnings will be higher. Naturally the highest scale of dependency is for agro tourism. The dependency for other factors is medium.

The search for dependencies between the interest in educational activities and other questions disclosed dependencies between combination with agriculture, eco-agro tourism and firm tourism. These dependencies are mesoscale.

4. Conclusions

The pilot investigation on present status of rural tourism in Czech Republic brought some interesting results:

The sector is relatively very young; developing in last ten years.

The firms are small, usually owned by private persons and families.

Mostly women are working in touristic services.

The services offered and equipment are satisfactory in average; many owners plan improvements.

The environment is suitable; many places of interest are attainable.

We see opportunities in better promotion and marketing of the services. Higher number of customers is desirable but it calls for improvement of reservation and payment systems. It is necessary to face immediately the raising interest from Czech customers which is now coming together with worse economical situation. By our opinion it is an opportunity to gain new customers but it is necessary to do something to keep them.

Generally wider range of services offered also raises the number of customers. Many activities can be connected with the agriculture production. The best way is to make up new services, to come sometimes with something new and modern, to broaden the chance to spend active and interesting holidays.

The recreation potential of Czech Republic is high and has not been discovered in many places. So far the interest of touristic business has focused mainly to the capital Prague and several best known places as Český Krumlov or Karlovy Vary.

The Czech countryside is able to offer unforgettable experiences and adventures as well as days spend in calmness and wellbeing. The first who must be aware of this fact are the locals.

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Literature

R. Hindls – S. Hronová – I. Novák (1999): *Data analysis in managerial decision making*. Grada Publishing. Prague, ISBN 80-7169-255-7 (in Czech).

M. Houška – M. Beránková, (2008): Innovative Interface for Knowledge Potential Development in Regions of the CR. Conference Countryside – Our World 2008. ZU Prague 2008, pp. 28-35 ISBN 978-80-213-1772-7.

H. Řezanková (2005): *Analysis of Cathegorial Data*. College of Economy Prague. ISBN 80245-0926-1 (in Czech).

E. Šimková (2000): Competition and its evaluation through balance of weak and strong features. *E + M Economy and Management, III., No. 2, s. 32–34*. ISSN 1212-3609. (in Czech).

TOURIST CONSIDERATIONS IN HOSTING A MEGA SPORT EVENT: 2010 FIFA WORLD CUP

Bresler Nerine Cecilia

Abstract: Tourism enterprises can create public viewing areas where shared enjoyment and heightened emotive experiences could arise, as well as sentiments of patriotism, and ownership of the event itself. But, they must keep their base business happy; to ensure long term loyalty of existing customers.

Key words: Tourism, mega sport event, 2010 FIFA World Cup

1. Introduction

There are only two mega sport events namely the FIFA Wold Cup and the Olympics based on the scale of media interest (*Davies,* 2009:33-34, Pillay, *Tomlinson & Bass,* 2009:5). FIFA owns the event and provides the entertainment extravaganza in the form of football, for profit generation. Their costs are covered mainly by television broadcasting and marketing rights. Host cities are required to provide the infrastructure and services. Hosting the event promises to the nation, not only the excitement of the media exposure, but the expectation of a positive return on the considerable investment. However, this may not result to growth benefits in the short term, for one, because of displacement of business-related tourism. But, the success South Africa (SA) wish to attain is the longer term intangible and ambiguous benefit of reducing the widespread legacy of Afro-pessimism, by proving that it can manage the event to world standards (*Czeglédy,* 2009:294). This cannot be done through marketing campaigns, but only through lived experiences of such an event.

This paper will endeavour to elicit the risk of not living up to visitor expectations. It will focus on the experience of visitors to a comparable event in SA and their perception of the destination. In order to do so the paper is structured as follows: firstly a brief overview will be given of hosting mega events, followed by a description of the motives of event tourists, and then the challenges of delivering the desired experiences. The significance of the contribution lies in synthesizing various theories from a visitor perspective to elucidate challenges in preparation for 2010, and in contextualising international literature. The findings can be used to iron out problems and to promote experiences that are deliverable.

2. Hosting a mega sport event

Given the capacity to draw visitors mega events has become a prominent component of many economic development plans (*Kotler, Haider & Rein,* 1993). They are likely to have long-term positive consequences for the cities and communities that stage them and provide opportunities for increased international publicity and recognition, by attracting attention to the locality (*Deccio & Baloglu,* 2002; *Keller,* 2001:31). They can also be strategically leveraged for business and investment development (*O'Brien,* 2006:241).

However, Crompton (1995) is of the opinion that the validity of many economic studies is less than reliable. In this regard, *Tomlinson* (2009:33) refers to lack of transparency, and *Pillay* et al. (2009:6) to deliberate misrepresentation. The benefit calculations thus cast a dark shadow on the return on investment claims. For example, studies mainly relate to the expenditure associated with the tourists who are attracted to the event, and care is needed in measuring the amount of expenditure that would not have occurred in the absence of the event. *Lee and Taylor* (2005:596-602) did that when they estimated the impact of the 2002 World Cup, by using an input-output model, but conclude that measuring all the economic impacts associated with a mega event is an impossible task. According to *Daniels* (2007:335) meaningful economic impacts seldom result from mega events such as the World Cup, because site options are narrowed by the necessity of sophisticated infrastructure and significant public investment. Central cities consequently gain more than remote ones because of their location. Sport tourism may thus exacerbate regional imbalances in development (*Pillay & Bass,* 2009:11,77). *Daniels* (2007:344) therefore suggests that planners of mega sport events should work closely with Destination Marketing Organisations (DMOs) from different areas, to ensure that all areas realize an equitable share of the event's cost and benefits. *Rogerson* (2009) supports this argument, but base it on the size of the enterprises and not the cities.

On the enterprise level, there are also risks. For example, accommodation occupancy the eight weeks before and after a mega event may be down compared to the same time the previous year, as was the case in Germany in 2006 (Du

Plessis & Maennig, 2009:68; *Van Meerendonk,* 2009:2). But, revenue per available room will be up because of rising prices. A study among operators in the major source markets also ascertained fear about disrupted supply and displaced business as a result of the 2010 FIFA World Cup, and only 56% of SA-based operators thought the event would be good for their business (*Now Media,* 2009:27).

With respect to the less tangible benefits, *Rogerson* (2009:337) is of the opinion that mega events are increasingly significant phenomena because they can generate long-term outcomes for the host locality by enhancing and regenerating it, and promoting or re-creating its image. For example, the UK redefined soccer in the 1990 World Cup, by using Pavarotti's *Nessun Dorma* as the BBC's theme tune, and moved it away from its former associations with violent masculine thuggery (Whitelegg, 2000:803). However, previous studies suggest that mega events may not translate into image enhancement that translate into tourist visitation (*Smith,* 2005:227) and may have profound negative impacts as they are likely to result in such problems as traffic congestion, difficulties of law enforcement, and increased crime. They may damage the image of the host destination or diminish its attractiveness because of inadequate infrastructure, poor facilities or improper practices (*Keller,* 2001:40, *Mihalik,* 2000; *Ritchie,* 1984). Negative impacts are often ignored prior to hosting a mega event while glorifying the expected benefits (*Kim, Gursoy & Lee,* 2006:88). To limit this risk, it is necessary ascertain cautionary pointers from a visitor perspective, prior to hosting a mega event and to establish what motivates them to attend.

3. Motives of event tourists and intent to attend

Event spectator appeal will affect the visitor attendance (The Economist, 2002:2), and the destination development that an event engenders is largely driven by the attendance it is expected to generate (*Kim & Chalip,* 2004:695). Estimating visitation is not an easy task. For example, the actual foreign arrivals of 403,466 to the 2002 World Cup was 37% less than the 640,000 the organising committee predicted, and of these, only 57.7% (232,800) were direct football tourists (*Lee & Taylor,* 2005:599,601).

Travel intentions are influenced by both pull and push factors (*Crompton & McKay,* 1997:425; *Yoon & Uysal,* 2005:54). Pull factors are related to external sources, including destination attributes, and push factors are commonly studied with reference to reasons, or motives for travel, but motivation is an insufficient basis for understanding the drivers of sport event attendance. The most common response obtained by sport motivation researchers, why visitors attend, is that it is *fun*, but fun explains nothing (*Green & Chalip,* 1998:287); the relationships between motives and behaviour are complexly determined (*Crompton & McKay,* 1997:427). A conceptual model of event interest and intent to attend is depicted in figure 1. Besides demographic variables, there are five other types of travel motivations: fan motives, travel motives, event interest, travel constraints and attendance intentions. Fan motives are multidimensional which include aesthetic experience (beauty and grace of soccer), vicarious achievement (sense of personal achievement, or status a spectator feels when his team wins), eustress (stimulation and arousal from watching soccer), interest in

players (fan of one or more players) and identification with the national team (degree to which spectators consider themselves to be a fan). The event interest captures the celebratory atmosphere that is common to mega events. This is one of its key appeals to attendees, and the aspect that media coverage is least able to capture (*Kim & Chalip,* 2004:703).

Green and Chalip (1998:276) suggest that the flow of tourists to sport events is equivalent to the historic religious pilgrimage and argue that spectators come together to celebrate the subculture they share. It is a statement about who they are; a shared and valued identity. Sport events create situations, or extended occasions in encapsulated spaces, for spectators to affirm their personal identity, for socialisation and camaraderie. The fundamental attraction is neither the place nor its people; it is the players and other spectators that participate. These findings are confirmed by *King* (2002:107) who expressed the opinion that travel is increasingly more about experiences, fulfilment and rejuvenation than about *places* and *things*. The hardware is less important than the benefit. The DMO's role is to facilitate the connection between the visitor and the experience they are seeking; to convert tourism products into relevant tourism experiences.

Only a small portion of the total revenue from mega sport events comes from ticket sales (*Davies,* 2009:34). Visitors typically spend money in eight categories; transportation, accommodation, food and beverage, recreation/entertainment, tour/sightseeing, game tickets, retail shopping, services (such as laundry), and miscellaneous (*Daniels,* 2007:339; *Daniels, Norman & Henry,* 2004:185-186; *Lee & Taylor,* 2005:598). Economic impact research revealed that visitors who travel greater distances to an event typically spend more than tourists from nearby and that first time event visitors spend considerably more than repeat visitors (*Qi Tang & Turco,* 2001:33). Similarly, the perceived attractiveness of the host community (i.e. alternative attractions,

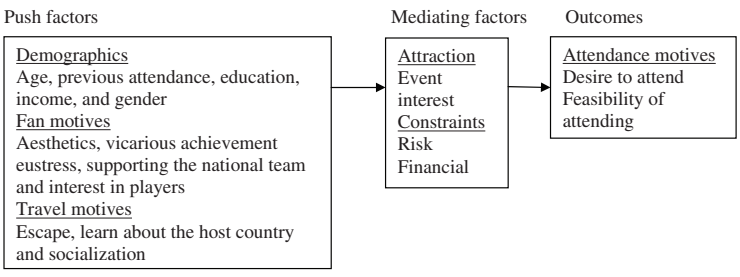

Figure 1. Conceptual model of event interest and intent to attend
Source: Adapted from *Kim and Chalip,* 2004:698-701.

climate, proximity to relatives, friends, etc.) may elicit larger visitor groups, and the nature of its tourism accommodation may stimulate more spending.

With respect to activity patterns, first time visitors spend more time at the attraction and visit more attractions. They are inclined to explore more possibilities and the difference in their activity patterns is moderated by the use of information about the available activities (*Kemperman, Joh & Timmermans,* 2003:1-6). In addition, many other exogenous factors may influence activity patterns such as economic considerations, accessibility and the reputation of the destination. For example, SA has gained a reputation for being an unsafe place to go on holiday; especially going out after dark and using public transport (*George,* 2003:576,581).

4. The challenges in delivering on the desired experience

South Africa is to host the 2010 FIFA World Cup which has the potential to raise its profile as a tourist destination, if it delivers on the desired experience (*Williams,* 2006:493). This is in line with the broader objectives for tourism in SA, namely to ensure a lasting social legacy, to advance the competitiveness agenda, to maximise tourism value during the event, and to maximise value for SA after the event; in sustainable GDP growth, redistribution and transformation (SA Tourism, 2008:91-97). SA Tourism concedes to the following ten challenges for 2010: 1) poor access to channels of tourism information, 2) insufficient accommodation, and 3) compelling attractions and activities, 4) inadequate service levels and skills shortage, 5) inadequate public transport, 6) insufficient focus on tourist safety and security,7) limited institutional capacity, 8) managing expectations, 9) demand management and 10) displacement of general tourists.

The support of the host community is also important for success (*Gursoy & Kendall,* 2006:604). According to a survey by FIFA (2009:4), 83% of the respondents felt SA will be ready to host the 2010 Cup, and 94% were proud that SA is hosting the event, 89% said it would bring long term benefits to the country, 92% believed it will lead to an upgrade in infrastructure, notably public transport, roads and telecommunications, and 86% said their interest were unaffected by the performance of the national team). Whilst 90% believed it would improve SA's image abroad, 59% had a concern for inflated prices, and 58% thought crime would be a concern for visitors, and anticipate increased congestion problems.

In the opinion of SA tour operators *Value for money experiences* is the main consideration (91%) for travellers considering SA as a destination, and according to them, *crime reduction* (78%) and *better priced air access* would help increase business (Now Media, 2009:26). By contrast, *value for money* was a strength (96.77%) in terms of SA's competitiveness, among 150 inbound tour operators, about a decade ago, (*Saayman & Du Plessis,* 2003:60).

5. The purpose of the empirical study, research method and sample

The primary purpose of the research was to ascertain if the target market for a mega sport event, namely the 2010 FIFA World Cup were of the opinion that SA could host it successfully, and if not, what had to be improved upon prior to the event. The secondary purpose was to uncover how the target market experienced a similar sport event, namely the SA 2009 FIFA Confederations Cup.

The study is based on secondary sources, supplemented by an empirical study. It is an exploratory, descriptive, and predominantly qualitative study, and the sample was a non-probability, convenience sample. Spectators to the penultimate match were interviewed, whilst waiting to enter the stadium, and completed the questionnaire with the assistance of fieldworkers. It was piloted, and improvements were made; especially with respect to directing questions specifically to SA residents or foreigners. A total of 205 spectators took part in the study and the composition is reflected in *table 1*.

Table 1. Composition of the sample

Gender %		Age %		Language %		Matches attended		Duration of visit		Country of origin	
Male	82	15-25	20.3	English	21.7	1	41.2	3-5 days	25.9	SA	18.4
Female	18	26-35	43.5	African	16.5	2	21.4	6-8	14.8	Rest of Africa	4.5
		36-45	23.7	European	7.5	3	16.6	9-11	7.4	Europe	10.5
		46-55	9.7	Oriental	5.4	4	7.0	12-14	18.5	East	5.4
		56-65	1.4	Afrikaans	1.9	5	4.3	15-21	7.4	Americas	5.4
		66 +	1.4	Undisclosed	47.0	6+	9.5	longer	26.0	Undisclosed	55.8
	100		100%		100%		100%		100%		100%

n=205

The questions posed were both fixed response and open ended, and for purposes of this paper can be grouped into three categories. The first encapsulated the demographic and geographic profile of the respondents and included questions about gender, age, home language, matches attended, duration of visit and country of residence. These are disclosed in *table 1*. The second category uncovered visitors' perceptions about SA as a host and tourist destination, on a 5-point Likert scale which ranged from strongly disagree (1) to strongly agree (5), and the intensions of overseas spectators to revisit SA for the 2010 FIFA World Cup, or recommending it. The last category of questions elicited their most positive and most negative experience and suggestions for improvement.

6. Findings: Perception of sa as a host to a mega sport event and tourist destination

A brief overview of the most pertinent findings will be given. Visitors were asked to express their opinions on SA's

ability to successfully host the 2010 World Cup. A summary of the perceptions is reflected in table 2. The sample size for statements varies as it consolidates the responses of domestic and foreign visitors and some applied to the latter only. The highest weighted average of 93.9% was received for the belief expressed by 205 respondents that SA will be able to successfully host the 2010 FIFA Wold Cup, and the lowest score, for the how well 192 spectators believed transport was well organised and easy to use. The average rating of all the statements was a high 84.1%.

Table 2. Perception of SA as a host to a mega sport event and tourist destination

Statement about SA's ability to host a mega event	Respondents	1	2	3	4	5	Weighted ranking
I believe SA will successfully host the 2010 World Cup	205	1	3	5	40	156	93.9%
I really looked forward to visit SA	73	2	1	3	16	51	91.0
The matches were well organised	204	2	1	11	68	122	90.1
Services provided by the airports are good	19	0	1	1	5	12	89.5
I was impressed by SA as tourist destination	78	0	3	1	25	42	87.2
Services in SA are good	20	1	1	1	5	12	86.0
Services provided by **private businesses** such as accommodation and restaurants are good	164	2	4	24	52	82	**85.4**
My perception about SA has changed positively during my stay	83	0	2	11	35	35	84.8
I felt safe in general	202	5	7	24	71	95	84.2
Services provided by information bureaus are good	56	0	0	13	20	23	83.6
I have heard good things about SA	86	2	4	10	32	38	83.3
It was easy to obtain adequate tourist information	126	1	9	29	50	37	78.0
Services provided by the **public sector** such as transport are good	176	7	11	42	52	64	**77.7**
Transport was well organised and easy to use	192	11	13	42	58	68	70.3
Weighted average							**84.1%**

Respondents were of the opinion that the matches were well organised (90.1%). As was expected, the services provided by private businesses were perceived to be delivered better than those provided by the public sector. The comparative figures were ranked 85.4 and 77.7%, by 164 and 176 respondents respectively. In order to triangulate/validate the findings, respondents were asked to rate their overall experiences during the SA 2009 Confederations Cup on a scale of 1 to 10 where ten was the highest, and the average rating was 7.84.

7. Most positive experience of visitors

Visitors were asked to describe their most positive experience during the SA 2009 Confederations Cup. Foreign visitors were also asked if they would revisit SA for the 2010 Cup, to substantiate why/or why not, and if they would recommend visiting SA for the upcoming cup. The purpose was to uncover their emotional feelings; what was *good* and *fun* as this tells one more about the target market and what is the core product (*Green & Chalip,* 1998:286; *Yoon & Uysal,* 2005:54). In addition, this question elicits testimonials of promises that are deliverable as well as what spectators would tell their friends; if their experiences relegated pervasive images of the past of what Africa can, and cannot do, to the past. The answers may be used by DMOs as themes that would render promotional material truthful.

The responses were categorised in two dimensions, namely the games itself, and SA as tourist destination. Experiences about the games can be classified as either emotional or cognitive/technical. The Confederations Cup created for the respondents moments of intense excitement, identity formation, and patriotism that transcended social cleavages. The positive emotional experiences can be classified as excitement (eustress) or belonging, which includes identification with the national team. Excitement was described by words such as: "The atmosphere was great, or electric, it was festive or awesome and the vibe at the stadiums enjoyable". The following words were used to describe belonging: "Bringing the nation together, the integration of people, having met lots of friendly and helpful people, and seeing South Africans united." Identification with soccer and the national team was for some respondents the highlight, and to see SA going through to the semi-finals. For others it was the opportunity to watch international teams and to see real superstars on the field.

With respect to the technical service delivery, comments on the organisation of the tournament and the infrastructure were positive, especially the unique and striking stadiums. The smooth delivery and organisation was described by words such as: "Everything was well organised, smart and glamorous, everyone was working together to ensure success and safety in the stadium was impressive. The park and drive initiative was brilliant". The most positive experience with respect to of SA as a tourist destination was for many foreign tourists the diversity it offers. SA was considered exceptional. Most of the foreign respondents (76) said that they would visit SA again in 2010. The reasons given were similar to the most positive experiences which validate the findings. All (86), but one foreign respondent indicated that they would recommend SA for the 2010 World Cup.

8. Most negative experience of visitors

With respect to the most negative experience and suggestions for improvement, the crime rate and public transport was by far the most disappointing. A few spectators reported poor service delivery. Smoking in the stands and the *vuvuzelas* caused a nuisance for many international visitors. Others mentioned the empty stands, and lack of support from volunteers. Some said that the pricing of tickets were too high and this could even be considered as exploitation. Transportation and internet access was also very expensive. Recommendations for improvement, confirmed these negative experiences.

9. Discussion and management implications

An overwhelming 93.9% of respondents believed SA will successfully host the mega event which is much more positive than the findings of the FIFA study (2009:4), where

83% felt their country will be ready to host it. This is congruent with the demographic push factors illustrated in figure I. FIFA succeeded in providing entertainment. The experience of respondents was very emotional in that it generated excitement and a sense of belonging and thus achieved one of the SA Tourism's objectives, namely to ensure a lasting social legacy. The results further confirms that the benefits spectators seeked were all delivered in terms of fan motives; namely eustress, supporting the national team, interest in players and aesthetics. The fundamental satisfaction was derived from the mediating factor, namely the players and spectators of the event itself, not the place. This is in line with the findings of *Green and Chalip* (1998:286) that spectators come together to affirm their personal identity, for socialisation and camaraderie, as well as the opinion of *King* (2002:108) that tourists segment themselves in terms of who they are and the experience they seek. An overwhelming majority would recommend SA as a tourist destination, and many intends to come back to SA for the 2010 Cup. However, research indicates that destination revisit intention, based on satisfaction, is a short-term intention, because of novelty seeking (*Jang & Feng,* 2007:586).

Public transport remained to be a challenge as was elicited in the FIFA (2009:5) study. This perception tarnishes the image of SA as a tourist destination since the turn of the century and requires serious interventions before 2010. This is also one of the FIFA infrastructure requirements (*Davies,* 2009:34). It would seem as if event organisers are able to make visitors feel safe whilst at the event, even though SA suffers from the general perception of being crime ridden (*George,* 2003:576, *Saayman & Du Plessis,* 2003:60).

10. Concluding remarks

SA must get the basics right in terms of world-class facilities and services if it wants to achieve the legacy that had only been vaguely defined at the outset. The major challenge lies in the improvement of public services such as transport, safety and security. In order to deepen the destination brand and to ameliorate, rather than reinforce geographical and enterprise differentiation, it is suggested that extended length packages be developed outside the match days because most spectators will be coming from outside Africa. Transient leisure travellers attending matches may combine the trip with sight-seeing and other tourist related activities, and first-time visitors are inclined to explore more possibilities than repeat visitors.

Tourism enterprises can create public viewing areas where shared enjoyment and heightened emotive experiences could arise, as well as sentiments of patriotism, and ownership of the event itself. But, they must keep their base business happy; to ensure long term loyalty of existing customers. The changed economic climate will impact on the performance of hotels during the 2010 event and the ability to outperform competitors will depend on the revenue management experience of tourist enterprises.

Literature

Crompton, J.L. (1995). Economic impact analysis of sport facilities and events: eleven sources of misapplication. *Journal of Sport Management*, 9(1), 14–35.

Crompton, J.L. & McKay, S.L. (1997). Motives of visitors attending festival events. *Annals of Tourism Research*, 24(2), 425–439.

Czeglédy, A.P. (2009). A World Cup and the construction of African reality. In Pillay, U., Tomlinson, R. & Bass, O. (eds.). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

Daniels, M.J. (2007). Central place theory and sport tourism impacts. *Annals of Tourism Research,* 34(2), 332–347.

Daniels, M.J., Norman, W.C. & Henry, M.S. (2004). Estimating the income effects of a sport tourism event. *Annals of Tourism Research,* 31(1), 180–199.

Davies, G. (2009). Managing the alchemy of the 2010 Football World Cup. In Pillay, U., Tomlinson, R. & Bass, O. (eds.). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

Deccio, C. & Baloglu, S. (2002). Non-host community resident reactions to the 2002 Winter Olympics: the spill-over impacts. *Journal of Travel Research*, 41, 46-56.

Du Plessis, S. & Maennig, W. (2009). South Africa 2010: Initial dreams and sobering economic perspectives. In Pillay, U., Tomlinson, R. & Bass, O. (eds.). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

FIFA. (2009). *2010 World Cup Update Magazine,* June/July, Ke Nako; celebrate Africa's humanity.

George, G. (2003). Tourist's perceptions of safety and security while visiting Cape Town. *Tourism Management*, 24, 575–585.

Green, B.C. & Chalip, L. (1998). Sport tourism as a celebration of subculture. *Annals of Tourism Research,* 25(2), 275–291.

Gursoy, D. & Kendall, K.W. (2006). Hosting mega events; modelling locals' support. *Annals of Tourism Research*, 33(3), 603–623.

Jang, S. & Feng, R. (2007). Temporal destination revisit intention: the effects of novelty seeking and satisfaction, *Tourism Management*, 28, 580–590.

Keller, P. (2001). Introductory report: *World conference on sport and tourism*, Barcelona, 2223 Feb. World Tourism Organisation.

Kemperman, A.D.A.M., Joh, C. & Timmermans, H.J.P. (2003). Comparing first-time and repeat visitors activity patterns. *Tourism Analysis*, 8, 1–6.

Kim, N. & Chalip, L. (2004). Why travel to the FIFA World Cup? Effects of motives, background, interest, and constraints. *Tourism Management*, 25, 695–707.

Kim, H.J., Gursoy, D. & Lee, S. (2006). The impact of the 2002 World Cup on South Korea: comparisons of pre- and post-games. *Tourism Management,* 27, 86–96.

King, J. (2002). Destination marketing organisations; connecting the experience rather than promoting the place. *Journal of Vacation Marketing*, 8(2), 105–108.

Kotler, P., Haider, D.H. & Rein, I (1993). *Marketing places: attracting investment, industry, and tourism to cities, states and nations*. New York: Free Press.

Lee, C. & Taylor, T. (2005). Critical reflections of the economic impact assessment of a mega-event; the case of 2002 FIFA World Cup. *Tourism Management,* 26, 595–603.

Mihalik, B. (2000). Host population perception of the 1996 Atlanta Olympics: support, benefits and liabilities. *Tourism Analysis*, 5, 49–53.

Now Media. (2009). *SA Tourism Update; marketing index*, 24 July. Now Media, Grant Thornton & SA Tourism Services Association.

O'Brien, D. (2006). Event business leveraging; the Sydney 2000 Olympic Games *Annals of Tourism Research,* 33(1), 210–261.

Pillay, U. & Bass, O. (2009) Mega-events as a response to poverty reduction: The 2010 World Cup and urban development. In Pillay, U., Tomlinson, R. & Bass, O. (eds.). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

Pillay, U., Tomlinson, R. & Bass, O. eds. (2009). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

Qi Tang, M.S. & Turco, D.M. (2001). Spending behaviors of event tourists. *Journal of Convention and Exhibition Management*, 3(2), 33–40).

Ritchie, J.R.B. (1984). Assessing the impact of hallmark events: conceptual and research issues. *Journal of Travel Research*, 22(1), 2–11.

Rogerson, C.M. (2009). Mega-events and small enterprise development: the 2010 FIFA World Cup opportunities and challenges. *Development Southern Africa*, 26(3), 337–352.

Saayman, M. & Du Plessis, E. (2003). Competitiveness of SA as a tourist destination. *SA Journal for Research in Sport, Physical Education and Recreation*, 25(2), 57–65.

SA Tourism, (2008). *The Marketing Growth Strategy for South Africa*, 2008–2010, May.

Smith, A. (2005). Reimaging the city; the value of sport initiatives. *Annals of Tourism Research,* 32(1), 217–236.

The Economist, (2002). *Passion, pride, and profit: a survey of football*, 30 May, 2–15. http://www.economist.com/agenda/PrinterFriendly.cfm?Story_ID=1142861 [accessed, 20/11/09].

Tomlinson, R. (2009). Anticipating 2011. In Pillay, U., Tomlinson, R. & Bass, O. (eds.). *Development and dreams: the urban legacy of the 2010 football World Cup*. Cape Town: HSRC Press.

Van Meerendonk, P. (2009). *2010 FIFA World Cup South Africa; winning strategies for revenue optimization.* Minneapolis: Ideas Advantage.

Whitelegg, D. (2000). Going for gold: Atlanta's bid for fame. *International Journal of Urban and Regional Research*, 24(41), 801–817.

Williams, A. (2006). Tourism and hospitality marketing: fantasy, feeling and fun. *International Journal of Contemporary Hospitality Management*, 18(6), 482–495.

Yoon, Y. & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism Management,* 26, 45–56.

THE FUTURE ROLE OF AGRICULTURE IN MULTIFUNCTIONAL RURAL DEVELOPMENT: THE CASE OF ITALY

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Abstract: This paper addresses the issue of the role of agriculture in multifunctional rural development in Italy. Italy is characterised by high heterogeneity in terms of territorial composition, rural areas and the role of agriculture. The paper reviews the main multifunctionality concerns in Italy, by discussing rural development issues and policies and addressing the role of agriculture in such a context. The further development of agriculture and related future issues are then discussed, both in terms of dominant themes and most relevant policy design issues.

Key words: multifunctionality, Italy, agriculture, rural development

1. Introduction and objectives

Italy is characterised by high heterogeneity in territorial characteristics, including a wide range of climatic and ecologic conditions (lowlands, mountains, coastal and internal areas, as well as rather fertile and almost arid areas, etc.). The rural areas and Italian agriculture reflect this heterogeneity. The prevailing character, however, at least in the policy discourse and public perception, is that of high cost, high quality production, embedded in a rich cultural and natural rural environment, strongly determined and conditioned by its long term historical development path.

In this context, the issue of multifunctionality has been central to the discussion regarding the development of rural areas over the past decade. A major role in this discussion has been played by agriculture and related policies.

The aim of this paper is to review the role of agriculture in multifunctional development of rural areas in Italy.

The paper is organised as follows: after a review of past trends and the present situation (section 2), the paper analyses future expected changes in the farming sector (sector 3), followed by a discussion of future multifunctionality issues in section 4. The paper ends with some conclusions.

2. Current situation and past trends[1]

2.1 Role and structure of the agricultural sector

The Italian agricultural area is about 30 million hectares, with a relatively low share of lowlands (23%) compared with hilly and mountainous areas. Agricultural areas account for between 37% of total area in the North and 44% in the South. About half of the total agricultural area is cultivated with crops. The ratio between population and agricultural area is of about 400 inhabitants/100 hectares.

The economic role of agriculture is confined to about 2% of the total value added, and 5.3% of total employment (2007). However, both figures are above the EU25 average , denoting the relatively important role of agriculture.

In 2007, there were about 1.7 million agricultural holdings in Italy. *(Table 1)*.

Of this, about 73% are below 5 hectares in size, denoting a small average structure and the presence of a large share of micro-holdings. In recent decades, the agricultural sector has been characterised by a decrease in the total number of farms. The decrease has been particularly evident in the smallest size classes, while the average sized farms are rather stable in number and there is an increase of the number of farms in the highest size classes. The large majority (almost 100%) of agricultural holders are natural persons. However, the share of legal entities with agricultural holdings has grown steadily in recent years. The age of the farmer population is rather high, with about 44% of the farmers being above 65 years of age. The number of farmers below 35 is small and continues to decline. The labour force is composed of approximately 1.3 million agricultural working units, which is less than 1 working unit per holding. The number of physical persons involved in agriculture is, however, much higher with a total of more than 3 million in 2007. Of these, a large majority are family farm members.

In spite of the emphasis on diversification and multifunctionality, only a minority of farms have gainful

1 The main source of information for this section is INEA, 2008. Check this source for the original source of information, mostly ISTAT (Istituto Nazionale di Statistica).

Table 1. Key indicators in farm structures and labour in Italian agriculture

	1990	1995	2000	2005	2007
Number of agricultural holdings (000)	2664.55	2482.1	2153.72	1728.53	1679.44
Agricultural holdings with agricultural area < 5 ha (000)	2099.05	1938.26	1687.04	1271.66	1230.7
Agricultural holdings with agricultural area > = 50 ha (000)	38.37	40.25	36.54	38.62	40.01
Agricultural holders being a natural person (000)	2646.53	2470.57	2137.72	1699.46	1663.51
Agricultural holders < 35 years old (000)	137.59	110.21	110.6	56.49	49.07
Agricultural holders > = 65 years old (000)	850.95	912.29	825.95	734.95	740.54
Total farm labour force (000)	1923.99	1818.02	1364.92	1374.26	1302.18
Family farm labour force (000)	5197.21	4695.58	3888.22	3127.46	3056.54
Agricultural holdings with another gainful activity than agricultural production (%)			8.8	6.1	6.4

Source: Eurostat website, 2010.

activity other than farming, and the share is declining, pointing to a process of specialisation.

The agro-industrial system is very strong in Italy with a total value added of about 240 billion euros, 10 times that of the agricultural sector, and about 8.3% of the value added of the industrial sector. The total number of employees is about 0,5 million. The main categories of products of the food industry (based on value added) are: Diet foods and other categories, milk and dairy, confectionery, and wine.

Agriculture and the agri-food industry are generally very connected to each other. A large share of the agricultural production is processed or traded by the co-operative agri-food industry, particularly in the North. Many high-quality food products (e.g. Parmiggiano-Reggiano cheese) owe their specificities to a combination of agricultural and processing prescriptions. In the perception of the general public, agriculture and small agri-food industries are the main distinguishing features of Italian rural areas. Most marketing strategies in the agricultural and food sectors are more or less explicitly related to origin (e.g. for wine and most certified quality products). While the population which depends directly on agricultural is limited to about 5%, a larger share of (rural) households are still connected to agriculture through assets (land, house) property or indirect work-related activities (agri-food and related industries).

2.2. Specificities of different rural areas

This very general picture is actually characterised by a high degree of territorial differentiation, which also reflects the role of agriculture in rural development. The "Piano Strategico Nazionale per lo sviluppo rurale" (National strategic plan for rural development, MiPAAF, 2009) identifies three main typologies of rural areas in addition to urban areas *(Figure 1)*

Urban areas include 43% of the Italian population and are characterised by a strong role of industry and services. Agriculture is mostly relevant in the surroundings of large urban settlements, which are potentially important short-distance markets for high quality products. While the role of agricultural employment in these areas is low, or negligible, the presence of food manufacturing is rather high, with about 30% of employment located in these areas. These are the areas experiencing the highest pressure from urbanisation and, as a consequence, higher land prices and a greater share of land subtracted from agriculture (-15% of Usable Agricultural Area, UAA, in a decade). The presence of Natura 2000 sites in these areas is rather low, while there is an important share of land vulnerable to nitrates according to the nitrate directive. Due to the vicinity of town centres, the infrastructure endowment is rather good, as well as tourism and hospitality facilities.

Rural areas with intensive specialised agriculture are the most important agricultural areas of the country. They occupy mainly plain areas in the North. They include only about 22% of the total national population and 24% of the UAA, but 29% of agricultural employees, 30% of the agro-food industry and account for 38% of the national agricultural value added. They tend to be densely populated areas, with a younger and growing population (+10% in the past decade). Most of the area is composed of agricultural

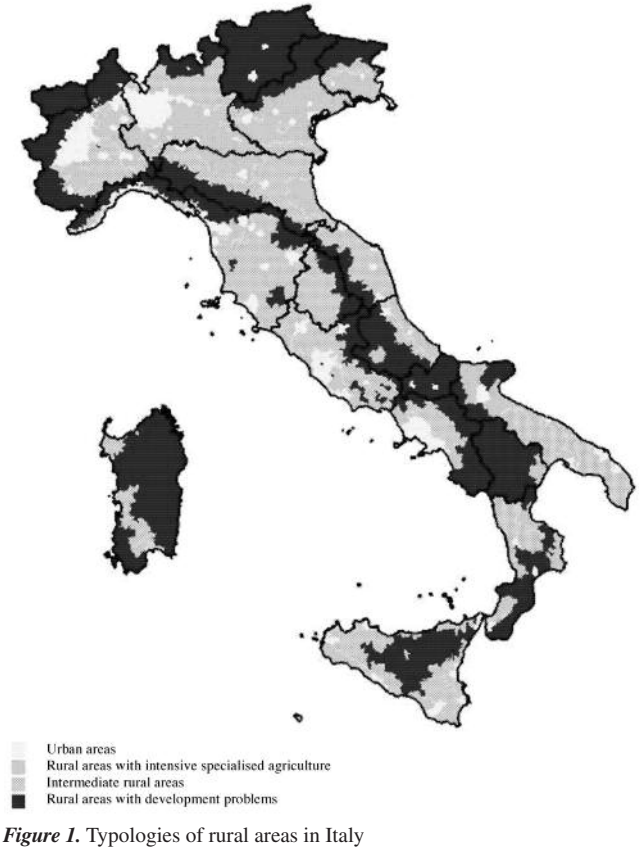

Figure 1. Typologies of rural areas in Italy

land (UAA=62%) and the economic system is strongly specialised in agriculture, with high productivity (gross revenue per hectare above 5000 euro/year). The Agro-food industry is also strong in the rural areas, with important chain and district connections with agriculture. However, small industries and other entrepreneurial activities are also very relevant in these areas. Rural areas with intensive specialised agriculture are also important for environmental concerns, in particular because they include 35% of the national areas classified as vulnerable to nitrates. While tourism and hospitality infrastructures are generally good, other infrastructures are below the national average.

Intermediate rural areas are mostly located in hilly and mountainous areas. They include 24% of the national population and 32% of the national surface area. The population is growing in these areas (+6% in a decade), but is affected by problems related to ageing. Agriculture is important in these areas, with a gross production of approximately 2200 euro/ha. However, the sector is experiencing important difficulties, with a strong reduction of cultivated surface (-12% of UAA) and employment (-27%) in a decade. This is due to the combination of ageing, increased production costs and lower land productivity. In spite of this, the agricultural and food sectors are considered to be a strategic component of the economy of these areas, in part because they combine with important environmental endowments (21% of the national protected areas, and 23 Natura 2000 areas). About 30% of nitrate vulnerable areas are also found in this typology of rural areas. The infrastructure endowment is very low in these areas, with regard to transportation, hospitals and internet connections. Moreover, tourism and hospitality infrastructures are considered to be insufficient. The area was strongly involved in the Leader+ initiative, with the municipalities interested in this policy representing about 37% of the population.

The rural areas with development problems are mostly located in the mountains and hills of the South. They are less densely populated, with a decreasing population (-1% in a decade, with a peak in the South of -6% due also to migration). While they include only 12% of the population, they cover 43% of the national surface, and 35% of the UAA. They also account for 20% of agricultural employees and 18% of the national agricultural value added. Agricultural productivity is low (1000 euro/ha) and does not guarantee economic viability. Consequently, land abandonment is very high. Development potential is generally seen to be related to local resources and tourism. These areas are marked by high unemployment rates and a higher than the average share of the population dependent on agriculture (8% compared with the national average of 5%). They are, however, very important from an environmental point of view, with 62% of the Natura 2000 areas (21% of the area of this typology), and 68% of the protected areas. The infrastructure endowment of these areas tends to be very poor, however, and the Leader+ initiative is most concentrated here (covering about 63% of the population).

2.3 Strength, weaknesses, opportunities and threats

In spite of the high heterogeneity of the system, it is possible to identify some mainlines that form the strategic development of the agricultural sector in Italy. This exercise was performed on the occasion of the "Piano Strategico Nazionale per lo sviluppo rurale" (National strategic plan for rural development, MiPAAF, 2009).

The main strengths are identified in the high propensity to produce certified quality products and in the diffusion of organic and integrated agriculture. The growing connections with the food industry and tourism are also seen as important.

The main weaknesses are found in the insufficiently high economic performances which ultimately prevent the sector from being competitive (high costs, low value added per employee). Additional weaknesses are found in structural problems at the level of agriculture (small farm size) and poor performance of the agricultural and food chain in terms of price transmission, performance of processing plants, difficulties in organization and concentration of supply, uneven market power between agriculture and the downstream sectors. Ageing and low infrastructural endowment, particularly in some areas, add to this picture.

The main opportunities concern the changes in consumption patterns with more attention to healthy and ethical products. Opportunities are also seen in the wide range of policy measures encouraging restructuring, investment and chain organization, as well as in the wide scope for enterprise organization though emerging legal forms such as agricultural limited liability companies.

The main threats identified stem from the crisis of consumption of agri-food products and the strong competition on international markets by both EU and non-EU countries (e.g. southern Mediterranean countries).

2.4. Agricultural policies

The Common Agricultural Policy (CAP) is the main policy concerning agriculture in Italy. The total first pillar expenditure for Italy is about 4660 million euro, representing 11.1% of the total EU expenditure under this chapter (with a decrease of 3% in 2008 compared to 2007). According to the variety of farming systems, specialisations and structural characteristics, a very wide range of measures are implemented in Italy, with varying importance depending on prevailing local production systems.

However, the chapter that is by far the most important in the first pillar is the single farm payment (SFP), which accounted for 3206 million euro (69% of first pillar payments) in 2008. In the same year, other direct payments accounted for 600 million euro (13%), while the remainder of the first pillar is provided by direct intervention on agricultural markets (880 million euro, 19%). The sugar restitution fund also played an important role with a 535 million euro payment. Following the Fischler reform, Italy opted for the total decoupling of cereal, oil and protein crops payment starting in 2005. In the same year environmental

cross-compliance was also introduced, tying SFP payments to compliance with a number of basic environmental regulations, and with keeping farmland in good agricultural and environmental conditions.

Pillar two measures, basically represented by Rural Development Plans (RDP) started in 2000 and aggregated a number of previous interventions classified either as structural or complementary measures. Italian RDP are co-financed by the national government and have a total availability of 16,604 million euro for the programming period 2007–2013, which is about 2372 million euro per year. However, the implementation got off to a slow start and on March 31, 2009 only about 1359 million euro had been paid (less than 9%). This is actually quite common in the implementation of all rural development plans; it also occurred at the beginning of the 2000-2006 programming period and in the mid nineties when the accompanying measures introduced by reg. EC 2078/92, 2079/92 and 2080/92 were implemented. Of the amount already paid, altogether, 81,3% of the total RDP funding is devoted to axis 2 measures, 16,3% to axis 1 and the remainder to axis 3. This concentration of payments on axis 2 is largely due to the coverage of undertakings already established in the period 2000-2006, and which remain in force for the following period during to the length of the contracts (5 to 20 years), particularly in the field of agri-environmental measures.

2.5 Public goods and agriculture

Pierangeli et al. (2008) found that different areas of Europe undergo different "multifunctional specialisations" and that this is more evident when moving to the lower scale. They also classified EU countries according to their characteristics with respect to multifunctionality. In this exercise, Italy is included in a cluster with other Mediterranean countries (Greece, Spain and Portugal). This cluster is characterised by the relevant weight of the primary sector on GDP, rural diversification (underscored by the large diffusion of Leader+ activities) and by the emphasis on product valorisation and territorial identification, mainly by way of certifications of origin.

Public goods related to agriculture are mostly identified with environmental and landscape features in rural areas. In such contexts, MiPAAF (2009) identifies seven main areas of concern:

- biodiversity;
- water resources;
- climate change;
- soil;
- air quality;
- landscape;
- disadvantaged areas.

Let us consider the main components in turn.

Agriculture plays a major role in biodiversity conservation due to the high share of high natural value farmland (about 21% of the total UAA), mostly concentrated in Natura 2000 areas. However, the level of biodiversity is still decreasing, as shown mainly by bird populations. This is mostly caused by a simplification of most agricultural habitats, due to the intensification of farming activities or farmland abandonment.

Water is a critical resource in Mediterranean systems, and for agriculture in particular. About one third of Italian UAA is irrigable, while almost a half of the national value added from agriculture comes from irrigated crops. This high dependency on water causes agriculture to be by far the most important water using sector in Italy (roughly 50-60% of total national water use), which encourages conflicts with other sectors for water resources. Water protection issues are mostly connected with qualitative issues in the North, and quantitative issues in the South. While surface water is for the most part in an acceptable status, the situation of groundwater is critical in many areas, particularly in the South where it is the source for 53% of water abstraction. Agriculture affects water quality mainly through nitrogen emissions (about 40 kg/ha) and quantity through abstraction for irrigation purposes. The use of chemicals in agriculture is characterised by an increase in total market value, but a decrease in quantity used. Irrigation water management is affected by major inefficiencies both in the distribution system and concerning on-farm irrigation systems.

Climate change is a relevant issue from the point of view of emissions/fixation of gasses contributing to climate change, and from the related point of view of energy production from biomasses. From the point of view of greenhouse gas (GHG) emissions, agriculture contributes only 6,5% of total Italian emissions. However, agriculture is the main source of emissions for Methane and Nitrous Oxide. From 1990 to 2006, emissions of these gasses have fallen by respectively 12 and 8%. What is most important is that many agricultural systems can play a role in carbon fixation. This role is particularly important as the total GHG emissions in Italy in the period 1990-2006 have increased by 10% compared to an expected reduction by 6,5%. In recent years a major emphasis has been devoted to the production of energy from biomass, mostly driven by poor agricultural profitability and the consequent search for alternative sources of income, and encouraged by both the value of green certificates and specific payments for energy-related investments under the RDP 2007-2013, axis 1.

Soil management issues are mostly characterised by the reduction of the cultivated area (-16% in the last decade), mostly in the area cultivated with permanent pastures (-26%). Soil quality is also a problem. In plain areas the main soil quality issue is related to the increase in phosphorous pollution due to fertilizers. In hill and mountain areas, soil degradation is mostly caused by the reduction of organic matter and soil erosion due to water flows. Practices such as organic agriculture have a major role in the preservation of soil. Organic agriculture represented about 9% of the national UAA in 2007, with a constant overall growth trend (it was 8% in 2000), but with contrasting trends among different crops (steady growth in fodder crops and a decline in grapes and fruit).

With regard to air pollution, the main source from agriculture is ammonia emissions (NH3). The main source of such emissions is livestock production with about 54%, followed by cultivation with 40%. The ammonia emissions in agriculture between 1994 and 2006 have been reduced by 12%, mainly due to a reduction in herd size. Agriculture is now seen as playing a major role in the fight against climate change.

Rural landscapes are a major feature of Italian agriculture, built over thousands of years, contributing to biodiversity conservation, cultural perceptions of rurality, quality perceptions the certification of products, and rural recreation activities. Rural landscapes have deteriorated in recent decades, particularly due to urban development and the simplification of crop-mixes. This trend was partly accompanied by unfavourable policy designs, which for decades were mostly oriented toward productive agriculture. Abandonment of marginal land and forests has also contributed to landscape degradation. In spite of the change in policy focus since the beginning of the 1990s, negative trends seem, altogether, to prevail.

Disadvantaged areas have been identified in order to implement the RDP measures on compensation for disadvantaged areas. They account for 61% of the national area, with percentages ranging from less than 40% to more than 90% in the Aosta Valley, Basilicata and the autonomous province of Bolzano. In terms of agricultural production units, they concern 59% of Italian farms. These areas have been characterised by constant depopulation and abandonment of agricultural activities in the last two decades. In contrast with this, the average farm area is also decreasing, although the trend can also be associated with a rationalisation of existing farming structures. Economic activities and infrastructure are also weaker in these areas.

This is particularly relevant in connection with the socio-economic aspects of agriculture, already discussed in relation to the differentiation of rural areas above. Though less commonly connected to agricultural activities and policy, socio-economic aspects also contribute to the public role of agriculture. For example, they are tied to the various dimensions of employment, social networks and cultural characteristics that are strongly related with the differing importance of agriculture in different kinds of rural areas, as discussed in section 2.2.

2.6 Policies related to multifunctionality

Agri-environmental measures have dominated the scene of non-first pillar measures since 1992, and also since 2000 (with the Agenda 2000 reform), when they were integrated into the RDP. RDP now include a very wide range of policies related to various aspects of multifunctionality, ranging from payments for investment in diversification activities, to measures aimed at improving the quality of life in rural areas.

The main measures directly related to multifunctionality in terms of budget, are those included in axis 2 of the second pillar of the CAP.

During the period 2000–2006, expenditures for contracts established under reg. EC 2078/92 (agri-environmental measures) accounted for 31,6% of the total RDP expenditure and this summed up to the Measure F of the RDP (agri-environment), which accounted for 19%. As a result, about half of the RDP resources were devoted directly to providing incentives for the production of environmental services from agriculture. The next most relevant measures in terms of expenditure were those of Measure A (farm investment), with about 10% of the total expenditure over the period 2000-2006 (MIPAAF, 2007).

3. Expected changes in the organisation of farming sectors from a generational perspective (20-25 years)

The main features of the last decades which are expected to continue in the future are the process of exiting from agriculture, accompanied by major restructuring of farms, either through the sale or renting of land or the increased role of machinery renting companies.

This will be to some extent driven by CAP developments. In particular, if the main policy trend remains characterised by decoupling, competition on the global market will accelerate restructuring and exiting from the farming sector, resulting in a more and more dualistic agriculture sector in which well-connected and endowed competitive areas are opposed with less favoured areas.

Such effects will also increase the attention given to innovative farm and chain organisation (e.g. farmers' markets), and the quality of production.

This will occur against two background features: urban development and climate change.

Urban development has characterised the second part of the 20th century and strongly affected land prices and ownership strategies in agriculture. Settlement development is expected to continue, particularly in small villages in rural areas surrounding the main towns. This will affect both access to land and quality of life in rural areas.

Climate change will be a crucial issue in the medium-long term. The crucial issues for Mediterranean agriculture will be related to water availability and the effects of temperature on evapo-transpiration. In addition, energy and carbon sequestration issues could yield opportunities for agriculture.

4. Possible Future Multifunctionality Issues

4.1 Main thematic issues

All the main thematic issues discussed above will maintain their relevance in the future. Among them, however, recent trends show a shift in attention toward water resources, climate change and energy production from biomass, and biodiversity. While this is consistent with the

recent trends in EU policy (new challenges introduced by the Health Check of the CAP), a number of specificities exist with regard to the Italian context.

Water management concepts are changing under the pressure of the increasing frequency of drought events, and the implementation of the Water Framework Directive (60/2000). While water scarcity issues are expected to become more severe in the future, the commitment from agriculture to save or efficiently use water is becoming more important in the context of the mediation of allocation to other sectors.

Climate change and energy are seen as relevant opportunities for Italian agriculture. After the rush to open new facilities and provide incentives for energy production from biomasses, witnessed over the last five years, the next challenges will be devoted to ensuring economic viability of existing energy producing infrastructures, and understanding the most likely strategies for a consistent development of energy production.

Agriculture continues to be mostly competitive with biodiversity conservation, in spite of the emphasis on biodiversity as a resource. Biodiversity conservation usually implies putting constraints on agricultural production for which compensation is provided.

A key concern in reconciling the profitability of agriculture and biodiversity (as well as a number of other public good related concerns) is the role of organic agriculture. In fact, based on the experience of recent years, two different "types" of organic agriculture should be considered. On the one hand, there is economically viable organic agriculture, mostly related to high value products, with rather direct connections with consumers, and sometimes connected to diversification activities (i.e. rural tourism). On the other hand, there is policy-driven organic agriculture, which is often characterised by extensive low-input crops, and mainly justified by payments provided by the RDPs, but unlikely to provide significant environmental benefits or market profits.

A connected issue is the role of quality products. The development of certifications has contributed to public (consumer) awareness and the recovery of typical high value added products. However, willingness to pay for quality and the effectiveness of certification is still modestly understood. In addition, the actual degree of connection between quality products and public goods is still largely to be qualified and demontrated.

Urban-rural interaction is also discovering new dimensions. Beyond the traditional and still relevant competition for land, a future issue is that of the actual integration of non-agricultural settlements into mainly agricultural areas and the role of agriculture related to local urban areas. While discussions in recent years have mainly been focused on the role of agriculture as a landscape producer, more recent attention on retaining profits for agriculture and reducing "food miles" has highlighted the role of local agriculture as a producer of food for local consumers, through farmer's markets and short chain solutions. The roles of agriculture are particularly relevant around urban areas characterised by high historical and landscape values and can develop a willingness to pay on the part of local non-agricultural populations (*Torquati* et al., 2008).

In recent years new attention has also been attracted to productive agriculture and innovation processes. This is due to the general policy context (CAP reform), the push for less protection and higher competitiveness in the market, as well as the strong structural change that is creating a growing number of large entrepreneurial farms that already hold a majority of production. These farms, though mostly open in terms of production processes, including multifunctional activities and policy driven production of public goods, are generally more oriented toward classical agricultural production, and in particular agricultural commodities benefiting from economies of scale.

A past and future issue is the role of diversification of farming activities in the context of multifunctional agriculture. For example, Finocchio and Esposti (2008) investigated diversification of farming activities in the Marche region of Italy, mainly with regard to deepening (organic farming, product processing, quality products (PDO, PGI, TSG), ISO, HACCP certification, and other kinds of certification) and broadening the kind of activities (rural tourism, farm contracting, participation in agri-environmental programs). They found that a move in the direction of multifunctional diversification is encouraged by small farm size, and dependent on location. In fact, this attitude seems also to grow over time. As far as policy is concerned, they found that the correlation with pillar I payments is negative and that the correlation with pillar II is very low, suggesting that diversification activities are more important for those farms which benefit less from CAP support.

An issue somehow touched marginally in the literature compared with the potential major relevance in the future is that of GMO acceptance and coexistence with organic and traditional production, in a context where a strong market strategy has been based on the qualification as GMO-free products and areas.

4.2 Main policy (design) and research issues

Two general policy and research issues can be identified in the lines of research already developed in the last two decades about the effectiveness and efficiency of policies directly aimed to provide incentives for the production of multifunctional goods by agriculture. They concern the documentation of jointness of such goods with agriculture and the ability to measure the changes actually attributable to policies.

On the first point, attention is drawn to the discrepancy between technically/economically demonstrated connections between agricultural, environmental and social effects, and the policy discourse surrounding agriculture, that often emphasises as a product of agriculture also weakly connected or competitive outputs. The trend of the

weakening of the connection between households and farming, even in the most rural areas, emphasizes that also the jointness of agriculture with social concerns is weakening, at least for quantitative issues (e.g. employment concerns). Cultural linkages, on the other hand, are still strong though reshaped by explicit communication/marketing strategies, not always corresponding to the true historical identity of rural areas.

The inability to measure effectively the effects of multifunctionality-related policies strongly affects the policy debate throughout Europe. This concerns, for example, agri-environmental measures (*Finn* et al., 2009). This is also related to a second issue associated with agri-environmental policy concerns, that is the determinants of participation, a theme also having attracted considerable attention in Europe (*Defrancesco* et al., 2008).

The introduction of cross compliance in 2005 has brought forward a number of new policy issues. While initially considered to be a very soft policy and basically dismissed on the research side as a simple matter of the obligation to fulfil existing requirements, it is beginning to raise major policy design questions. First, the costs of cross-compliance are relevant and become part of the decision making process at farm level. At the same time effectiveness is not assured and should be analysed in a moral hazard context, in particular considering the low level of monitoring. This leads us to the problem of the appropriate design for rarely verifiable prescriptions, incentives related to pre-established payments, and sanctions (*Bartolini* et al., 2008a). One additional issue related to cross-compliance is that agri-environmental prescriptions are now connected to the baseline represented by cross compliance, which enlarges the scope for locally negotiated constraints leading to public good production and, more importantly, calls for a joint design of first and second pillar environmental measures (*Bartolini* et al., 2008b).

A major issue for the future of multifunctionality will be the integration between policies. Relevant examples already in the present RDPs are measures that provide compensation for farmers subject to restrictions from the Water framework directive or Natura 2000. Similarly, cross-compliance measures rely heavily on existing regulations, as they refer in most cases to compulsory norms which have already been in place for several years.

In fact, a number of less visible connections exist throughout all second pillar measures. A large part of this integration is actually performed at the local level as both RDP and reference regulations are specified locally. This is the example of WFD, where measures are designed at the basin district level, which is close to, but never coincides, with the nuts II level where RDP (and partly cross-compliance) is designed in Italy.

This leads to the further problem of governance. Coordination at the local level involving a growing number of actors is increasingly required, and is already proving to be a difficult task. In addition, even within the same institution, an issue in coordination between different directorates may arise.

As well as the integration between policies, increased attention has been attracted in recent years by the effects of networking in the connection between agriculture and agri-food industry in either a chain or district perspective. This attention has been emphasised by the diffusion of Leader+ initiatives, that focus on networking, and has tended to move from "mere" economic networking to either the role of social networks and social capital (e.g. *Medicamento and De Gennaro,* 2006; *Magnani and Struffi,* 2009), and the emerging of "knowledge" networks related to development and innovation processes. Altogether, the recent literature seems to suggest an important space for the development in this direction, also taking into account of the increasing complexity of agricultural embedding in rural and non rural society and the pervasive role of globalised phenomena as determinants of local outcomes. A number of potential major issues are now being detected in this direction, but still insufficiently studied, such as Central EU elderly moving to buy houses in Mediterranean areas, "multi-country farms" split between Italy and the Balkans, non-EU immigrants up-taking farms as entrepreneurs, technologies flowing from outside (e.g. biogas digestors from Germany or cereal storage bags from Argentina.

5. Discussion

In recent decades agriculture in Italy has been characterised by a reduction in importance in the national economy and employment, accompanied by major structural change, though they are often poorly reflected in official statistics (e.g. farm size). Agriculture is strongly connected to the food industry, which is, on the contrary, a major component of the Italian economy.

The discussion about multifunctionality of agriculture in rural areas in Italy has developed around the two connected themes of the provision of public goods from agriculture (including the reduction in production of "public bads"), and the development of agricultural-rooted "non-conventional" agricultural activities (diversification). Policy, particularly the CAP, has been a major driver of such developments. However, the marketing strategy based on certified, high quality, environmental and socially friendly, traditional local products has also played an important role in this direction.

The future is characterised by high uncertainty, though some major trends seem to maintain their relevance, such as: farm structural change and the concentration of land in a smaller number of farms, price volatility, concentration of agricultural activities in the most productive rural areas, and attention to environmental and food quality.

In such a context, dichotomies between production-oriented and multifunctionality-oriented farms seem to remain and indeed be strengthened. The same contrasting attitude seems to increase in the contraposition between areas of specialised agriculture and areas of low income, high natural value agriculture.

A key issue concerns the market sustainability of the multifunctional roles of agriculture. In most cases such roles

will remain highly policy dependent. As a consequence, a high attention needs to be paid to key emerging policy design issues, particularly concerning cross-compliance, coordination between first and second pillar of the CAP, and coordination between agricultural and other policies.

This is embedded in the wider issue of rural development and its profound diversification across the different areas of Italy.

6. References

Bartolini, F., Gallerani, V., Raggi, M. and Viaggi, D. (2008a). Effectiveness of cross-compliance under asymmetric information and differentiated compliance constraints, 2008 EAAE Congress, Gent, Belgium, August 26–29, 2008.

Bartolini, F., Gallerani, V., Raggi, M. and Viaggi, D. (2008b). Linking cross-compliance and agri-environmental schemes: a case study in Emilia-Romagna, 109th Seminar of the European Association of Agricultural Economists (EAAE) "The Cap After the Fischler Reform: National Implementations, Impact Assessment and the Agenda for Future Reforms, Viterbo, Italy, 20–21 November 2008.

Defrancesco, E., Gatto, P., Runge, F. and Trestini, S. (2008). Factors affecting farmers' participation in agri-environmental measures: a Northern Italian perspective. Journal of Agricultural Economics, 59, 114-131.

Finn J.A., Bartolini F., Bourke D., Kurz I., Viaggi D. (2009): Ex post environmental evaluation of agri-environmental schemes using experts' judgement and multicriteria analysis, Journal of Environmental Planning and Management, 52, pp. 717–737.

Finocchio R. and Esposti R. (2008). Determinants of farm diversification and interaction with the CAP. An application to FADN of Marche region (Italy). 12th Congress of the European Association of Agricultural Economists – EAAE 2008.

Istituto Nazionale di Economia Agraria (2008). Italian Agriculture in figures 2008, Rome.

Istituto Nazionale di Economia Agraria (2009). L'agricoltura italiana conta 2009, Rome.

Magnani N., and Struffi L. (2009). Translation sociology and social capital in rural development initiatives. A case study from the Italian Alps, Journal of Rural Studies 25, 231–238.

Medicamento U. and De Gennaro B. (2006). Social Networks and Supply chain Management in Rural Areas: A Case Study Focusing on Organic Olive Oil, Poster paper prepared for presentation at the International Association of Agricultural Economists Conference, Gold Coast, Australia, August 12–18, 2006

Ministero delle Politiche Agricole Alimentari e Forestali (MiPAAF) (2009). Piano Strategico Nazionale per lo sviluppo rurale, Rome.

Ministero delle Politiche Agricole Alimentari e Forestali (MiPAAF) (2007). Attuazione finanziaria PSR 2000-2006, Rome.

Pierangeli F., Henke R. and Coronas M.G. (2008). Multifunctional agriculture: an analysis of country specialisation and regional differentiation, 12th Congress of the European Association of Agricultural Economists – EAAE 2008.

Torquati B., Giacché G., Taglioni C., Musotti F. (2008). The effects of CAP reform on the periurban agricultural area in the plain of the city of Assisi, (Central Italy), 109th EAAE Seminar " The CAP after the Fischler reform: national implementations, impact assessment and the agenda for future reforms". Viterbo, Italy, 20-21 November 2008.

AGRICULTURE IN THE NETHERLANDS: ITS RECENT PAST, CURRENT STATE AND PERSPECTIVES

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Abstract: The driving forces that determine the prospects of the agricultural sector are dominated by international and European developments related to the demand for and supply of products. In this context, European policy, (such as the CAP), and national policy (e.g. nature management) can greatly influence the development of the agricultural sector. A further reduction of the support by the government forms an important element in the expected future developments.

Key words: Dutch agriculture, current state and perspectives of agriculture

1. Introduction

Although their shares in the national economy has declined steadily, agriculture and its allied sectors are still important in the Netherlands. The so-called agro-complex, which covers all the economic activities in production, processing and distribution of agricultural products (food and non-food), equated to 9.6% of the total national added value (i.e. 47.9 billion Euro) in 2007. Moreover, it offers employment to over 600,000 jobs, which equals almost 10% of national employment *(Table 1)*. A Porter analysis of the competitiveness of the Netherlands in 2003 showed that of the one hundred most competitive flows of goods in the Netherlands, about half came from the agriculture and food cluster. It is therefore not without a reason that the Innovation Platform, appointed and chaired by Prime Minister Balkenende, designated flowers and food as the first key area of the Dutch economy (Ministry of LNV, 2005).

Dutch agriculture has become dependent on foreign countries for the import of raw materials and for the export of agricultural products and commodities. As such, the agricultural sector is greatly influenced by the global economy. As *Silvis and Leenstra* (2009) show, the proportion of agricultural products and food in total Dutch exports of goods services is fairly high (17%). Every year, the agricultural sector generates an extensive positive export balance of over €20 billion (€23 billion in 2007). In total, about 70% of the economic significance of the agricultural complex relates to exports, the majority of which (about 80%) are destined for other EU member states. Germany and the United Kingdom are the largest buyers of Dutch agricultural products (Ministry of LNV, 2009). After the United States and France, the Netherlands is the third largest exporter of agricultural products. In combination, ornamental products, meat dairy products and vegetables account for almost 75% of the net exports (*Silvis and De Bont,* 2005).

This article provides an overview of the recent past, the current state and the perspectives of the Dutch agricultural sector. It draws heavily on the work of the LEI (Agricultural Economics

Table 1. Economic significance of the Dutch agro-complex

	Added value (× 1,000 million euros)			Employment (× 1,000 annual labour units)		
	1995	**2001**	**2007**	**1995**	**2001**	**2007**
* Agro-complex (total)	32.4	40.5	47.9	659	717	672
Share of national total (%)	12.0	10.2	9.6	11.6	10.8	9.9
* Agro-complex on basis of domestic agricultural raw materials	20.2	21.5	25.6	430	416	390
Primary production	8.4	7.6	8.0	189	184	169
Processing	3.0	3.2	4.4	54	50	42
Supply	6.5	8.1	9.9	135	137	130
Distribution	2.3	2.6	3.2	53	45	50
* Processing, supply and distribution of foreign agricultural raw materials	10.9	15.3	18.3	190	226	218
* Agricultural services, gardening businesses and forestry	1.3	3.7	4.0	39	75	64

Source: LEI Wageningen UR

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Research Institute), which forms part of Wageningen University and Research Centre. The article utilizes a descriptive analytical approach, supported by historical and current data. Its structure is simply based on the second part of its title. That is, section 2 deals with the Dutch agriculture in the recent past (1900-2000). In this section, we pay also some attention to the introduction of the European Common Agricultural Policy (CAP), because this policy formed and still forms the context of today's agricultural reality. Then, section 3 focuses on the current state of the agricultural sector, but will also discuss some Dutch policy issues of topical interest. Section 4 concludes and presents a future outlook by describing the perspectives for agriculture in the Netherlands.

2. Dutch agriculture in the recent past

For centuries, Dutch agriculture has performed many functions in the economy, and has played many roles in society and in caring for the land. Moreover, it has dominated the landscape and the environment in rural areas, as farmers cleared forests to create fields, built houses and outbuildings, laid out gardens, and cultivated the land for agricultural purposes. This section sketches the history of Dutch agriculture. Sub-section 2.1 serves as a sort of preamble and describes succinctly the situation until 1950. Sub-section 2.2 continues with the agricultural developments in the second half of the 20th century.

2.1 1900 – 1950[2]

In the beginning of the last century, agriculture in the Netherlands was concentrated on small-scale mixed farms, with some cows, and some other farm animals, such as pigs for meat and horses as beasts of burden. Arable land and grassland plots were quite small and primarily used to produce fodder for the animals on the farm. The rest of the production was traded on local weekly or monthly markets or used for consumption by the farmers themselves. In general, and probably in line with the daily struggles of farmers in other countries, Dutch farmers worked a hard living, especially from the nutrient-poor sandy soils. Many people earned their livelihood from agriculture; around 1900 there were approximately 2.8 million workers in agriculture.

But then, at the beginning of the 20th century, the situation for farmers became more favourable and rosier. As shown by *van den Ban and Bauwens* (1988, pp. 215–216), "a process of change started on the sandy soils towards a type of agriculture where farmers got their income from the sale of animal products and produced arable crops to feed their animals." This process was accelerated with the introduction of fertilizer, which made it possible not only to increase yields and to overcome the problems of shortage of manure, but also to change heathland into arable land and pastures. But also the development of efficient systems for input supply, processing, marketing and credit, largely by co-operatives, had a significant impact on the traditional livelihood of small farmers, especially in the regions with poor sandy soils.

The economic crisis of the 1930s and the food shortages during and after the Second World War forced European governments to intervene intensively in the agricultural sector. This intervention varied greatly from one country to another (see *Tracy,* 1989). The Dutch government policy was aimed at the recovery of the national economy and increasing industrial production and capital investment. In order to increase the purchasing power of the population, the prices of food and other essential items were kept artificially low. The increase of agricultural production was achieved by making farm labour more effective through a more general use and deployment of machines and through yielding more harvest from both the soil and the animals. Increase of the yield was achieved by, *inter alia*, using artificial fertilizer, pesticides and herbicides, and high-energy fodder. Also land consolidation policies – which tried to reduce the number of parcels, to improve their shape and their location in relation to farm buildings, roads and villages – were seen as important in boosting food production. In fact, land consolidation became a central part of the structural policies for agriculture (*van den Noort,* 1987).

2.2 1950 – 2000

European Integration started on 9 May 1950 with the Schuman Declaration that proposed the establishment of a European Coal and Steel Community. Also agriculture had to become involved in European and international integration processes, because agriculture was and is an important part of the economy. The Treaty of Rome, signed in 1957, was the founding treaty of the European Economic Community (EEC), which later became the European Union (EU). This treaty laid down the initial provisions for the economic community, including the development of the internal market and the common agricultural policy (CAP). In fact, a separate chapter of the EEC Treaty stipulated in its first article that agriculture and trade in agricultural products should be part of the common market (article 38 of the EEC Treaty; currently article 32 of the EU Treaty).[3] Due to the agricultural policies already in force in all member states, this internal liberalization was conditional on the creation of a common agricultural policy as a substitute. The greatest contribution made by European agriculture commissioner Mansholt and his collaborators was to ensure that, despite the inherent difficulties, the chapter on the common agricultural policy did take shape. In consequence, agriculture therefore

2 For a good and accessible overview of the Dutch agriculture until 1950, see Bieleman (2006).

3 The common market refers here to a free trade area with common policies on product regulation, and freedom of movement of the factors of production (capital and labour) and of enterprise.

became a frontrunner rather than an obstacle to the integration process in Europe.

If we look at the Dutch situation more deeply, then it appeared that after the Second World War agriculture was in a process of transformation. New technological developments as well as improved education and better accessibility resulted in a flourishing rural economy. Moreover, the Dutch agriculture changed from a labour intensive mixed farming system, characterised by a diversification of agricultural production, into a highly specialized intensive farming system with high inputs of capital and labour. The new system was totally designed to maximize the production of pigs, cows and poultry. The process of intensification and modernization of the Dutch agriculture started around 1960 creating a type of farm that in academic circles became known as footloose agricultural farms.

The creation of this 'new' type of farm coincides with the expansion of dairy farming in the Netherlands, which – according to the Dutch dairy board (www.prodzuivel.nl) – gained momentum after 1960. Indeed, dairy production, which is one of the most important production sectors in Dutch agriculture, grew enormously since the 1960s. Although the number of dairy farms decreased dramatically, the milk production per hour and per hectare showed a strong increase in particular until 1985 (the European Community introduced a milk quota system in 1984 to control milk production). As a result, from the 1960s onwards, the Netherlands have become a major exporter of dairy products, selling about 60 percent of domestic milk production abroad.

Table 2. Development in dairy farming in the Netherlands (1960–2000)

Period	Land / farm (ha)	Yield / cow (kg)	Cows / farm (#)	New technological input
1961-1965	14	4,120	18	* Wide-scale introduction of milking machines
				* Artificial insemination
1966-1970	16	4,350	22	* Higher fertilizer use on grassland
				* Specialisation in dairy
1971-1975	20	4,875	34	* Milk cooling tank
				* From hay to grass-silage
				* Loose housing system with cubicles
1976-1980	22	5,340	48	* Maize feeding
				* Higher concentrate feeding
1981-1985	25	5,700	54	* Cow identification for individual feeding
				* Wide-scale use USA Holstein-Friesian blood
1986-1990	29	6,575	49	* Embryo transplantation
1991-1995	31	6,975	51	* Environmental protection (e.g. manure injection)
1996-2000	35	7,525	55	* Introduction milking robot

Source: *van Horne and Prins,* 2002, p. 9.

In the period between the 1930s and 2000, the Dutch population doubled, but milk production almost tripled.

These developments should be seen against the background of changes in the economic environment, institutions and market conditions. *Van Horne and Prins* (2002) show that especially technological change has led to a spectacular increase in the total production of milk *(see Table 2)*.

To summarise *Table 2*, the period 1960–1980 can be characterised by a fast growing production of milk per farm. This was accompanied by a strong growth in labour productivity. These developments were largely due to a number of changes in production technology, which were stimulated by the agricultural policy of the Dutch government and afterwards by the agricultural policies of the European Community. As a result, during the 1970s milk production in the European Community increased very quickly. The self-sufficiency grew well over 100%. There were few opportunities to export milk products to destinations outside Europe and these were supported by high export subsidies. In those days, stocks of milk powder and butter became 'mountains'.

In 1984, the European Community imposed a quota on the production of milk to stop surplus production. Due to this milk quota, it became impossible to increase the production of milk any further. In addition, the focus of society became more directed at the quality of the environment. New legislation came into force to protect the environment and to reduce pollution. For the dairy sector, legislation aimed at reducing air and water pollution was particularly important. Dairy farms have to satisfy the criteria for environmental licences, entailing costs in the form of specific investments required to adapt the concern, for example to be able to store enough manure in the right way and to apply it properly to the land. These regulations are also increasingly influenced by European policy. In addition more farmers try to distinguish themselves in the market by sustainable production (organic or ecological products) and thus in some cases obtaining higher prices for their products. From the above, it can be concluded that the development in the dairy sector during the last two decades of the 20th century differed in many respects from that of the period 1950–1980. This conclusion is not restricted to the dairy sector, but applies generally to the whole primary agriculture.

If we compare the importance of the agricultural sector in the second half of the 20th century with that of today, then we see that during 1970, agriculture was a more important sector in the Dutch economy than it is nowadays *(see Table 3)*.

Table 3. Share of agro-complex in the Dutch economy, 1970–2007 (in%)

	Agro-complex (total)		Primary sector	
	Value added	Employment	Value added	Employment
1970	15.3	16.4	5.8	6.4
2007	9.6	9.9	1.6	2.5

The fall in the share of primary agriculture within the Dutch economy was until about 1990 primarily a matter of prices that were becoming unfavourable. Later, the growth in

production volume was also lagging behind, particularly as a result of environmental measures that were gradually being tightened and changed in the agricultural policy of the European Union. In the next section, we will see how these measures and policies have influenced and shaped today's agriculture and food production systems.

3. The current state of the Dutch agriculture

3.1 Current position of the agricultural sector in the Netherlands

Today, primary agriculture and horticulture still account for about two third of the land use in the Netherlands. The area of cultivated land in the Netherlands is approximately 1,930,000 hectares, of which some 53% is classified as grassland and 42% as arable land, while 3% is cultivated for vegetables and fruit and 2% for flowers, ornamentals and seeds.

The number of farms is declining quite rapidly – during the past 25 years, the number of farms decreased by an average of 2.3% per annum (see Table 4). In 1950, there were some 410,000 farms in the Netherlands, while by 2008 the number had decreased to less then 80,000. The total area under cultivation has decreased by only 16% over that same period, so the average farm is much larger today and increases in scale are an important trend. The bigger farms account for a continually larger share of production. At the same time, however, there are still many smaller farms, including part-timers, and farms which are broadening their scope. There is therefore a dual development with the most production and income generation among the big farms. Sustainability is a topical issue, but after rapid improvements until around 2000, further gains in environmental performance are more difficult to achieve (*Silvis and Leenstra,* 2009).

Table 4. Agricultural holdings by the five major types (1985–2008)

	1985	1990	1995	2000	2005	2008
Grassland base livestock	63,381	58,326	54,613	47,075	41,098	38,883
Horticulture	18,907	17,975	15,889	13,281	10,239	8,542
Arable crops	17,560	16,265	14,663	13,749	12,358	11,175
Pigs and poultry	12,756	11,807	10,414	8,382	6,083	5,545
Mixed	17,542	14,778	11,873	9,850	7,532	6,679

Source: LEI Statistics (see www.lei.wur.nl/UK/statistics/)

Let us take a closer look at the three most important agricultural sectors in the Netherlands: the dairy sector, arable farming and horticulture. If we start with the dairy sector then reality dictates that a lot of dairy farmers see further increases in scale as the best way of continuing to operate on a profitable basis even though the price paid for milk is falling (hard). As the Ministry of LNV (2005) shows, in 1980 the Netherlands had almost 50,000 dairy farmers, each with an average of 40 to 50 cows. Currently, there is only half that number, with an average of more than 60 cows. If the trend continues, then there will be about 14,000 dairy farms in 2015 with an average of 80 cows. However, size is not the only significant factor: given the enormous differences in cost price between comparable holdings, many farmers could make their operation more profitable by means of better management. Moreover, not all the farmers want to increase the size of the farm in order to be able to produce world for world market prices. A growing number of farmers is succeeding in finding new sources of income, either at the farm or elsewhere (multifunctional agriculture or diversification). They can provide services for specific target groups in the form of access to nature and nature management running a campsite, care (including childcare), cheese making and farm shops.[4] As a result, small regional supply chains are being set up to provide special high-quality products for niche markets.

In 2008, the Netherlands had about 11,000 arable farms, which employed more than 24,000 people. The predominant arable crops are cereals (especially wheat), fodder crops, sugar beets, table potatoes and legumes. The total area under arable crops is 812,812 ha. Most arable crops are frequently found on sandy soils and therefore it is not surprising that the province of *Noord-Brabant* (in the south) and the provinces of *Gelderland* and *Overijssel* (in the east) have the most arable farms. In recent years, rapeseed is being grown in the northern provinces and its oil is processed to fuel for cars and ships. Dutch arable farms are relatively small in area. Because the price of land is high, the process of scaling up is slower than in other European countries. In the past, this was compensated for by intensive farming practices but environmental requirements sets limit to further intensification.

In terms of production and export value, the horticulture sector is by far the most important sector in Dutch agriculture. Its export value in 2003 was 6.5 Billion euro's. Horticulture includes both the production of ornamentals and of edible crops. The first group – ornamental flowers and plants – is the largest. Dutch producers account for 70% of the total European Union export of ornamentals and 93% of the total export of flower bulbs. The largest bulb buyers are the United States, Germany and Japan. Germany, the United Kingdom and France are the largest buyers of Dutch flowers and plants. The second group of horticultural products consists of edible crops. Nearly a quarter of European vegetable exports

[4] However, not only livestock farms but also (and in particular) arable farms are involved in diversification activities. According to the Ministry of LNV (2005), in 2003 almost 40% of primary agricultural holdings were engaged in such activities. For example, half of the dairy farms are active in nature management. However, as recently shown by Heringa (2009) the economic significance of diversification is rather small especially when compared to the economic value of primary agriculture.

originate from the Netherlands, with Germany and the United Kingdom as the largest buyers. In fact, the Netherlands accounts for more than a third of the total European export of fresh vegetables, particularly mushrooms, tomatoes, lettuce, cucumbers, cauliflower and bell peppers. The Netherlands exports about 540 million kilograms of tomatoes (333 million kg of tomatoes-on-the-vine). The main markets for Dutch tomatoes are Germany and the United Kingdom.

Much of the horticulture is practised under glass (in glasshouses). About a quarter of all the glasshouses in the world are located in the Netherlands, and between 75 and 80% of Dutch glasshouse products is exported. In 2008, more than 60.000 people work in the glasshouse production sector. The oldest glasshouse areas in the Netherlands are the *Westland area* (bordered by the cities of Rotterdam, Delft and The Hague) and the area around Aalsmeer (south of Amsterdam).

3.2 Agriculture, nature and food quality in 2009[5]

The policy of the Dutch Ministry of Agriculture, Nature and Food Quality for 2009 is focused largely on sustainability. The Ministry has defined three core areas: the green economy; food and consumer; nature, landscape, vegetation and a vital countryside. The attention devoted to sustainability is manifested in forms such as the measures for sustainability in greenhouse horticulture, for animal friendly stall systems, and for low-energy and selective fishing methods. The Ministry of Agriculture, Nature and Food Quality is coordinating the bio-based economy theme of the Government's *Clean and Efficient* Programme. The bio-based economy theme includes a review of bio-refinery technology suitable for the optimum utilisation of all parts of plants, in particular the non-edible parts. The Ministry of Agriculture, Nature and Food Quality's *Food and Consumer* policy memorandum will contain a detailed specification of the objective of the food policy in which a 'conscious choice' will be assigned a prominent place. The Ministry intends to ensure that consumers are offered an opportunity to make conscious and sustainable choices when buying food. The nature and landscape policy devotes a great deal of attention to the *Landscape Agenda* and to the designation of the 162 Natura 2000 regions in the Netherlands.

The Ministry of Agriculture, Nature and Food Quality introduced an additional package of incentive measures in April 2009 as part of the *Working on the Future* policy agreement of the Dutch Cabinet. This agreement includes an envelope of 50 million euros for a sustainable agricultural sector. The Minister of Agriculture, Nature and Food Quality intends to use these investments to provide incentives for the economy and to make a contribution to the Government's sustainability targets. In 2009 and 2010, twenty million euros will be allocated to the acceleration of the development of and investments in sustainable stalls: an equal amount will be allocated to the development of combined air-scrubbers for the poultry sector. In addition to these two major measures, the Ministry of Agriculture, Nature and Food Quality is also investing in measures such as the plans for an international algae research centre. The Ministry has also allocated 5 million euros to the clearance of horticulture greenhouses distributed throughout the Netherlands.

3.3 Financial and economic crisis

In 2009, the primary agricultural sector was confronted with a sharp fall in income for the second consecutive year. Although the volume of the sector's production increased by almost 3% in 2009, the price of the products fell by almost 9%. As a result, the entire sector's production value fell by more than 6% to almost 22.5 thousand million euros (including agricultural services) in 2009. The production value of plant products fell by about 4.5%, less than the almost 11% decline in the production value of the livestock farm products. This year's total production value of the horticulture sector is approximately the same as that of the livestock sector (more than 8.5 thousand million euros), while the production value of the arable farm sector – including fodder crops – amounts to more than 2 thousand million euros. The cost of the goods and services purchased by the agricultural and horticultural sector fell by about 4.5% in 2009, primarily due to the approximately 15% lower cost of animal feeds and fertiliser. On balance, the net added value of the sector decreased by more than 15%. The net operating income for the families of the farmers or horticulturalists – after the deduction of interest payments, wages and long-term leases – fell even more sharply, namely by almost 50%. It is striking to note that in 2009 the total amount of the subsidies received by the agricultural sector, primarily comprised of farm payments, is slightly higher than the sector's net income of 800 million euros. When account is taken of the decline in the number of farms and inflation then the purchasing power of the farm family's operating income fell extremely sharply in 2009. In 2008 and 2009, as was the case in the two previous years, the development in the Netherlands' agricultural and horticultural sector incomes is expected to lag behind that in other EU countries (*De Bont* et al., 2009).

4. Conclusions and perspectives for agriculture in the Netherlands

The driving forces that determine the prospects of the agricultural sector are dominated by international and European developments related to the demand for and supply of products. In this context, European policy, (such as the CAP), and national policy (e.g. nature management) can greatly influence the development of the agricultural sector. It is expected that the growth in the world's population will

[5] This sub-section is almost entirely taken from Berkhout and van Bruchem (2009).

decline to around 1% per year over the coming years. However, the global demand for food will be determined more and more by the development of incomes per capita than by the growth in population. For the richer countries a higher income does not mean a greater demand for food. Moreover, due to the continuing individualization the demand for agricultural products is likely to diversify, on the one hand due to increasing immigration and familiarity with other cultures and new possibilities, and on the other hand to the increasing need for variety, perception, convenience, health, quality and image (*Silvis and de Bont,* 2005).

In 2005, the Dutch Minister for Agriculture, Nature and Food Quality published a policy document on the future of the Dutch agricultural sector, titled "The Choice for Agriculture". In this document, the cabinet expresses its faith in the future of the agricultural sector. Favourable prospects are still foreseen for greenhouse and open field horticulture. A further reduction of the support by the government forms an important element in the expected future developments. The policy document sees the setting up of new activities within agricultural holdings – diversification activities – as a possibility for securing the continuity of holdings. In addition, the emphasis is placed on reducing cost prices through increases in scale. According to the document, the entrepreneurs must be given more scope, and the role of the government could be limited. A debate is announced regarding the milk quotas and about the implementation of the income payments. Currently, the payments in the Netherlands are implemented on the basis of a historical reference per farm.

Thus, although the economic significance of the agricultural sector will remain large, it will nevertheless decrease in relative terms. With an average decline of more than 3% per annum, the number of farms will have decreased to fewer than 60,000 by 2015. This is more than 30% below the almost 84 ,000 farms in 2004. But not only the number of farms will dwindle down, also the acreage of agricultural land will continue to decline in the coming years, although the great majority of this land will continue to be used for agricultural purposes. As a result of urbanisation, this decline will be more marked in the west of the Netherlands and the south and east of the country than it will in the north. The horticulture sector will be able to retain its position in the west of the Netherlands. The acreage of arable land will decrease in the north of the Netherlands, since relatively large amounts of the contracting starch potato and sugar beet crops are cultivated in this region. The land no longer required for these crops will be taken over by dairy farms. When expressed in terms of the number of cows, the decline in dairy farming is most pronounced in the provinces in the west of the Netherlands. As a result, the share of the other provinces, in particular those in the north of the Netherlands, is increasing. No major shifts are forecast in the location of the intensive livestock farming complex; these farms are concentrated in the south, middle and east of the Netherlands, and this will continue to be the case (*Silvis and De Bont,* 2005).

References

Ban, A.W. van den and A.L.G.M. Bauwens. 1988. Small farmer development; experiences in the Netherlands. *Quarterly Journal of International Agriculture,* 27 (3–4), pp. 215—227.

Berkhout, P. and C. van Bruchem (eds). 2006. *Agricultural Economic Report 2006 of the Netherlands: Summary.* The Hague, LEI Wageningen UR.

Berkhout, P. and C. van Bruchem (eds). 2009. *Agricultural Economic Report 2009 of the Netherlands: Summary.* The Hague, LEI Wageningen UR.

Bieleman, J. 2006. Dutch agricultural history c. 1500-1950: a state of research. pp. 283-294. In: E. Thoen and L. van Molle (eds). *Rural History in the North Sea Area: An Overview of Recent Research, Middle Ages – Twentieth Century.* Turnhout, Brepols, CORN Publication Series 1.

Bont, C.J.A.M. de, W.H. van Everdingen, A. van der Knijff en H.A.B. van der Meulen, 2009. Actuele ontwikkeling van resultaten en inkomens in de land- en tuinbouw in 2009. Rapport 2009–088. The Hague, LEI Wageningen UR.

Heringa P.W., 2009. *Goed geboerd?! Een regionaal-economische analyse van multifunctionele landbouw*. MSc-thesis, Wageningen University, Chair of Regional Economics.

Horne, P. van and H. Prins. 2002. *Development of Dairy Farming in the Netherlands in the Period 1960–2000.* The Hague, Agricultural Economics Research Institute (LEI), Report 2.02.07.

Ministry of LNV. 2005. *The Choice for Agriculture; A Vision of the Future of Dutch Agriculture.* The Hague, Ministry of LNV.

Ministry of LNV. 2009. Homepage of the Dutch Ministry of Agriculture, Nature and Food Quality. Http://www.minlnv.nl/portal/page?_pageid=116,1640381&_dad=portal&_schema=PORTAL, accessed 18 November 2009.

Noort, P.C. van den. 1987. Land consolidation in the Netherlands. *Land Use Policy,* 4 (1), pp. 11–13.

Sivlis, H. and K. de Bont (eds). 2005. *Prospects for the Agricultural Sector in the Netherlands; The Choice for Agriculture, Background Report.* The Hague, Ministry of LNV, and Wageningen, Wageningen UR.

Silvis, H.J. and F. Leenstra (eds). 2009. *Prospects for the Agricultural Sector in the Netherlands; Economic and Technological Explorations.* The Hague, LEI Wageningen UR.

Tracy, M. 1989. *Government and Agriculture in Western Europe 1880–1988. Third Edition.* New York and London, Harvester Wheatsheaf.

FUTURE ROLE OF AGRICULTURE IN MULTIFUNCTIONAL DEVELOPMENT OF RURAL AREAS

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Abstract: In the paper the changes in agriculture in terms of falling share of agriculture in gross domestic product and decrease in the share of persons employed in agriculture in total employment in Poland and selected countries are discussed. The main driver of these changes is a faster pace of development of non-agricultural activities and continually deteriorating relations between the costs of production factors and prices of agricultural products. The rate of growth in labor costs and prices of the means of production for agriculture is much faster than the rate of increase in prices of agricultural products. This causes the decline in profitability of agricultural production which increases the size of farms. The pace is dependent on the level of economic development of the country. The study also identified trends in the structure of farms, functions and systems of agriculture in the generational perspective. The polarization of the farms will deepen. A strong group of commodity farms and a group of so-called self – subsistence social farms will emerge. Agriculture in Poland will have a dual nature. In addition to the production function and social services agriculture will expand the scope of service functions for the environment and society.

Key words: ?????

Introduction

Agriculture is one of the key sectors of national economy in determining the level of nutrition of the population and food security of the country. Its role and functions are changing along with economic development and social expectations. The shape of changes in farming conditions is determined by economic, legal, environmental, technological, international, institutional, demographic and socio-cultural conditions. Each of these areas, both individually and in conjunction with the other, sets the direction and the logic of transformation in agriculture.

This article aims to attempt to assess the current state of Polish agriculture and to delimit the anticipated changes, in response to the challenges arising from the principles of multifunctionality and sustainable development. The paper will discuss the following issues: a place of agriculture in national economy, the economic drivers of change in agriculture, trends of changes in the level and the relationship between factors of production, trends of organizational changes in agriculture and its functions in the coming years 2020–2025.

Place of agriculture in national economy

The basic indicators for assessing the significance of agriculture include: the share of agriculture in gross domestic

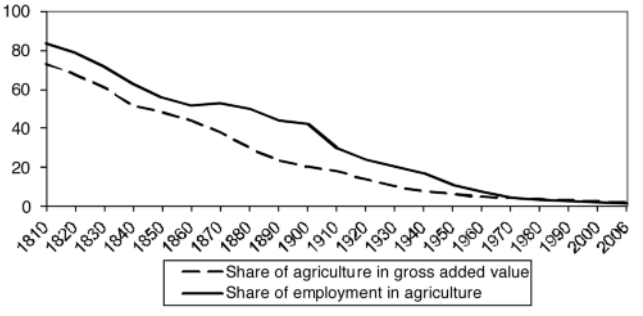

Figure 1. The trend of changes in the share of agriculture in the structure of manufacturing gross domestic product and total employment in the U.S.
Source: Tomczak F.: Od rolnictwa do agrobiznesu. Wyd. SGH. Warszawa 2004. [From Agriculture to Agro-business]

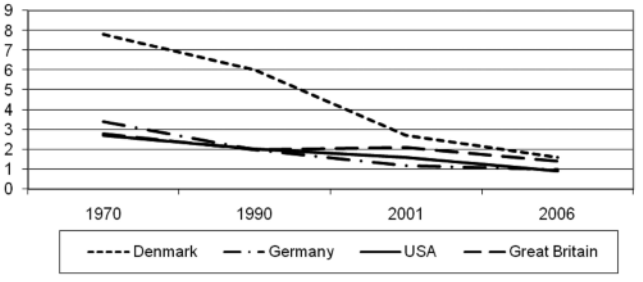

Figure 2. The trend of changes in the share of agriculture in gross value added structure in selected countries
Source: Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. Roczniki Statystyczne GUS. Warszawa 1996–2007. [Statistical Yearbook of Agriculture and Rural Areas]

product or value added and share of agricultural employment in total employment. Model example for changes in agriculture involves the United States *(Fig. 1)*. In 1810–2006 the share of employed in agriculture and the share of agriculture in GDP fell from around 84% in 1810 and 73% to about 1% in 2006. Similar trends have occurred in European countries (eg Denmark, Germany, United Kingdom). The trend in values of the share of agriculture in gross added value in these countries in 1970–2006 are shown in *Figure 2*.

Figure 2 shows that in 1970-2006 in the analyzed countries, the agricultural gross value added showed a downward trend. The pace of decline in Britain and Germany was similar to those in the U.S. In 2006, the share of agriculture in gross value added in these countries was around 1%. By contrast, in Denmark, this share was higher and in 2006 it was 1.6%. Similar trends occurred in the analyzed countries in terms of employment *(Figure 3)*.

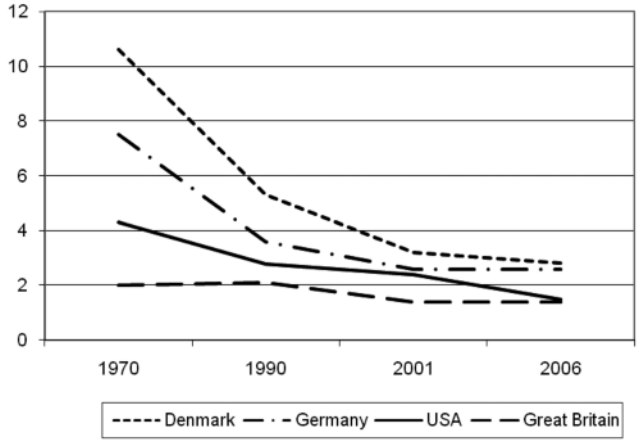

Figure 3. The trend of changes in the share of agriculture in the structure of employment in selected countries
Source: Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. Roczniki Statystyczne GUS. Warszawa 1996–2007. [Statistical Yearbook of Agriculture and Rural Areas]

Figure 3 shows that the level and rate of decline in agricultural employment in the UK and the U.S. were similar. In 2006, the share of agricultural employment in total employment was 1.4%. In Denmark and Germany, this share was higher and amounted to respectively 2.8% and 2.6%.

Figure 4 presents the trends of the share of agriculture in employment and gross value added in Poland in 1950–2006. In this period the share of workers employed in agriculture declined from 50% in 1950 to 16.2% in 2006. The reduction was significant, but still the share of employed in Polish agriculture compared to previously analyzed developed countries of Western Europe was very high. Strong downward trends occurred in the share of agriculture in gross value added. In 1950 this share was 30% while in 2006 only 3.7%. The high share of agriculture in gross value added and total employment in Poland in 1950 was typical of a agriculture oriented country. Present trends in this area in Poland are similar to those in Western Europe, however, shifted in time by about 50 years. A similar share of agricultural employment which now occurs in Poland occurred in those countries in the postwar period of 1950 to 1960.

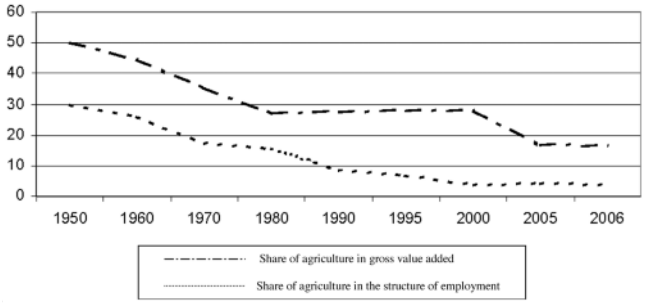

Figure 4. The trend of changes in the share of agriculture in the structure of employment and gross value added in Poland
Source: Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. Roczniki Statystyczne GUS. Warszawa 1996–2007. [Statistical Yearbook of Agriculture and Rural Areas]

Despite the decline of the formal share of agriculture in gross value added it is a very important part of the economy and, above all, is the basis for the functioning and development of agricultural processing sector. Furthermore, it is the predominant element in the rural economy [*Wilkin* 2008].

Economic factors of changes in the Polish agriculture

The transformation of agriculture in recent decades in Poland was influenced by changes in the prices of production factors and prices of agricultural products *(Figure 5)*. The highest growth rate in this period involved labor costs showing particularly high growth in non-agricultural branches and slightly lower prices of goods purchased by farmers. However, the increase was much lower in prices of agricultural products sold by farmers. Indicator of price

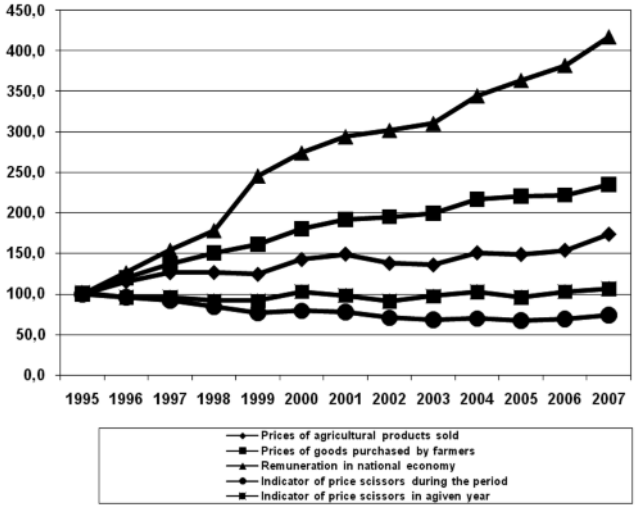

Figure 5. Changes in the prices of production factors and agricultural products in Poland in 1995–2007
Source: Analiza produkcyjno-ekonomicznej sytuacji rolnictwa i gospodarki żywnościowej w latach 1996, 2000, 2005, 2007, 2008. IERiGŻ – PIB. Warszawa. [Analysis of Production-Economic Condition of Agriculture and Food Economy in 1996, 2000, 2005, 2007, 2008.]

scissors in each year averaged to about 100%. In 1998–2000 and 2002–2003, it was below 100% while in other years it exceeded 100%. In 2007, the exceptionally favorable to agriculture, it amounted to 106.5%. Indicator of price scissors in the entire analyzed period was definitely detrimental to agriculture and in 2007 was about 75% taking 1995 = 100%. This means that labor costs and prices of agricultural production grew much faster (25%) than the sale prices of agricultural products.ű

Present trends are characteristic of all market economy countries, with the timeless nature of regularity. They cause fall in unit profitability of agricultural production. Farmers wishing to achieve the income from their farms at least at the parity level (similar to the salaries of workers in non-agricultural departments) must increase the scale of production and implement the technological progress in its broad sense. This objective can be achieved mainly by increasing the size of farms.

In 1990, the Polish farmer's income at the parity level could be obtained from a farm of 10 ha of utilized agricultural area (UAA). In the next two years, the area had risen to over 15 ha. In 1995–2001 parity farm size ranged from 20 to 50 ha [*Ziętara* 2000, 2003]. The results of the farm accountancy in FADN system indicate that the minimum area of a farm parity in 2005 was included in the range of 20–30 ha, depending on the region. [Agriculture-FADN in 2008]. The results given correspond to the results of W. Józwiak, who shows that in 2004–2006 the volume of farm parity was about 35 ha, which corresponded to the economic size of holdings range from 16 to 40 ESU[1] [*Józwiak,* 2008]. Generally it can be concluded that the area of farm parity is still growing. In the next few years it is likely to reach a size of 50 ha of UAA.

Changes in production factors

Evaluation of the basic resource of the Polish agriculture, which is the land, was made by reference to selected countries in Western Europe. It concerns changes in the utilized agricultural area in total and per one inhabitant in 1990–2006. In all countries there is a decline in the UAA in this period, in average by 5%. In Poland, the decrease in surface area was considerably higher and amounted to 15%. UAA in this period declined from 18.7 million hectares to 15.9 million ha. Surface reduction was mainly caused by the exclusion from agricultural use of low quality land [Central Statistical Office (GUS) Statistical Yearbooks 1966–2007].

In terms of UAA per 1 citizen in 2005, Poland had a similar potential as Denmark and France (about 0.5 hectares per capita), but definitely higher than the United Kingdom and Germany, where these rates were respectively 0.28 and 0 21 ha [CSO Statistical Yearbooks from 1966 to 2007].

The decrease of farmland per 1 inhabitant is a constant trend in all countries.

Polish agriculture is characterized by an unfavorable structure of the area. This is proved by the low average farm size, which in 2005 was only 6.4 ha [CSO Statistical Yearbooks from 1966 to 2007]. In the countries compared, the average household size was 6 (France, Germany) to 9 times higher (Denmark, United Kingdom). Other indicators characterizing the structure of the farm area are: the share of holdings of 5 ha and over 50 ha. The relevant data have been presented in Table 1. In Poland, in 2005 the share of farms with an area of 5 ha was 57.4% while in Denmark 4%. In Germany and France it is contained in the range of 23–28% while the UK it was 37%. Despite a significant share of small farms in the UK, over 65% of arable land is in use of farms of

Table 1. Number of farms of the area exceeding 1 ha in Poland in the period 2002-2007 and in selected countries in 2005 (in thousands).

Year	Total	Farm size clusters			
		1–5	5–20	20–50	>50
2002	Number 1,951.7 % 100	1,146.3 58.7	692.8 35.5	95.5 4.9	17.1 0.9
2005	Number 1,782.3 % 100.0	1,031.9 57.9	632.9 35.5	98.7 5.5	18.8 1.1
2007	Number 1,804.1 % 100.0	1,036.5 57.4	643.8 35.7	102.3 5.7	21.5 1.2
Selected countries in 2005					
Denmark	Number 49.0 % 100	2.0 4.1	19.0 38.8	12.0 24.4	16.0 32.7
France	Number 567.0 % 100	148.0 26.1	110.0 19.4	109.0 19.2	200.0 35.3
Germany	Number 390.0 % 100	88.0 22.6	129.0 33.1	88.0 22.6	85.0 21.8
Great Britain	Number 287.0 % 100	107.0 37.3	59.0 20.5	47.0 16.4	74.0 25.8

Source: Charakterystyka gospodarstw rolnych w 2005 r. GUS. Warszawa 2006. Charakterystyka gospodarstw rolnych w 2007 r. GUS. Warszawa 2008 Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. Systematyka i charakterystyka gospodarstw rolnych. Powszechny Spis Rolny 2002. GUS. Warszawa 2003. [Characteristic Features of Agricultural Farms. Statistical Yearbook of Agriculture and Rural Areas. Systematics and Characteristics of Agricultural Farms: Public Agricultural Inventory]

[1] ESU (European Size Unit) is a measure of economic size of farm. One ESU corresponds to the equivalent of the EURO 1200 standard gross margin.

Table 2. Forecasted changes in the structure of farms in the period 2007–2030

Specification	Farm holdings (thousands)					
	2007		2020		2030	
	Number	%	Number	%	Number	%
Over 1 ha in this (ha):	1804.1	100.0	1468.5	100.0	1258.5	100.0
1–5	1036.5	57.5	787.0	53.6	591.5	47.0
5–20	643.8	36.5	523.0	35.6	447.5	35.5
20–50	102.3	5.7	120.0	8.2	146.2	11.6
50–100	15.6	0.9	29.0	1.9	56.0	4.5
100–300	4.9	0.3	8.8	0.6	16.2	1.3
300–500	0.6	0.0	0.4	0.1	0.6	0.1
500–000	0.3	0.0	0.2	0.0	0.3	0.0
1000 and more	0.1	0.0	0.1	0.0	0.2	0.0
Average area of individual farms exceeding 1 ha	7.8		9.2		10.7	
Other private forms	3.0		3.0		3.0	
In this cooperative farms	0.9		0.7		0.5	
State owned sector	1.0		0.7		0.5	
Total farms over 1 ha	1808.1		1472.2		1262.5	

Source: Charakterystyka gospodarstw rolnych w 2007 r. GUS. Warszawa 2008 [Characteristics of Agricultural Farms. Yearbook]

over 100 ha [*Steffen* 2004]. For this reason, the average size of farms is high here, i.e. approximately 60 hectares. The share of farms with an area exceeding 50 ha in Poland is extremely low and in 2005 it was 1.1%. And the corresponding rate in the countries surveyed was in the range of 21% (Germany) to 35% (Denmark and France). A highly negative picture of the area structure of farms in Poland as compared to European countries of the highest level of agriculture is mitigated by the analysis of the figures shown in *Table 1*, where are the structure of farms and the change trends in 2002–2007 are given.

The figures shown in Table 1 indicate positive trends. In 2002–2007 the share of farms of the area of 20–50 ha and over 50 ha has increased respectively by 0.8% and 4.4%, while a small decrease in the number and share of holdings in the range of 1–5 ha might be observed. These processes should be assessed positively, although the pace of these changes is slow. However, as concluded by Majewski [2008, p.44] "in the near future stronger demand for agricultural land… and further transfers of land enlarging size of Polish farms and deepening an existing polarization of the farm structure can be forseen". Similar processes occurred in German agriculture [*Reisch* 2004].

The forecast for the next 20–25 years leads to a conclusion that there will be further positive changes in the structure of farms. The relevant numbers have been presented in tables 2 and 3. Still, this structure differs from the currently occurring in the compared countries.

Table 4 contains numbers characteristic for labor resources in Poland and the studied countries in 1996-2006.

There is a fundamental difference between the studied countries and Poland in the number of workers and the share of employed in agriculture in relation to the overall number of employees. A characteristic feature in all analyzed countries was a decline in the number of people employed in agriculture. It was included in the range of 9% (France) to 31% (Poland). High decline in employment in Poland in this period was mainly the result of changes in the employees' in agriculture counting methodology in the Agricultural Census in 2002 [*Systematics,* 2003][2]. Regardless of the change in the methodology of workload counting, the reduction of employment in the Polish agriculture was influenced by the increasing levels of mechanization, and changes in the structure of production. Increase in the proportion of cereals in the crop

Table 3. Forecasted changes in the utilization o f the agricultural area in farm size clusters in the period 2007–2030 (in thousand ha)

Specification	Utilized Agricultural Area					
	2007		2020		2030	
	ha	%	ha	%	ha	%
Over 1 ha in this (ha):	14087.3	100.0	13537.7	100.0	13432.6	100.0
1–5	2603.3	18.5	2217.3	16.4	1964.5	14.6
5–20	6189.1	44.0	5057.1	37.4	4103.5	30.5
20–50	2955.5	21.0	3238.9	23.9	3549.5	26.5
50–100	1044.2	7.4	1524.7	11.3	2064.0	15.4
100–300	757.1	5.3	909.8	6.7	1093.3	8.1
300–500	228.6	1.6	252.4	1.9	277.6	2.1
500–1000	208.9	1.5	237.5	1.7	279.0	2.0
1000 and more	100.6	0.7	100.0	0.7	110.0	0.8
Other private farms	1189.3		1200.0		1200.0	
State owned sector	569.6		315.6		150.0	
Total area over 1 ha	15846.2		15053.3		14782.4	

Source: Charakterystyka gospodarstw rolnych w 2007 r. GUS. Warszawa 2008 Rocznik, own study [Characteristics of Agricultural Farms. Yearbook]

[2] In previous years, resources in agriculture were described by the number of economically-active employees, while in 2002 and next years, the so-called full-time employees were counted, taking into account the working time at a farm

Table 4. Employment in agriculture in Poland and in selected countries of the European Union, in the period 1996–2006 (in thousand and 100 per ha of UAA)

Year	Denmark		France		Germany		Great Britain		Poland	
	Total	Per 100 ha UAA	Total	Per 100 ha UAA	Total	Per 100 ha UAA	Total	Per 100 ha UAA	Total	Per 100 ha UAA
1996	103	3.7	1048	3.5	1076	6.3	512	2.9	3310	17.7
2001	89.9	3.3	971	3.2	942	5.5	391	2.3	2720	15.3
2004	84.6	3.3	994	3.3	832	4.9	356	2.1	2484	15.6
2006	79.4	2.9	953	–	843	4.9	384	–	2300	14.4

Source: Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. Roczniki Statystyczne GUS.. Warszawa 1996-2007. [Statistical Yearbook of Agriculture and Rural Areas]

structure, from 60% in 1990 to 73.8% in 2007 [*Characteristics,* 2007], and a reduction in livestock density from 58 LU per 100 ha UAA in 1994 to 49 LU per 100 ha UAA in 2007 [*Characteristics,* 2007].

There were also significant differences between compared countries and Poland in the share of agricultural workers in general employment. In the countries under comparison, this share was in the range of 1.4% (Great Britain) to 4% (France). In Poland this indicator was 22.1% in 1996 and 16.2% in 2006. Very significant differences can also be found in labor resources per 100 ha UAA. In 2006 in the countries under comparison, the labor force ranged from 2 (United Kingdom) to 5 (Germany) persons per 100 ha UAA. In Poland, the rate was 14.4 persons on average. This is on the one hand, a strength of Polish agriculture, on the other hand it is a barrier preventing the increase in the agricultural income. The figures given in *Table 5*, which refer to households with an area of over 1 ha UAA support this statement.

Table 5. Labor force in farm size clusters in the years 2005 and 2007 (thousand of FWU)

Specification		Total	1–5 ha	5–10 ha	10–20 ha	20–50 ha	>50 ha
2005	Total	2 027.1	783.4	551.8	433.3	207.2	51.4
	Per 100 ha UAA	14.9	30.9	20.0	12.9	7.3	2.4
	% labor force	95.3	97.5	96.4	95.3	91.4	67.1
2007	Total	2 047.8	796.8	556.9	426.2	209.3	58.6
	Per 100 ha UAA	14.5	30.6	20.2	12.7	7.4	2.7
	% labor force	95.1	97.5	96.0	94.8	92.0	67.4

Source: Charakterystyka gospodarstw rolnych w 2005 r. GUS. Warszawa 2006. Charakterystyka gospodarstw rolnych w 2007 r. GUS. Warszawa 2008. [Characteristics of Agricultural Farms]

In the smaller farms the labor resources are over two times higher than the country average in comparable countries. The labor force on farms with the area exceeding 50 ha UAA is only similar to the labor force in the compared countries.

The labor potential in agriculture depends largely on quality of labor force, which can be characterized by the education and age of people working in agriculture. In 2007, only 6.6% of farmers held a university degree. The share of farmers with secondary and vocational education was respectively 29.3% and 39.2%. About 25% of farmers had primary complete and incomplete education. In the farms of over 100 ha share of farmers with higher education was about 21% [*Ziętara,* 2009]. It is clear that the level of education of Polish farmers is insufficient as compared to the needs.

The average age of employed in agriculture in 2007 was about 45 years. There is a significant correlation between the area of farms and the age of employees. With the increase in the average age the area decreases.

Characteristic for the agriculture of Poland is a relatively low production intensity level – as an indicator mineral fertilizers in kg NPK/ha can be used *(Table 6)*. This is one of the reasons of lower productivity of land. The average milk yield per cow in the Polish agriculture is also lower compared to other European countries with intensive agriculture.

The above data indicate that the direction of changes in Polish agriculture is similar to that of the comparable Western European countries, but the advancement of these processes is weaker. There is a characteristic time lag. There are many reasons for this. One can mention among them the issues of demographic differences, the level of economic development, and inhibition of natural transformation in agriculture in the first four decades of the postwar period. Under the present conditions, there is a need for new perspectives on the

Table 6. Use of mineral fertilizers in kg NPK/ha and yields from selected production activities

Year		Denmark	France	Germany	Great Britain	Poland
1995/1996 (kg NPK/ha)		160.7	163.5	162.7	126.1	84.5
2002/2003 (kg NPK/ha)		111.3	134.3	152.9	106.1	93.6
Cereals (dt/ha)	1995	62.1	64.6	61.1	68.7	30.2
	2000	62.0	72.4	64.5	71.6	25.3
	2005	62.0	69.8	67.3	72.0	32.3
Sugar beet (dt/ha)	1995	462	668	497	430	346
	2000	565	759	617	525	394
	2005	576	573	602	574	416
Milk litters/cow/year	1995	6657	5517	5424	5703	3231
	2000	7421	5948	6122	6155	3778
	2005	8156	6548	6439	6975	4271

Source: Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. [Statistical Yearbook of Agriculture and Rural Areas]

role and functions of agriculture in the context of multifunctionality and sustainability of its development and designation of the directions of changes.

Directions of changes in agriculture in view of generational perspective

Directions of changes in agriculture will be discussed in several areas. These include the strategies of agricultural functioning, use of technological advances, models of agriculture, the functions of agriculture and agricultural production systems.

Strategies of agricultural functioning

In order to survive, Polish agriculture must be equipped with special, durable and defendable types of competitive advantage. Theoretically, these advantages may come from three sources:

- Land and Latour productivity increase,,
- specific skills, which allow to provide the market with distinctive products,
- taking additional non-agricultural activities.

The primary means of achieving competitive advantage is to improve the efficiency of production. Figure 6 shows the key ways to improve efficiency in agriculture

These include improving the economic efficiency and the search by farmers of alternative sources of income [*Runowski,* 2004].

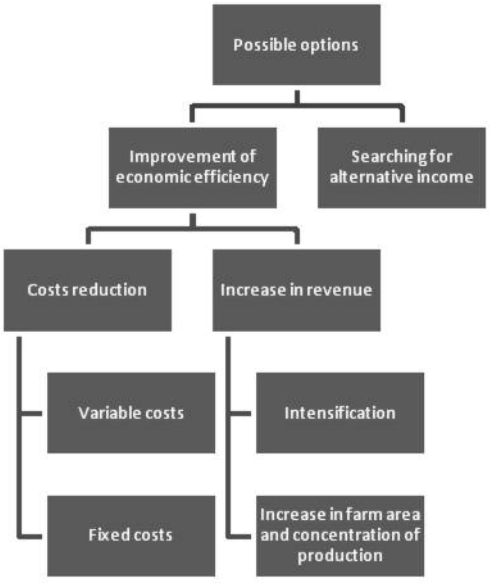

Figure 6. Ways of efficiency improvement in agriculture
Source: Runowski H.: Kierunki rozwoju przedsiębiorstw rolniczych w Polsce. Postępy Nauk Rolniczych, nr 3. Warszawa 2004. [Directions of Development of the Agricultural Holdings in Poland. Advancement in Agricultural Sciences.]

The importance of technical progress in the adjustment process of agriculture

In view of the ever-growing challenges of efficiency in agriculture, the broadly defined technical progress becomes particularly important, as it provides improved efficiency of outlays. Thanks to technological advances, the same quantity of financial outlays causes higher level of production. In the Polish agriculture it is necessary to more widely use various kinds of progress, in this mainly the biological, which is a kind of substitute for substantial investment, and leads to a reduction of costs in agricultural production [*Runowski* 1997].

Evolution of functions of agriculture

In many situations, the chances for increase of farm income from typically agricultural activities are limited. This forces the need to seek other opportunities to improve the economic situation of farming families. Such possibilities result from different instruments of the EU Common Agricultural Policy, or national policies that promote forms of agricultural management more friendly to the environment and animals.

It means that agriculture can and must extend the scope of its existing functions in accordance with the proposals set out in *Figure 7*.

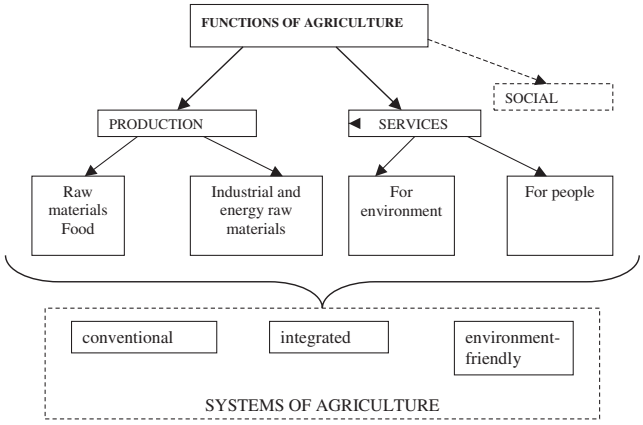

Figure 7. Basic functions of agriculture
Source: Runowski H.: Kierunki rozwoju przedsiębiorstw rolniczych w Polsce. Postępy Nauk Rolniczych, nr 3. Warszawa 2004. [Directions of Development of the Agricultural Holdings in Poland. Advancement in Agricultural Sciences.]

In addition to the production function, there must appear functions of a service nature for the environment, its biodiversity, animal welfare or conservation of traditional plant and animal species as well as services for the public, including, inter alia, tourism [Runowski 2009]. Finally, the social function should be mentioned. It concerns the small farms that produce food products exclusively or in significant advantages for their own needs. Evolution of the proportions of the three functions: manufacturing, service and social services are presented in *Figure 8*.

In addition to the existing feature of the production, the feature of agriculture services for the population and the environment will gain increasing importance. Along with them there will be the social function. This means that future agriculture increasingly will fit into the concept of multifunctionality and development in

rural areas. A typical Polish village in the next few years will continue, however, to be mainly associated with agriculture, but its economic and social landscape will include different, new production and service activities, which are additional sources of income of the farming population.

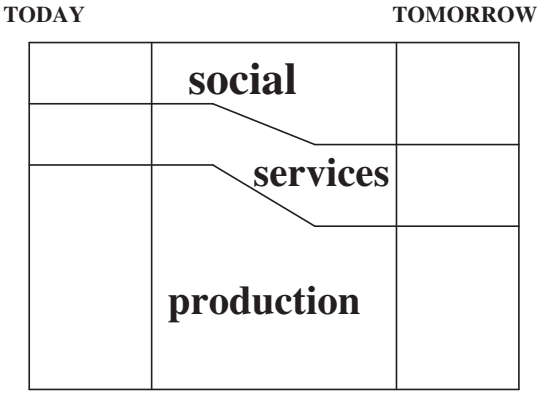

Figure 8. Changes in the proportion of functions of agriculture in time
Source: Own study

Model of the Polish Agriculture

Analyzing trends in changes, an attempt to determine the pattern of development of Polish agriculture was made. This model is affected by many factors, mostly related to globalization and European integration. Despite the external factors, the enormous role is played by permanent concentration processes, which occur in the immediate vicinity of agriculture, mainly in the businesses of trade and agricultural processing. These processes directly lead to an increase in the scale of production on agricultural farms and holdings. They also enforce the increase in quality of agricultural products. Only the production units in agriculture of the adequate scale will be able to meet the demands of trade and agricultural processing [*Ziętara,* 2009]

In our climate zone two extreme organizational models of agriculture can be differentiated *(table 7)*:

- the so-called model of plantation agriculture, characteristic for certain states in the USA, South America and Australia,
- the Western European model of agriculture.

Table 7. Agriculture models in the world

Specification	**PLANTATION**	**WEST EUROPE**
Regions	**USA, South America, Australia**	**Western European countries**
• Features	• Disappearance of traditional farms, mostly family businesses, • Specialized companies in the form of corporations, • Livestock production conducted by industrial methods, • Connections with agricultural processing companies, • Increased burden on the environment, • Low production costs.	•The dominance of family farms, •Smaller scale of production, •Relationships in the form of horizontal integration, •Reduced load on the environment, •Higher production costs

Source: Own study

The plantation model is characterized by the disappearance of traditionally understood family farms. Production of agricultural raw materials is provided by specialized companies having the legal form of equity companies engaged in activities over large spaces. These companies are mostly related by means of capital to the agricultural processing enterprises. Livestock production is carried out industrially on a large scale. This system results in the production of the most significant environmental burden.

Western European model of agriculture is based to a large degree on family farms of smaller production scale, in which more attention is paid to the quality of the environment. There are links between farms in the form of horizontal integration, which increases their bargaining power in relation to the agricultural trade businesses and the relationships of vertical integration nature allowing the farmers to participate in the benefits achieved by the trade and agriculture processing companies.

Taking into account the conditions of our country, one can most likely assume that model of agriculture based on the Western family farms will dominate in the near future *(Table 8)*.

In addition to this form of legal and organizational forms there will also be other legal forms, such as a limited liability company, particularly in the Northern and Western Poland, where until 1990 were dominating state farms. Other forms of companies will also occur in the future, but will not play a decisive role.

Generalizing the previous considerations it can be stated that in Poland in the near, foreseeable future the dual model of agriculture will dominate, which will cover two groups of farms: i.e. the so called social and commodity farms.

Table 8. Models of agriculture for Poland

Domination of the Western European model	Place for large enterprises
Increased role of vertical and horizontal relationships for the farms Polarization: - Significant share of the number of small farms (to 5 ha) - Reduced number of medium farms (5-20 ha) Increased number of large farms (>20 ha)	Increased role of vertical relationships Possible splitting of large holdings into smaller companies – a reaction to the agricultural policy objectives
The growing importance of production to reduce the burden on the environment	
Dual character of development: Commodity farms ↙ ↘ Social farms	

Source: Own study

Systems of agricultural production in Poland

The development of agriculture is associated with changes in management systems. In absolute terms, we can talk about two forms of agriculture: conventional and organic [*Runowski,* 1996; *Majewski,* 2002]. Organic farming produces more good for the environment, and conventional

agriculture more private goods. The existing comparisons of conventional and organic agriculture in the context of sustainable development focus on organic indicators, often without any evaluation of other performance indicators. To assess the relative sustainability of agricultural systems, one must consider their cumulative effectiveness. On the basis of information held, it can be concluded that both organic and conventional agriculture the production and organic capabilities are not yet fully exploited, which means that in both these systems, there are also reserves of efficiency. One could make more environmental goods and private goods in both of them [*Alvensleben,* 2000; *Majewski,* 2008]. Possible efficiencies in organic agriculture is and will be constrained by the strict guidelines established for certified crop farming and animal husbandry. In particular, a total ban on the use of agricultural fertilizers and chemical pesticides may interfere with achieving the improvement of management efficiency and thus reduce their ability to pursue environmental objectives in the long term [*Runowski,* 2004]. Many studies show that consumers are not willing to accept significantly larger differences in prices between organic and conventional products, and in addition accepted differences in the prices of those products have recently been declining [*Bruhn,* 2001]. Similarly, taxpayers can in the future (when the scale of the organic production increases) reluctantly refer to acceptance of a high level of financial support to organic farms from budgetary sources. The total abandonment of the use of artificial fertilizers or chemical pesticides is now a strategy that can be accepted by a small (richer or more conscious) part of consumers and taxpayers.

Conventional agriculture, in turn, by reducing the level of previously used external input of and their better, more accurate application, and the use of biological and technology advances can significantly reduce, in relation to the status quo, its adverse impact on the environment, while maintaining high economic efficiency. By applying the principles of good farming practices, reduced production intensity, and precise application of inputs of industrial origin (the better technical and technological solutions), conventional farming can significantly improve its environmental performance in a short time. This type of farming is called integrated farming. It must be assumed that the future will belong to integrated farming, which occupies an intermediate position between the current conventional agriculture and organic farming [*Runowski,* 1999; *Majewski,* 2002]. This trend does not close the possibility of development of organic farming, which is still classified as the market niche. Trends in Poland are likely to be such as in Switzerland *(Figure 9)*.

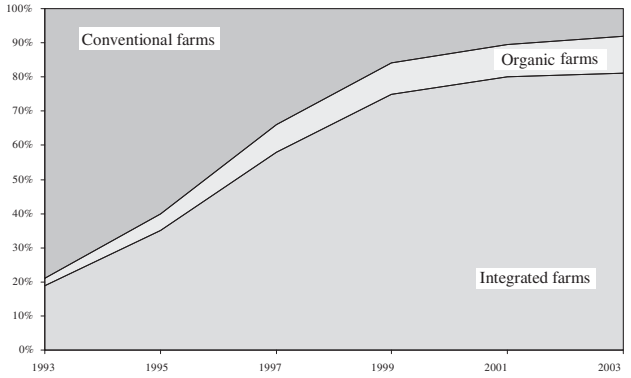

Figure 9. Tendencies of changes in agricultural production systems in Switzerland

Source: *Richter T.,* 2002: Possibilities and barriers for retailing organic products. Research Institute of Organic Agriculture (Switzerland), 2001–2003 own calculations.

Conclusions

Presented considerations entitle to formulate the following conclusions:

1. In the Polish agriculture, there are similar trends as in other European countries, but the level of development in Poland is lower. There is a consistent decline trend in the share of agriculture in gross value added and a drop in the share of employed in agriculture in the total number of employees.
2. In view of the faster pace of growth in labor costs and prices of non-agricultural means of production than the growth in prices of agricultural products, profitability of agricultural production is decreasing.
3. The primary and viable way to bridge the gap between income of employees in agriculture and outside agriculture is the increase of labor productivity in agriculture, which can be achieved due to concentration in the farming sector.
4. The pace of changes in agriculture in order to improve the structure of farms is dependent on the pace of economic development of the country.
5. One way to improve the income situation of farmers may be taking alternative activities. This is possible thanks to the expansion of the functions of agriculture. In addition to the traditional production and social functions, agriculture provides services to the environment and the public.
6. Model of Polish agriculture will have a dual nature in the future. Polarization processes lead to emergence, on the one hand of commercial, on the other hand of subsistence or semi subsistence clusters of farms.
7. Anticipating the changes in agricultural systems in Polish agriculture, it is expected that the importance of integrated agriculture, and partly organic farming, will increase at the expense of conventional farming.

Literature

1. Agriculture – FADN: F.A.D.N. – FADN PUBLIC DATA. 2008.
2. Alvensleben R., Zur Nachhaltigkeit land- und forstwirtschatlicher Nutzungssysteme – Anmerkungen aus der Sicht eines Agraröekonomen. Agra_Europe 16/2000.
3. Analiza produkcyjno-ekonomicznej sytuacji rolnictwa i gospodarki żywnościowej w latach 1996, 2000, 2005, 2007,

2008. IERiGŻ – PIB. Warszawa. [*Analysis of production and economic situation of agriculture and food economy in 1996, 2000, 2005, 2007, 2008*]

4. Bruhn M., Die Nachfrage nach Bioprodukten. Dissertation, Universität Kiel, 2001.
5. Charakterystyka gospodarstw rolnych w 2005 r. GUS. Warszawa 2006. [*Characteristics of agricultural farms in 2005*]
6. Charakterystyka gospodarstw rolnych w 2007 r. GUS. Warszawa 2008. [*Characteristics of agricultural farms in 2007*]
7. Józwiak W., Mirkowska Z.: Polskie gospodarstwa rolne w pierwszych latach członkostwa. Zag. Ek. Rolnej 2. Warszawa 2008. [*Polish farms in the first years of membership*]
8. Majewski E., 2002: Ekonomiczno-organizacyjne uwarunkowania rozwoju Systemu Integrowanej Produkcji Rolniczej (SIPR) w Polsce, Wydawnictwo SGGW, Warszawa [*Economic and organizational determinants of the development of the Integrated System of Agricultural Production (SIPR) in Poland*]
9. Majewski E., 2008: Trwały rozwój i trwałe rolnictwo – teoria a praktyka gospodarstw rolniczych, Wydawnictwo SGGW, Warszawa [*Sustainable development and sustainable agriculture – the theory and practice of agricultural farms, SGGW Publishing*]
10. Majewski E., 2008: Historic Landmarks in the Development of Agricultural Land Market in Poland. Apstract, vol.2, Numbers 1–2.
11. Reisch E.: Rozwój rolnictwa i obszarów wiejskich w Niemczech. Postêpy Nauk Rolniczych PAN.3/2004. Warszawa 2004. [*The development of agriculture and rural areas in Germany. Advances in Agricultural Sciences.*]
12. Richter T., 2002: Possibilities and barriers for retailing organic products. Research Institute of Organic Agriculture (Switzerland).
13. Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich. GUS. Warszawa 2006. [*Statistical Yearbook of Agriculture and Rural Areas*]
14. Roczniki Statystyczne GUS. Warszawa 1996–2007. [*GUS Statistical Yearbooks*]
15. Runowski H., Strategia zrównoważonego rozwoju gospodarstw wyspecjalizowanych w chowie bydła. Wyd. SGGW. Warszawa, 1999. [*The strategy for sustainable development of farms specialized in cattle rearing, SGGW Publishing*]
16. Runowski H. Gospodarstwo ekologiczne w zrównoważonym rozwoju rolnictwa i obszarów wiejskich. Wieś i Rolnictwo, 3/2004. [*Organic farm in the sustainable development of agriculture and rural development. Agriculture and Countryside*]
17. Runowski H., Ograniczenia i szanse rolnictwa ekologicznego, Wyd. SGGW. Warszawa 1996. [*Limitations and opportunities for organic farming, SGGW Publishing*]
18. Runowski H.: Kierunki rozwoju przedsiębiorstw rolniczych w Polsce. Postępy Nauk Rolniczych, nr 3. Warszawa 2004. [*Trends in development of agricultural businesses in Poland. Advances of Agricultural Sciences, No. 3*]
19. Runowski H.: Postęp biologiczny w rolnictwie. Wyd. SGGW. Warszawa 1997. [*Biological progress in agriculture, SGGW Publishing*]
20. Runowski H.: Rolnictwo ekologiczne – rozwój czy regres? Roczniki Nauk Rolniczych. T. 96. Zeszyt 4. Warszawa 2009. [*Organic farming – development or regression? Yearbooks of Agricultural Sciences*]
21. Samuelson P., Nordhaus W., 2004: Ekonomia. PWN. Warszawa. [*Economy*]
22. Steffen G.: Przedsiębiorstwa rolnicze w Europie Zachodniej. Postępy Nauk Rolniczych PAN 3/2004. Warszawa. [*Agricultural enterprises in Western Europe. Advances in Agricultural Sciences*]
23. Systematyka i charakterystyka gospodarstw rolnych. Powszechny Spis Rolny 2002. GUS. Warszawa 2003. [*Systematics and characteristics of farms. Agricultural Census 2002*]
24. Tomczak F.: Od rolnictwa do agrobiznesu. Wydawnictwo Szkoły Głównej Handlowej. Warszawa 2004 [*From agriculture to agribusiness. Publishing of the Main School of Economics*]
25. Wilkin J.: Wielofunkcyjność rolnictwa i obszarów wiejskich. W „Wyzwania przed obszarami wiejskimi i rolnictwem w perspektywie lat 2014-2020. IRWiR. Warszawa 2008. [*Multifunctionality of agriculture and rural development. In "The challenges before rural areas and agriculture in the perspective of 2014 to 2020"*, IRWIR Publishing]
26. Ziętara W.: Ekonomiczna i społeczna wydajność pracy w różnych typach gospodarstw Rolniczych. Zeszyty Naukowe SGGW. Ekonomika i organizacja gospodarki żywnościowej 40/2000. Wyd. SGGW. Warszawa. [*Economic and social performance in various types of agricultural holdings. Scientific Papers of SGGW. Economics and organization of the food economy 40/2000*]
27. Ziętara W.: Wydajność pracy w rolnictwie i w różnych typach gospodarstw. Roczniki Naukowe SERiA. Warszawa 2003. [*Labor productivity in agriculture and in different types of farms. Yearbooks of SERiA Assoc.*]
28. Ziętara W.: Model polskiego rolnictwa – wobec aktualnych wyzwań. Zeszyty Naukowe SGGW, Ekonomika i Organizacja Gospodarki Żywnościowej. Nr 73/2009 [*Polish agriculture – to the current challenges. Scientific Papers of SGGW, Economics and Organization of Food Economy*]

PORTUGUESE AGRICULTURE AND ITS ROLE IN MULTIFUNCTIONAL RURAL DEVELOPMENT

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Abstract: ????

Key words: ?????

1. Introduction

As in Europe, agriculture in Portugal is supposed to fulfill a multiplicity of roles. It should contribute to supply Portuguese population with quality and safe food, to be viable in a global, competitive, dynamic and aggressive market, to preserve precious cultural landscapes across country through sustainable land management, to assist rural areas to be attractive and feasible and to support employment and social cohesion. Nevertheless, adjustments are expected to adapt to new environmental conditions, mainly climate change, to minimize weaknesses, to hold new opportunities and face new challenges. Otherwise, increases on human desertification, rural areas abandonment and consequent negative effects on territory are predictable.

The EU Common Agricultural Policy (CAP) intends to answer the agriculture's sustainability questions by enhancing the competitiveness of the agricultural sector, ensuring sufficient and secure food supply, preserving the environment and the countryside while providing for a fair standard of living for the agricultural community (EU, 2009).

In the actual context, Portuguese agriculture faces two main challenges that need to be balanced in the next years: food safety and environmental safety. It is imperative to know how to produce enough products to increase substantially the present volume of food supply and it is important to find ways to achieve productivity gains and increase UAA (Utilized Agricultural Area) in order to fight climate changes and promote sustainability of rural landscapes, natural resources and biodiversity. National interests should include struggle the abandonment of rural areas, valuate the territorial occupation and halt losses of biodiversity, achieve the auto-provisioning level of food supply, decrease external dependence of food by increasing export/import rates, define and implement priority actions to protect or sustain biodiversity, sustain farm structure diversity and match it with productive orientations appropriated at demographic, environmental and structural scale.

Following sections aims to demonstrate the ability or inability of Portuguese agriculture to respond to changing economic conditions as well as societal expectations and demands. The main question is to know how the CAP's evolutions through a policy with a double emphasis – on market orientation and competitiveness and on sustainability – can be strong enough to improve the development of Portuguese rural areas supporting farmers' income and environmental sustainability.

2. Portuguese current situation and past trends

This section follows closely EU rural development report structure to characterize rural development situation and past trends in Portugal. Two major aspects should be underlined: first, in Portuguese territory there is a sharp contrast in the location of predominantly rural, intermediate rural and predominantly urban areas according to OECD classification. All predominantly urban areas (NUTS III) are close to the sea and no predominantly rural areas (NUTS III) are found in the seaside. Hence, in this characterization we will refer as rural areas in Portugal to predominantly rural areas of OECD and we are at the same time speaking of inner areas of Portugal. Secondly, all Portuguese NUTS II regions combine seaside areas and large inner areas. Consequently, data for NUTS II averages these areas and so also averages urban and rural areas. To characterize rural areas of Portugal this data is useless and inadequate. Concluding, we will

speak of rural areas as predominantly rural areas of OECD and use only NUTS III data to characterize those areas in Portugal.

2.1 Importance of rural areas

In Portugal, rural areas represented 69.7% of the territory and 21% of the population in 2006. EU averages are 51.1% to 55.5% to territory and 14.7% to 36.1% of population[1].

Traditionally, rural areas have low and declining population densities. Portuguese predominantly rural areas follow that pattern. Population is concentrated in the areas close to the sea and decreases rapidly as we move to inner areas. Average population density is 35 inhabitants / km^2 and there is a tendency to decline. These indicators contrast with increasing population densities of predominantly urban areas, reaching an average value of 697 inhabitants / km^2 in 2006.

Economic activities in these predominantly rural areas account for 16.7% of national Gross Value Added (GVA) and 20.7% of employment. Hence, rural areas in Portugal are particularly important in terms of territory and indicators per capita are much less far from average values then per territorial units.

2.2 Socio-economic situation in rural areas

Portuguese rural areas have, proportionally, less people below 14 and between 14 and 64 and more people above 65 years old than urban areas. Production per capita[2] in rural areas is estimated in 60% (and compares with 88% for urban areas) of EU average. Hence, production levels are low in EU standards and there is a large gap between rural and urban areas. There is almost no change in this economic development indicator for rural areas and a small decrease for urban areas (-4%) from 1999 to 2005.

Gross Value Added (GVA) of rural areas makes 7.6% of total value. Average change in the structure of the Portuguese economy from 2000 to 2006 is characterized by a decrease in the primary and secondary sectors' economic relevance of 1 and 3.3%, respectively, and an increase of 4.3% in tertiary sector. Rural areas follow this general pattern with a 3.4% decrease of primary's sector GVA contribution to economic activity and an increase of 4.4%, for the tertiary sector.

Employment in primary sector still represents 29.6% in rural areas of Portugal in 2006. However, in the period of 2000 to 2006 changes in rural areas' employment in primary, secondary and tertiary sectors of -0.4%, -3.1% and 4% have been lower than their average values of -0.8%, -4.2% and 5%, respectively, indicating lower rates of adjustment, economic activity and opportunities. However, unemployment is lower in rural than in urban areas (7.3 and 9.3%, respectively, in 2007) and change of unemployment rates are slower in rural than in urban areas (2.6 and 4.8%, respectively).

2.3 Agriculture

Agriculture, forestry and hunting in 2006 employed around 589 thousand persons in Portugal representing 11.5% of total employment. The sector added value was estimated in 3 400 thousand € and represented 2.5% of GDP. The relative importance of primary sector is declining in Portugal following EU trend. In terms of employment its share declined 0.7% between 2000 and 2006 (1.2% for EU-27) and 0.2 with respect to added value (0.6% for EU-27).

Agricultural area used in Portugal was 3.47 million hectares in 2007, with 31% utilised for arable crops, 51.3% for permanent pastures and 17.2% for permanent crops.

Farms numbered 275 thousand, of which 3.6% had more than 50 and 72.6% less than 5 hectares. Average farm size was 12.6 hectares, which is also the average size of farm in EU-27. In economic size[3], however, Portuguese average value of 6.6 European Size Units (ESU) is far from the EU-27 average of 11.3. Only 0.8% farms have economic potential for more than 100 ESU and more than half of the farms (57.5%) have less than 2 ESU. Around 93.5 thousand very small farms that could be considered important in semi-subsistence activities have less than 1 ESU (potential for GVA per year less than 1 200 €) and represent 34% of total number of farms.

Family farming based on the farmer or household full-time job represents a large part of the labour force in agriculture that was estimated in 338 thousand annual work units in 2007. Around 11% of farmers had basic or full training in agriculture in 2005. In Portugal the proportion of "young" farmers is very low. In 2007, farmers with less than 35 years represented 3% of the farmers with more than 55 years. This means that Portugal has 1 "young" farmer for each 33 farmers of more than 55 years old. This is the lowest percentage among EU-27 and European average is 11%.

Labour productivity in Portuguese agriculture is 48% of EU-27 average value (12 089 €) per AWU[4]. Gross Fixed Capital Formation in Portugal was estimated in 762 million € in 2007 which represents 35.6% of GVA and is lower than EU-27 average ratio value (37.4%).

2.4 Food Industry

The food industry makes an important contribution to economic activity. In Portugal, food industry accounted for 3 132 million € in 2007 representing 2.4% of total GVA. This contribution increased at a rate of 1.4% between 2000 and 2006.

Investment in the food industry represents 25.9% of GVA and was estimated in 811.5 million € in 2007. The rate of investment decreased (-0.4%) between 2000 and 2006. This industrial sub-sector employed around 110 thousand persons or 2.1% of total employment in 2007. Employment in food industry has also decreased at a rate of -0.3% in the same period.

[1] Depending on group of EU countries considered (EU-12, UE-15 and EU-27).

[2] Evaluated by GDP in p.p.s. per capita and compared to average value of EU-27 =100.

Labour productivity in the sub-sector as increased at an estimated rate of 1.7%. In 2007, labour productivity was around 28.5 thousand €per person employed.

2.5 Forestry

Forest available for wood supply in Portugal covers about 2 009 thousand hectares. Forest productivity was estimated in 6.8 m^3 / tear /ha. Labour productivity is around 51.8 thousand €per person employed, very close to average EU value of 51.5 (EU-15). Investment in the forestry sector in Portugal was estimated in 86.2 million € in 2005 representing 13.6 of the sector GVA.

2.6 Environment

Agriculture and forestry have a fundamental role in preserving environment and landscapes in Portugal. Together they cover 75.3% of land, with natural area being also a relevant category (20.7 of the territory).

Less favoured areas represent 86.6% of the agricultural surface (PDR, p. 6). In 2005, 92.4% of agricultural used area respected to less favoured areas, 30.2% being in mountain zones. This value is considerably higher than EU-27 average (46%). Hence, a major part of agriculture is practiced in difficult conditions. Extensive grazing area where livestock is less than 1 livestock unit per forage hectare is 58.5% of agriculture used area and extensive arable crop area with yield below 60% of EU-27 average was 16.8% in 2007.

Natura 2000 special protection areas and sites of community importance areas represented 10.7 and 17.4% of the territory, respectively. Under Natura area there is 18.5% of agricultural used surface and 18% of forestry area.

Strong environmental pressure is revealed by the percentage of 24.5% of samples that evidence defoliation of trees, but the estimated rate of development of 14% of this process is particularly significant in Portugal. As a positive aspect it should be indicated the average annual increase of forestry area of 40 thousand hectares between 2000 and 2005.

Agricultural production systems also have important impacts on soil and water use and quality. Irrigated area represented 12.2% of total agricultural land used in 2007. Although this share is lower than for other EU Mediterranean countries it is expected to increase with the irrigated area of the Alqueva dam. Only 3.7% of the territory is reported as nitrate vulnerable zone and estimated surplus of nitrogen and phosphorus per hectare were 48 and 15 kg, respectively which compared to EU-average reported values is relatively low for the first and high for the second nutrient. Estimates of soil loss due to water in areas of risk of soil erosion are above 4 tons/ha/year, significantly above EU average value.

Changes to production systems more friendly in environmental terms took place in recent years (for instance, organic farming). Average annual growth rates of utilised agricultural area under organic farming of 17.9% per year between 2003 and 2007 increased this area up to 233.5 thousand hectares which represents a share of utilised agricultural area under these systems of 6.3% of total SAU.

Agriculture also has impact on air quality. With 7 638 thousand tonnes of CO2 equivalents, agriculture in Portugal contributed with 9.3% for total emissions, a share almost equal to 9.2% of EU-27 share in 2007. Annual decrease rate for Portuguese agricultural emissions (estimated in 2% for 2000-2007 period) is higher than average EU-27, reported as -0.9%.

Production of renewable energy from agriculture and forestry around 165 and 2 808 Ktoe represent around 2 and 4.1 of total EU-27 production but increased at slow annual growth rates (1.3%) relatively to EU-27 average increase (4.4%). Utilised agricultural area devoted to energy and biomass production crops of 7.6 thousand hectares and its share (0.2%) in total UAA are very low for EU-27 average standard (1.6%).

2.7 Diversification and quality of life in rural areas

About 25% of Portuguese farmers in rural areas had other sources of income than agriculture in 2007. This value is lower than average share of 36.4% in EU-27. Similar pattern is found to non-agricultural (secondary and tertiary sectors) share of employment in Portugal rural areas (70.4%) vs. EU-27 (84%). Average annual growth rates of non-agricultural employment have been positive (0.5%) but lower than EU-27 average increase of 1.3% between 2000 and 2006. The economic development of non-agricultural sectors can also be evaluated by the share of non-agricultural sector on total GVA. For rural areas of Portugal this indicator (92.4%) is also lower than EC-27 average (95%) and although increasing in rural areas of Portugal (1.9% annually between 2000 and 2006) is growing faster in average terms of EU-27 rural areas (2.5%).

Rural areas have 16.4% of Portugal's bed places installed capacity and this bed availability is decreasing (-1.8% annual growth rate). This share is higher in average terms (26.7%) and is increasing (1.7 annual growth rate) in EU-27.

Internet infrastructure coverage of rural areas is 86% and up-take, the percentage of population in rural areas[5] having subscribed DSL internet was 5.4% in 2008. Rates of change of these indicators were 7 and 2.2% per year, respectively, between 2005 and 2008.

Service sector accounts for 65.1% of GVA of rural areas in 2006. This share is lower than in urban areas (76.8%). Values for these area types in Portugal are slightly above EU-27 average values of 63.5 and 76.1%, respectively. Annual rates of change in% of GVA in services are also higher than EU-27 and are estimated in 4.4% in the period of 2000 to 2006.

[3] In European size units that measure potencial GVA.

[4] Measured by GVA at basic prices per Annual Work Unit (AWU).

[5] In these cases areas are rural if they have less than 100 inhabitants per Km^2.

The following indicators are only available with treatment at the aggregated level of NUTII. Since the unique predominantly rural area at that level of aggregation is Alentejo region of Portugal we are in fact characterizing that region from now on. However, rural inner areas of North to South would not be expected to have more favourable indicators than Alentejo.

Net migration ratio of rural areas was 3.1 per thousand in 2005 but change in that rate was negative (-2.9%) between 2000 and 2005. For urban areas net migration was higher (4.2 per thousand) and the rate of change was positive (0.7%). Migration average values registered for EU-27 were smaller for rural areas (2.3) and larger for urban areas (4.6 per thousand) but rates were larger for both type of areas (1.2 and 6.9%, respectively).

Human potential is a major factor for a country's development. It is particularly important in rural areas, usually less favoured areas that have other factors constraining development. This is a major factor that restraints Portuguese development in general and rural areas particularly. The percentage of adults with medium and superior education in rural areas was 26.7 in 2008. Average in EU-27 is 72.3%. However, this is not a structural problem of rural areas as in urban areas of Portugal this percentage is only 39%. This situation is changing too slowly. Rates of increase of this proportion for the country are 1.8 and 3.4% for rural areas between 2005 and 2008. Even with an average percentage much higher, for EU-27 the average rate of increase was 2.5% in the same period.

Life-long learning should bring solutions to improve human potential in Portugal. Its contribution is positive but in relative terms below EU-27 standard. The percentage of adult participating in education and training in rural areas was 4.5% in 2008. In other areas this value goes up to 5.5%. In EU-27 this percentages are 9.7% and 11.1% for rural and urban areas, respectively.

3. Expected changes in the future agriculture sector

In order to give the sector's increasing competitiveness and market orientation, Portuguese agriculture has received a sustained level of public support since their adhesion to the EU in January 1986. Comparing with those times, at present, both Portuguese and the CAP situation are very different. Agriculture has lost economic weight and the CAP political weight (Patier, 2000) and markets became more global and competitive. Following a course of consecutive reforms since 1992, the CAP is currently centered on three main policy axes, which aim to respectively support product prices, producer income, and structural adjustment (EU, 2009).

Before Agenda 2000 the agricultural system of EU faced an economic crisis, represented by an increasingly minor difference between the total agricultural production, expressed in economic units, and the costs, an ecological crisis, expressed in an intensified production, associated to costs more and more unlinked to nature, perceptible, for instance, on the chemical fertilization that substituted organic fertilization, and a structural crisis, expressed in production increases inhibited by quotas in several products (*van der Ploeg* et al., 2002). Agenda 2000 reinforced the correction of the farmers' role that began with 1992 reform, electing rural development and multifunctionality paradigm as the basis of future's CAP. The actual context of European agriculture represents the end of a cycle of agricultural modernization whit strong protection from policy and public institutions and a progressive abandonment of production structures to international markets regulation mechanisms. Without this protection, the crisis in family small scale agriculture, unable to follow behaviors dictated by modernization needs tends to be generalized also to other forms of agriculture, the attentions being now turned to demand questions, instead of supply questions, to the impact of technical models transformation and to new institutional forms of organization.

The CAP has undergone fundamental reforms over time, which demonstrates its proven capacity to respond to changing economic conditions as well as societal expectations and demands. In this process, the CAP has moved to a policy putting emphasis on market orientation and competitiveness, income support, environment, and the development of rural areas. Nevertheless, CAP is still a changing policy. The challenges ahead are driven by internal factors, such as budgetary constraints and the budget reform, with change on EU political priorities and the loss of the traditional agriculture importance, and also by external factors, such as globalization and the world financial crisis. CAP challenge will be to develop an European agri-food market that can survive in a world competitive market and answers the WTO pressures, respecting the budget, stimulating the agricultural sector competitiveness and promoting products' quality and the respect by environmental concerns and animal welfare. Finally, CAP must ensure a sustainable use of natural resources and an effective rural development.

The evolution will surely continue to be from a sectoral to a territorial approach, slowly re-balancing its two pillars. We can expect Portuguese agriculture to slowly adjust itself to the policy changes with adjustments on agricultural product composition accommodating the reform effects and adjust to a new framework without sudden brakes or disclosers (*Jorge,* et al., in print).

According with the information on farmers' expectations (*Rosário,* 2005), obtained through direct and personal interviews to 928 farmers within the Farm Accountancy Data Network (FADN,) results revealed no great farmers motivation to introduce changes in their production systems in the short (79.3%), or medium term (73.0%), a situation similar to that of the previous years. Intentions to change the current production system corresponded to only 21% of the interviews. In the medium term, this expectation decreases to 18.5% for active situations. Approximately 79% of the farmers do not intend to complement their farm income with

income from other sources. Only 20% of the farmers are willing to resort to off-farm income sources and 5% of the contacted farmers consider developing supplementary income sources within the farm. The difficulties resulting from the Global Economic Framework for the farming activity were the most often referred by the interviews (56%) followed at a distance (15%) by Farms' Structural Hindrances (*Rosário,* 2005).

Rural development, I&D, market regulation and price stabilization are the keys for Portuguese agriculture sector restructuration, but also to encourage diversification and innovation in rural areas. In the next decades, Portuguese agriculture will be faced with the global challenge trade-off of food security and safety (increasing production volumes and reduce external dependence and deficit) and environmental safety (combat climate change and improve natural resources sustainability, biodiversity and landscape preservation). This implies creating conditions for Portuguese agriculture to produce enough food based on environmental, quality and animal welfare's friendly technologies and on competitive market conditions. It also involves the production of rural public goods that contribute to the natural resources preservation and combating climate change, abandon and human desertification. In synthesis, it means improving the quality of life in rural areas based on consolidation and diversification of the economic and business environment (*Avillez,* 2010).

4. Possible Future Multifuntionality Issues

4.1. Food security, food safety and quality

Food security, food safety and quality must be ensured throughout the Portuguese food chain as one of its foremost roles. Latest developments have shown that these issues are not to be neglected and may be accentuated by climate change, by increased water scarcity, by food scandals or crises or by an inadequate or inefficient food chain. The ability to react to these issues depends on agricultural sector performance, competence to maintain sustainable modes of production and consumption linking economic growth and environmental objectives with a steady scheme of trade relationships.

The farmers' difficult task is to supply food in an open and increasing competitive market which supposes both: to produce at competitive prices and to fulfill societal desires and expectations regarding high levels of food, product quality and standards of food safety, animal welfare and environmental friendly farming systems. Relating the Portuguese external trade, namely the exports/imports rate (about 35% in 1998) and the degree of self-sufficiency (87% in 1999), the numbers show a negative situation in most of agricultural products. For consumers, the analysis highlights significant benefits related with the growth, diversity and quality enhancement of food supply. Moreover, consumers have benefited from the evolution of agricultural prices less than proportional to the production level reductions, which were partly appropriated by the processing circuits and distribution stakeholders. The benefits to consumers result evident since accession by the fact that the Portuguese general annual price evolution has been systematically higher than the specific evolution of food prices which significantly contributed to the domestic inflation control. Meantime, the negligible development in agricultural production volume associated with a sharp augment in food consumption and increased integration in European markets led Portuguese agricultural and food products' foreign trade to progress in a very unfavorable way (*Pinto,* 2000). The deficit doubled in approximately one decade till the year 2000 and still rising. Most Portuguese imports come from the EU countries of Spain, Germany, France, Italy and the United Kingdom. Most exports also go to other EU member states.

Portuguese wine and olive oil are especially praised by nationals for their quality, thus external competition (even at much lower prices) has had little effect on consumer demand. Portugal is a traditional wine grower, and has exported its wines since the dawn of western civilization: *Porto wine*, *Vinho Verde* and *Madeira Wine* are the leading wine exporters. Portugal is also a quality producer of fruits, namely the *Algarve oranges*, Cherries from the center east countryside and *pera rocha* (a specific Portuguese type of pear). Other exports include horticulture and floriculture products, beet sugar, sunflower oil, cork and tobacco. Portugal produces half of the world's cork.

In terms of safety, the European food market in general and the Portuguese market in particular have suffered from several food scares of which BSE and nitrofuranes scandals are good examples. Under the glare of intensive media attention, specific consumer food safety concerns can erupt into widespread alarm. Consumers are therefore more and more concerned about food safety and quality, more skeptical about food supply, desiring more transparency in production and distribution channels and, for some products, also more skeptical about the production process. Depending on their perceptions of the risks associated with the product, food scandals led the individual consumers to react in different ways (*Henson and Northen,* 2000).

According *Lucas and Toscano* (2003) Portuguese consumers doesn't thrust about food handle in restaurants and they consider having little information to judge correctly the safety level of a product. Specifically, they consider food not as healthy as it should be; they need more nutritional information as they don't find it on food label. In the consumers' attitudes to food price, a clearly disstisfaction of respondents is the main result. In their opinion a decrease in food price can induce a well balance diet. In relation to the impact of food production processes on environment, consumers are very concerned and they consider the ordinary production system aggressive to the environment. Consumer food confidence is higher in fresh fruit and fresh vegetables, fish, dairy-food, rice, pasta, wine and olive oil then in meat, crayfish, prepared dishes, eggs and mayonnaise. They have

also higher confidence level on food prepared and cooked at home and lower confidence level in crude meat, food with residues of permitted pesticides and fruits and vegetables with artificial colorants. Portuguese consumers read label information frequently and the date of caducity is the information more consulted by the consumers, leaving off other important food safety information and the relation between diet and health, such as the instructions of storage and cooking, the nutritional value and the ingredients. Veracity, content, and product quality association, are label information perceive as truthful.

Because safety and health related issues influence consumers' attitudes and behaviour (*Lucas,* 2006), food safety and freshness are determinant in defining food experienced quality. In an empirical research with beef consumers, *Marreiros* (2005) found that freshness and butcher's advice are very important cues for meat buying-decision. Colour is the other main cue for choosing meat. The importance of fat as an attribute for experienced meat quality and as a choice cue is not confirmed in the study, and consumers' awareness and knowledge about the quality labels and about the PDO meat brands was found to be rather low. On the other hand Lucas (2006) concluded that these guarantees or certifying labels are valuable decision-making criteria for some Mediterranean consumers segments (*Lucas,* 2006). The country-of-origin or region-of-origin of meat are products attributes with complex effects on consumer behaviour as they have high symbolic meaning, reflecting geographical differences in the food culture, both between and within countries.

4.2. Land Management

Although the farming past has shaped the rural character, often the specific farming practices that helped generating those features lost their competitiveness. In some areas, notably those with a low productivity of soils or economically unfavorable structures, agricultural activities and land management as such are at risk. The disappearance of farming results in losing the associated environmental and cultural assets, such as typical landscapes and valuable habitats. Those assets have the characteristics of public goods, because the demand and supply cannot be satisfied through market mechanisms. Besides its traditional function of producing food, agriculture has a determinant role in the maintenance and evolution of rural characteristic landscapes and in environmental and biodiversity preservation. Policy measures are needed for ensuring delivery of these goods. However, public goods cannot be delivered without the necessary farming capacity being in place – "public money for public goods" can only be delivered where there is an agricultural presence to which this condition can be attached.

One of the key issues of land management is the possible abandonment of rural areas in a near future. The trends after 2013 (*Jorge,* et al., in print) point to diverse effect depending on the Portuguese regions. The North and Lisboa, with production systems more difficult to extensify, are those who demonstrate a greater abandonment potential.

4.3. Viable Rural Areas

As looks upon the economic would-be of rural areas, agriculture offers a stand for economic diversification in rural areas. The multiplicity of activities not only allocates agricultural systems continuity but generate employment and supplementary profits in specific regions. In spite of the decline in the relative economic weight of the primary agricultural sector, rural tourism economic role remains significant, particularly in remote Portuguese areas where agriculture as such has a significant share in employment. In this context, the development of sustainable tourism is of special importance. Many of possible future projects should support the creation of small-scale infrastructure, of recreational infrastructure offering access to natural areas and the development of tourism services relating to rural tourism. However, the rural tourism option should be integrated in the specific regional contexts in order to multiply effects on economy and society that interact with other farm activities and sharing territory. Being a cross- activity, the rural tourism sustainability depends more on establishing relationships (local people, business, tourists, senior administrators) than a monocultural specialization of imported models. The option should always attend the rural tourism decision-making based on opportunity costs comparing with other possible solutions. It should not be a direct consequence of the absence of other options or the apparent attractiveness of foreign models which opportunities are cyclical. The strategy and actions should be based on horizontal and vertical structure of production, where rural tourism is integrated in space and time with other activities and sectors.

In the context of viable rural areas, innovation plays a crucial role. An activity as agriculture where the flows are increasingly globalized but paradoxically the success of many products depends on the maintenance and valuation of its regional identity, innovation is the guarantor of the constant product renewal due to changing demand profiles. It is the innovation that can induce the ability to create products and services themselves, supplementing them with innovative management, able to enter into these specific value-added chains for the benefit of the region. It supposes a process where horizontal integration is necessary but where integration vertical also should occupy a privileged place in developing strategies and future actions. In addition to the operational measures aimed to strength the productive base, the range of agricultural production is the one that requires innovative procedures: (a) based on quality demand that combine tangible and intangible factors (skills and human resources), (b) develop relational capital (public / private interaction, formation of integrated regional clusters) and (c) target the needs of technology support and enjoy the externalities offered by the consequent development.

The contribution of agricultural Portuguese regions to the economic progress implies also the existence of other attributes such as infrastructure and services which plays important tasks for farmers, for tourists, visitors and other inhabitants of rural areas. Beyond innovation, information and

communication technologies (ICT) and I&D dissemination must play their important role. They make easier connections between rural and urban regions and facilitate employment creation and diversification possibilities inside rural areas. Both, growing internet infrastructure coverage of rural areas and increasing the percentage of population in rural areas having subscribed DSL internet was good indicators. Quality of life of rural population depends by and large of the maintaining of rural area economic development which is close linked with the access to services of general interest. Development can help to promote competitiveness in the agricultural and food processing sectors.

Safety and national defense are public goods when the depopulation problem is focalized because national cohesion (in economic, social and territorial terms) is compromised. To avoid abandon and depopulation of rural zones and consequently inverse concentration in urban centres, agricultural landscape has to preserve their appeal for citizens. Inverse the rural population exodus and promote their return depend intimately of rural attractiveness potential which strongly depends of it capacities to catch new investments, create new employments and promote parity of economic and social opportunities. From the specific measures for regions with high risk of abandonment, it is noted the importance of strengthening and / or adaptation in Portugal of a few already in force, such as income support and early retirement which should aim major rejuvenation of farmers and the resizing of the holdings. Because its direct impact on national security, measures devoted to the vulnerabilities of forest and the combat to forest fires are also of vital importance to the country (*Fernandes,* 2005).

The origin or local provenance should have a growing role, promoting the endogenous development potential of the territory, which passes through the local regeneration with priority mobilization of local actors in the management of local interests, creation of local decision-making centers and oriented economic recovery of endogenous resources. These features enhance and support a diversity of solutions, ranging from agriculture component in the form of traditional high quality products, protected designations of origin (PDO), new crop profitably market (hydroponic and organic), non-agricultural land within the multifunctionality of agriculture as rural tourism mentioned before and other activities such as recreation, crafts, preservation of cultural heritage, including the rural amenities (immaterial tradable goods) as the scenery, the pure water , biodiversity and climate.

It should be noted that support non agricultural activities serves both, supply and demand sides. Considering the consistent increase number of consumers, especially from urban zones, which manifest willingness to access and enjoy such goods, this represents an expanding market.

4.4. Competitiveness in Global Markets

Portugal is a high income mixed economy which occupied the 43rd position out of 134 countries and territories in the Global Competitiveness Report from World Economic Forum (*Schwab,* 2009). Comparing with 2005 where Portugal placed on the 22nd position this showed that the country had dropped twenty one places regarding the actual ranking position. The report "assesses the ability of countries to provide high levels of prosperity to their citizens". This in turn depends on how productively a country uses available resources. Therefore, the Global Competitiveness Index measures the set of institutions, policies, and factors that set the sustainable current and medium-term levels of economic prosperity (*World Economic Forum,* 2009).

Some domestic problems with strong impact on the economy and consequently on country competiveness are possible to identify. Like in other countries with very hot summers and seasonal drying of soils and vegetation, every year large areas of the Portuguese forest are destroyed. This situation has strong economy impact because many people and industries depend on forestry related activities and as well a significant ecological impact associated with a safety issue for the populations. Other problem that commits agriculture competitiveness is the public debt which exceeds 60% of GDP. This problem, in addition with the over-dimensioned public sector, is a threat to the Portuguese economy and the State's financial sustainability.

As previously mentioned, one of the prevalent aspects of Portuguese agriculture is the dominance of production system with dependence on supports and subsidies. Thus, the search for economically viable alternatives involves a process of technical and structural conversion. On the other hand, some effective conversion measures represent an increased risk of abandonment and human desertification. According to Avillez (2010), it is desirable in the future to have in Portugal the following variety of agricultural systems: 1) agro-environmental systems socially sustainable and target for conservation of nature, biodiversity and territorial land management; 2) agro-commercial systems socially sustainable and target for organic and bio-energy production; and 3) agro-commercial systems economically competitive such as vineyards, olive trees, horticulture and quality meat production systems.

The Portuguese farmers will have to face global markets challenges at the same time as they have to value high standards coming from environmental, animal welfare, quality and food safety goals. According natural and structural specificities an adequate response for Portuguese agricultural sector to these challenges will be to ensure increased product and process quality.

4.5. Responding to climate change

As been seen before, CAP has been profoundly reformed in the recent past (EC, 2003) – the role of intervention mechanisms has been significantly reduced, the support is mainly decoupled and subject to conditionality and there has been a reinforcement of Rural Development (CAP 2nd pillar). Additionally, the policy tends also to be more efficient, meaning that the market disequilibrium and public stocks are not so common any more, there has been a raise on

the competitiveness and a change in the agriculture's role on commercial exchanges and there has been a better use of public funds with more efficient income transference.

One issue that is now in the "concerns table" is how to face the new challenges, from climatic changes to hydric resources and biodiversity protection. Simulations made for Portuguese agriculture (Jorge *et al,* in print) point to a general positive result of the future CAP, due to a predictable decrease on animal production activities and forage production extensification – this will lead to a decrease on negative environmental externalities, not due to a reduction on seeded area but to a change on the land cover diversity and its extensification. Additionally, there will be reductions on potential lixiviation, on CH_4 and NO_2 emissions and on the Global Warming Potential (GWP).

Nevertheless, some authors (*Rosário,* 2003) states that agri-environmental measures are not completely recognized by farmers as public support to change practices, as they are still mainly comprised as just subsidies for agriculture and income for farmer and there are still many farmers that don't intend to apply for this support. The same author (*Rosário,* 2003) recommend a bigger effort on environmental education of farmers, on information availability and on environmental training actions, in what concerns amenities, residues and resources as the farmer is the privileged actor that contacts in a constant and professional way with all these situations.

5. Conclusion

A considerable part of Portugal is dedicated to agriculture, although it does not represent most of the economy. Nevertheless, the sector has a crucial importance on the maintenance of national cohesion in economic, social and territorial terms and so an effort must be done to revitalize it.

This effort must accomplish all different agriculture's roles: the main vectors of development must be put in human resources – to train, qualify and rejuvenate human resources –, in the diversification of production basis – new technologies, new products –, in supporting (as a public good) the multifunctionality of agriculture – new rural activities, like tourism, gastronomy, landscape –, and finally in correcting the infrastructural constraints. This could reduce the economic dependence of Portuguese agriculture and its vulnerability to EU support mechanisms and reverse the rural population exodus, creating conditions to raise rural attractiveness.

The evaluation of the potential of agriculture and natural resources capacities in each region can't separate itself from the capabilities generated by farms and from the infrastructural and environmental constraints and spaces where they operate. When the main point is the global competitiveness, innovative capabilities of a country or region depend mostly on the sector dynamics and they remain spatially related to regions, cultures and networks (formal and informal) carrying different conditions to promote endogenous dynamics innovation.

References

Avillez, Francisco (2010), "As políticas públicas de apoio à agricultura na UE. Que futuro?", Apresentação na sessão comemorativa do 20º aniversário da Agrogés, 21 Janeiro, http://www.agroges.pt, Retrieved February 2010.

EC- European Commission (2003), *Mid-Term Review of the Common Agricultural Policy: July 2002 Proposals, Impact Analysis*, Brussels *http://europa.eu.int/comm/agriculture/publi/reports/mtrimpact/rep_en.pdf*, Retrieved March 2009.

EC – European Comission (2009), "Why do we need a Common Agricultural Policy? Discussion paper by Director-General Agriculture and Rural Development ", December**,** 16 pp, Brussels.

Fernandes, Maria João P. (2005), "Abandono agrícola: um problema de segurança e defesa nacionais", *Série Estudos e Documentos*, Documento nº 11, GPPAA – Gabinete de Planeamento e Política Agro-Alimentar, Ministério da Agricultura, do Desenvolvimento Rural e das Pescas, Lisboa, Portugal.

Henson, S. and Northen, J., (2000). "Consumer assessment of the safety of beef at the point of purchase: A pan-european study." Journal of Agricultural Economics, 51 (1), 90-105.

Jorge, Raul, P. Esperança, M.B. Martins, M.R. Lucas "Medium Term Prospects for Portuguese Agriculture under Health Check Proposals – A Quantitative Analysis with the CAPRI Modelling System*, New Medit, in print.*

Lucas, M. Raquel e R. Toscano (2003). "Segurança alimentar e comportamento do consumidor em Portugal", XIII Portuguese Congress of Animal Science – Producing with quality and safety", Evora, Portugal, October 1–4.

Lucas, Maria Raquel, *Handbook of Consumer Behaviour* (2006)*,* Leonardo da Vinci project (PL/04/B/F/PP-174 455).

Marreiros, Cristina (2005), "Consumers' Perceptions of and Attitudes to beef: a study of labelled beef in Portugal", PhD Thesis, Newcastle-upon-Tyne, UK.

OCDE-FAO (2009), "Agricultural outlook", http://www.agri-outlook.org , Retrieved 2010-02-03.

Patier, Eduardo D. (2000), "Experience of accession to the EU. Sapian and Portugal ", in *Agricultural Policy and Enlargement of the European Union,* edited by Alison Burrell and Arie Oskam, Wageningen Pers, The Netherlands, p. 131-142.

Pinto, A. Sevinate (2000), "A Integração Europeia da Agricultura Portuguesa", http://www.agroges.pt, Retrieved 2010-02-12.

Rosário, Maria do Socorro (2003), "Sensibilidade dos Produtores Agrícolas face ao Ambiente", Estudo n.º 7, Série Estudos e Documentos, Gabinete de Planeamento e Políticas, Ministério da Agricultura do Desenvolvimento Rural e das Pescas.

Rosário, Maria do Socorro (2005), "Expectativas dos empresários agrícolas – Informação Produzida a partir de um Painel Experimental de Produtores", GPPAA – Gabinete de Planeamento e Política Agro-Alimentar, DSEGI – Direcção de Serviços de Estatística e Gestão de Informação, Lisboa, Portugal.

Schwab, Klaus (2009), "The Competitiveness Report 2009-2010", World Economic Forum, Geneva, Switzerland. http://www.weforum.org/pdf/GCR09/GCR20092010fullreport.pdf. Retrieved 2009-09-12.

Van der Ploeg, J. D., Long, A. & Banks, J. (2002), "Living Countrysides – Rural Development Processes in Europe: the State of the Art". Elsevier bedrijfsinformatie, Doetinchem, NL.

World Economic Forum (2009), "The Global Competitiveness Index rankings", http://www.weforum.org/pdf/gcr/2008/rankings.pdf, Retrieved 2009-09-12.

ROLE OF AGRICULTURE AND MULTIFUNCTIONAL RURAL DEVELOPMENT IN SERBIA

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Abstract: Serbia is mostly rural country, as three fourth of its territory make rural areas, while almost half population is living in rural areas. Serbian agriculture is the sector which is very important for the total economy of the country in respect of resources, participation in GDP, employment as well as importance for rural areas and population. This is the only sector in Serbian economy that shows positive foreign trade balance in the recent several years. There are potentials for development of agrarian entrepreneurship on one hand, but on the other, there are constraints in existence of great number of small family farms whereas the huge share could not have commercial profile and could not live only from agricultural activities. The concept of multifunctional development of agriculture and rural areas is still present mostly in scientific and political sphere without clear explanation or interpretation as well as mechanisms of implementation. Serbia's rural space is heterogenic and devastated in different extent, and therefore extremely complicated for planning of multifunctional development.

Key words: agriculture, rural areas, multifunctional development, Serbia

1. Introduction – Economic Trends and Importance of Agriculture in the Economy

Serbia is located in the Balkan Peninsula, at southeastern Europe and in the Pannonian Plain (a region of central Europe). It is landlocked, although access to the Adriatic is available through Montenegro, and the Danube River provides shipping access to inland Europe and the Black Sea. Serbia covers a total of 77,474 km^2; it has 4,720 settlements of which 187 are urban[1].

According to the data of the last Census (2002) there are 7,498 million inhabitants in Serbia. In the 1991–2002 period the population number dropped by 1% (by 3.65% in rural areas). An average population density is 97 inhabitants per km^2 (289 inhabitants/km^2 in urban areas and 63 inhabitants/km^2 in rural ones). Areas in eastern part of the country, particularly in the southeastern part near the borders with Bulgaria and FYR Macedonia, are low populated areas with significant negative demographic balances. Serbia has for some time been part of the trend of permanent aging of the population[2].

Since 2000 Serbia's economy has been going through recovery from conflict and isolation in the 1990s. In the first eight years of transition, from 2001 to 2008, Serbia has implemented economic reforms that have resulted in the increase of gross domestic product, gradual reduction of high inflation rate, employment growth and in increase of foreign direct investments. In this period, the average annual growth of gross domestic product reached 5.4%, and GDP per capita was increased from EUR 1.709 in 2001 to EUR 4.661 in 2008. In 2007 and 2008, for the first time in decades, there were positive signals in the labor market. The unemployment rate of around 21% was reduced to 18.1% in 2007 and to 14.0% in 2008. Unemployment in Serbia is extremely high and a major problem in economic and social sense. This has largely been the result of privatization and the necessary restructuring of the old overcrowded and inefficient large state-owned companies. This situation is exacerbated by the inherent inflexibility of the Serbian labor market: part-time jobs account for only 7% of the total and temporary work only 13%. The high unemployment rate in the economy can also be attributed to the large size of the informal economy in Serbia. Inflation rate in the entire period was within the targeted inflation limits, and in 2007 it was 6.8%, which is a significant progress relative to the beginning of decade (*Bogdanov, N.* 2008).

Table 1. Selected macroeconomic indicators; 2000–2008; Serbia

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Change in real GDP –%[1]	4.5	5.4	3.6	2.8	8.2	6.0	5.6	7.1	5.5
Inflation rate (annual average) –%[2]	70.0	91.8	19.5	11.7	10.1	16.5	12.7	6.8	10.9
Unemployment rate –%[3]	12.1	12.2	13.3	14.6	18.5	20.8	20.9	18.1	14.0

[1] Calculated from data on GDP at 2002 constant prices
[2] Retail prices

[1] Data for territory of the Republic of Serbia excluding Kosovo (EULEX).
[2] Statistical data show that the average citizen of Serbia is 42 years old, and fertility i.e. the number of children born to a woman is among the lowest in Europe.

Table 2. Share of agriculture in the economy; 2000–2008; Serbia

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share of agriculture in GDP (current prices) –%	19.0	19.3	14.4	12.7	13.2	11.5	10.6	8.7	:
Share of agriculture in total employment –%	:	:	:	:	23.9	23.2	20.5	20.8	21.4
Share of agri-food exports in total goods' exports-%*	19.0	18.3	25.3	20.9	22.2	20.3	19.4	18.9	31.3
Share of agri-food imports in total goods' imports –%	8.6	10.7	9.8	8.8	8.0	7.4	6.9	6.1	6.4

*Agro-food trade according to Combine Nomenclature of Custom Tariffs (CNCT)
Source: Statistical Office of the Republic of Serbia

Agriculture's contribution to the Serbian economy is as broad as it is deep. During the transition period the share of primary agricultural production in the realized GDP was reduced in comparison with the 1990's, so that in 2007 it accounted for 8.7% *(Table 2)*. The share of the food industry, beverages and tobacco in the realized GDP in this period accounted for 5.5% on the average and also has a trend of permanent decrease. But despite this downswing the share of primary production in agriculture is compared to the EU and to neighboring Western Balkans countries still very high.

The agriculture employs a big portion of the total labor force in Serbia. The main reason for the high reliance on agriculture is certainly reduced employment opportunities, fact that agriculture absorbed labor surplus from other sectors of economy which have already completed reforms and low investment activity in country, also. Compared to other sectors of Serbian economy, the agro-food sector plays a very prominent role in overall trade. The agro-food trade balance was mostly negative during the mid 1990s' and since 2000 it became positive for the first time in 2005. The agro-food sector accounted for some 20% of total Serbian exports. Serbia's main export commodities are cereals (maize, wheat), raw and processed fruit (frozen raspberries, prunes), refined sugar and some livestock and meat products. The share of the agro-food sector in total Serbian imports is about 7%. With regards to agricultural imports a wide range of food and agricultural products is imported, with the EU as the largest origin of imports (*Bogdanov, N.,* 2010).

2. Natural resources

Serbia's terrain ranges from rich, fertile plains of the northern Vojvodina region, limestone ranges and basins in the east, and in the southeast ancient mountains and hills. In Central Serbia, the terrain consists chiefly of hills, low and medium-high mountains, interspersed with numerous rivers and creeks. Four mountain systems meet in Serbia: Dinaric Alps in the west cover the greatest territory, and stretch from northwest to southeast. Apart from the Danube, the chief rivers are its tributaries Sava, Tisa, Drina and Morava. Climate of Serbia is moderate continental with diversity on local level, caused by geographic location, relief, terrain exposition, presence of river and lake systems, vegetation, urbanization etc.

Thanks to the relief and climate conditions in the territory it covers, Serbia has favorable natural conditions for diversified agricultural production. Forest to agricultural land ratio (39:61%) is also more favorable compared to many European countries. Serbia disposes of 5.1 million hectares of agricultural lands (0.60 ha per capita), out of which 3.3 million hectares (65%) fall to arable lands (0.45 ha per capita).

Depending on the quality of soil and above sea level, the agriculture of Serbia covers all the forms of intensive, semi-intensive and extensive farming. Regarding its suitability for agricultural production (soil fertility), the soil potential of Serbia is divided into eight fertility classes, where the first four classes represent better soils, and classes 5-8 include the areas mainly unsuitable for tillage. As for the whole of Serbia, distribution of arable and non-arable land is almost identical. Intensive agricultural production is least restricted in Vojvodina and most restricted in Kosovo and Metohia. The latter territory, similar to that of Central Serbia, has a wide range of natural fertility in narrow geomorphologic units. According to the above sea level, the plain terrains (up to 200 m) cover about 37% of the territory of Serbia. Hills (200–500 m) and low

Table 3. Surface area and land cover (000 ha)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total area*	7747	7747	7747	7747	7747	7747	7747	7747	7747
Forest area	1950	1950	1950	1950	1950	1985	1985	1985	1985
Agricultural land	5106	5108	5106	5112	5113	5110	5104	5090	5096
– Arable land	3353	3351	3346	3340	3342	3326	3315	3295	3302
of which fallow and uncultivated land	175	143	156	169	176	194	248	200	200
– Permanent crops	316	313	317	316	312	305	302	301	303
– Grassland	1402	1409	1407	1420	1421	1441	1448	1455	1453
– Other agricultural area	35	35	36	36	38	38	39	39	38

*Excluding Kosovo (EULEX)
Source: Statistical Office of the Republic of Serbia

mountains (500–1000 m) account for nearly the same percentage, of about 26%, and mountains (above 1000 m) approximately 11%. As regards the slope of the terrain, it is characteristic relatively high percentage (42.6%) of steep and very steep areas (slope over 30%) with shallow lands prone to erosion and inadequate for tillage. Nearly level terrains (slope below 5%) to slightly sloped terrains (5–10%) account for about one third of the land area, and the remaining 24% falls to slopes of 10–30%, whose exploitation for agricultural purposes is conditioned by undertaking appropriate protection measures.

However, a great part of the arable lands is acidulated, as a result of uncontrolled use of chemical agents, and in Vojvodina (the most developed part of the country in terms of agriculture) and salinated, what reduces the yield and raises the production costs. According to the assessments, it is necessary to take measures for amelioration of physico-chemical characteristics of the soil on approximately 1/3 of arable lands. The share of irrigated arable lands in total arable lands is among the lowest in Europe (approx. 1.5%), whereas about 85% agricultural land is endangered by wind and water erosion. At the level of Serbia, the calculation of total nutrient balance is not carried out. For the needs of Serbia Danube River Enterprise Pollution Reduction Project (DREPR), the assessments were made on the nutrient load from agricultural sources (manure and chemical fertilizers) and its consumption – quantities necessary for crops. Comparison of the amounts of nitrogen and phosphorus in manure and chemical fertilizers with the crop requirements showed that the cumulated supply was far from reaching the crop requirements. It indicates that there is a great potential for using manure on crops.

In general, the structure of agricultural land exploitation in Serbia is stable, and there were no significant changes in the past ten years. The only one significant change was in the vineyards' area decrease by cca 5%. Areas under vineyards are getting reduced first of all because of the unfavorable economic position of the grape production, low competitiveness and lack of labor.

Serbia has no accurate records on agricultural land surfaces and there are large discrepancies between statistical data and cadastral records. Official statistics registers about 4% uncultivated surfaces annually, but it is estimated that data much higher. There is uncultivated land particularly in the hilly-mountain regions with emphasized depopulation, as well as in those territorial parts affected by erosion and subject to flooding.

3. Farm structure

Agrarian structure in Serbia is very complex. It consists of micro farms owned by poor farmers or successors of reprivatized land, small semi subsistence farms, large family farms in the northern part of the country, as well as the privatized big properties with mixed ownership structure. According to the statistics, private farmers own approximately 80% of the 5.1 million hectares of agricultural land. The rest of 20% of farmland is utilized by many entities, varying with regard to ownership and farm size. In Vojvodina, there is a higher concentration of larger farms. Ownership rights are poorly defined and recorded in Serbia. This lack of clear ownership rights for a significant proportion of the land is a hindrance to the proper operation of the land market, although land tenure in Serbia is overwhelmingly private. However, today the majority of public property, which originates from confiscated lands it from former proprietors, fiscal and legal entities, remains in state ownership. In 2005, Ministry of Agriculture, Forestry and Water Management (MAFWM) adopted a regulation according to which all state-owned land should be tendered for rent[3].

Serbia has on average a much smaller private farm size than many other European countries. According to the 2002 Census *(Table 4)* there are about 778,900 private farms in Serbia with an average size of 3.6 ha, fragmented in an average of 4 plots per farm, which puts Serbia at Europe's bottom in terms of farm size and fragmentation (*Subić, J., Vasiljević, Z., Cvijanović, D.,* 2009). According to the 2002 Census over 75% of private farms have less than five hectares and fewer than 5% have more than 10 hectares.

Table 4. Family farms number and area farmed*; 1991 and 2002; Serbia

	1991	**2002**	**Change (%)**
Number of farms – 000	997	779	78.11
Area farmed – 000 ha	3460	2869	82.92
Average size of farms – ha	3.5	3.7	106.17

* Data refers to private family farms only (without agricultural enterprises and cooperatives)
Source: Statistical Office of the Republic of Serbia – The Census of the population, households and dwellings 1991 and 2002

The tendency of turning the family farms into big, commercial farms as well as strengthening of dual agrarian structure has been shown in the case of farms of Vojvodina region, particularly in the areas with marked tendency of population aging. The land market is active in this part of the country, but it prevails renting in relation to the land buying and selling. In the central part of the country, around big cities where there is a higher agrarian population degree as well as participation of the mixed farm holdings, the small properties are dominant ones (*Bogdanov, N.* 2009).

Analysis of the property structure change and of the land market is impeded because of lack of reliable data. Namely, the Census of agriculture has included only private family farms, but not agricultural enterprises, whose ownership and holding structure have no record. In addition, in the period between the two censuses there have not been conducted other researches by Statistical Office where the data on land would be innovated. The other researches conducted on a national representative sample (LSMS, 2002 and 2007),

[3] According to estimates 350,000 to 380,000 ha of agricultural land are state owned.

show that there is an increase both in number of farms that rent the land and in size of rented surfaces.

4. Agricultural production and output

Until the beginning of the 1980s Serbia had an impressive agricultural production growth rate (3.5–4%), which stagnated during the 1980s, and in 1990s it declined sharply. Extremely unfavorable production and economic indicators of Serbian agriculture in that period are reflected in the following: production of almost all agricultural products characterized by marked fluctuation and negative trend; the use of agro-technical inputs has been reduced; low labor productivity; low level of market production; production structure acquired the characteristics of extensive production (*Bogdanov N.,* 2009).

Period from 2000 to 2008 was characterized by substantial annual fluctuations of agricultural production, but generally it is still lower than in pre-transition period. Relatively extensive production method caused fall in the physical scale of production, especially in the years of unfavorable climatic conditions (particularly in 2000, 2002, 2003 and 2005, 2007). Agricultural production in Serbia is strongly influenced by the weather conditions – particularly the droughts and uncontrolled activity of waters. The economic transformation process affected the livestock sector more than the crops' sector. In the structure of the realized value of agricultural production, about 67% comes from the plant production, and 33% from animal production, without a pronounced change tendency during the observed period.

Table 5. Agricultural production volume indices*; 2000-2008 (2005=100); Serbia

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	-13.0	19.0	-3.0	-7.2	19.8	-5.3	0.0	-8.0	8.0
– Crops	-27.0	50.0	-4.0	-16.8	44.3	-5.7	-3.0	-18.0	23.0
– Livestock	-5.0	-1.0	2.0	-1.9	-0.2	1.1	-3.0	0.0	-3.0

* Final (net) production only
Source: Statistical Office of the Republic of Serbia

Dominant position in the production structure of agriculture belongs to cereals (maize and wheat). Areas under cereals account for about 60% of arable lands, with pronounced decreasing trend over the past years. Reduction of the areas under cereals is a result of lowered interest of farmers in the production of wheat which was extremely uncompetitive compared to other crops. Value of cereals production is still extremely high and accounts for about 30% of total agricultural production value in Serbia.

Areas sown by industrial plants have recorded permanent growth since 2000. Their share in the arable lands increased in the period 2000–2008 for about 16%. The industrial crops accounts for 7% of total agricultural production value of Serbia. Opening of the foreign market, budgetary support, export subsidies and privatization of the processing capacities, contributed to fast revitalization of the industrial plant production after the crisis in 1990's. More than in other segments of the food chain in Serbia, this sector has set up the trade chain that has also reflected positively on the growth of the lands and production.

Fruit and vegetable production recorded positive trends in the past years and it makes about 11% of the agricultural production value. Fruit and vegetables occupy about 12% of arable land and they are predominantly grown on private holdings in Central Serbia (about 99%). In this sector significant progress has been made in the improvement of standards in the production and processing, as well as in the strengthening of the production linkages. Serbia has ideal climatic conditions for growing many varieties of fruit. The country's territory is rich in microclimates that are perfectly suited for organic fruit production, making development of this sector extremely promising. Over the last years, thanks to favorable credit conditions for purchasing the irrigation systems and building green houses, production has been significantly intensified.

Negative trends in livestock production have been slowed down at the beginning of this decade, while since 2006 the decline has been continued. The number of farm animals in Serbia has decreased significantly since the 1990s (by more than 30%). Falling incomes together with the restricted access to foreign market severely reduced meat consumption. Production has fallen even more than livestock number, due to an additional difficulty of providing adequate feed and veterinary care. The main explanation is the decreased demand for animal products, but a shortage of animal feed and adequate veterinary services maybe also have played a role towards this decline.

Pig meat production avoided the worst depression though there has been some fluctuation (in particular due to high feed prices in some years). In recent years the milk production has been stabilized at the level of reconciliation of the domestic balance needs.

Achieved average yields in agriculture of Serbia compared to EU countries indicate to the prominent technical and technological backwardness as well as absence of technical and technological innovations in practice. The reason for this situation is in an expressed price disparity of agricultural products and basic inputs which causes reduction of the fertilizers' and chemicals' use, inadequate animal nutrition as

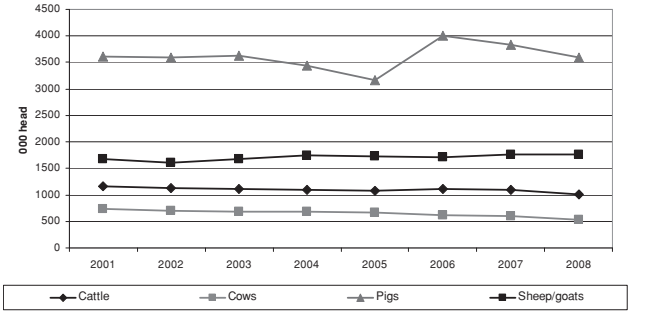

Figure 1. Number of main livestock categories (in 1000); 2000–2008; Serbia
Source: Statistical Office of the Republic of Serbia

well as disrespect of agro-technical requirements[4]. High yields, at the European level, have been recorded only in production of industrial plants (first of all in the case of sunflower and soybean).

5. Serbian rural mosaic

Rural areas in Serbia are highly diverse in economic, social and demographic terms, due to differences in their geo-morphological characteristics, (mountainous, hilly, plain areas), population changes, economic structures, infrastructure, environmental conditions, transport accessibility, etc. In an effort to identify similarities and differences among rural areas in Serbia, as well as to identify their strengths and weaknesses, a typology of rural areas was developed through cluster analysis[5] in the framework of preparing the present National Rural Development Programme (Bogdanov, N., Meredith D., Efstratoglou, S. 2008).

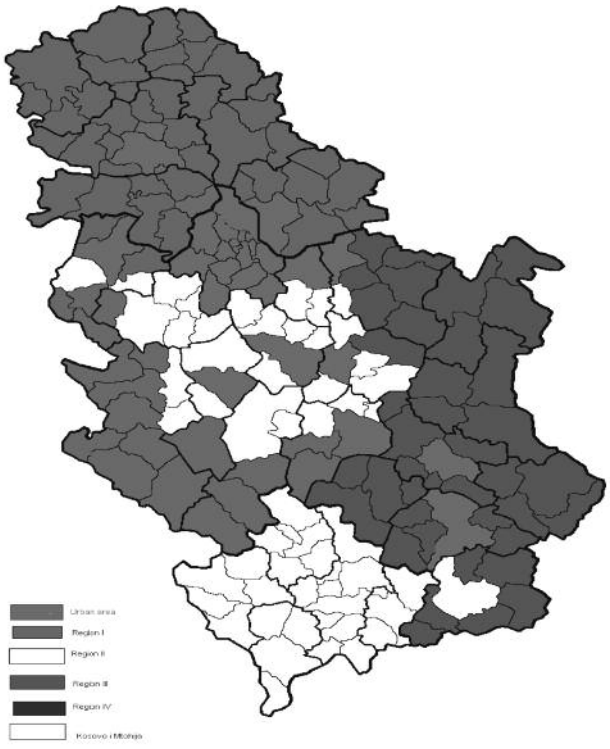

Figure 2. Typology of rural regions in Serbia
Source: "Selection of rural areas in Serbia for rural development programming purposes" by Sophia Efstratoglou, Natalija Bogdanov, David Meredith, EU Project SRDPPS Publication No 06

Region 1 – **Highly productive agriculture and integrated economy** – this region has favorable edapho-climatic conditions and rather appropriate structure of agricultural production dominated by more capital intensive activities, as compared to other rural areas of Serbia. Moreover, this region possesses adequately developed human capital, distinctively progressive entrepreneurship, a sufficiently diversified industrial sector and a well developed physical and economic infrastructure; as a result, this region displays more favorable socio-economic indicators of overall economic development and a more integrated and advanced economy.

Region 2 – Small urban economies with labor intensive agriculture – this region covers the area in the perimeter of urban centers and of bigger towns and their surroundings. The general economic structure and the productivity rate of certain economic sectors are more favorable in this region, compared to other parts of Central Serbia. Taking into account the proximity of this "region" to markets with large numbers of consumers, the structure of agricultural production in this "region" is oriented towards intensive farming producing mainly fruit, vegetables, and intensive livestock products.

Region 3 – Natural resources oriented economies, mostly mountainous – according to its geographical characteristics, this "region" is highly heterogeneous. Its economic structure is based on the exploitation of the rich natural resources – mining and agriculture. Unfavorable demographic trends are a particular characteristic of this area. This region covers the territory of Serbia which has the highest rate of rural poverty and of total unemployment.

Region 4 – High tourism capacities and poor agricultural structures – This "region" represents the part of Serbia with the greatest tourism potential and the highest rate of tertiary sector contribution to its economic structure. The agricultural structure is rather undeveloped and it is based mainly on the utilization of the rather abundant natural resources of feedstuffs.

6. Main Characteristics of Rural Areas in Serbia

Some of the main trends and problems that rural areas in Serbia are facing with are the following:

1. ***Demographic trends.*** Rural areas in Serbia, till the beginning of 1990s, were characterized by a strong out-migratory trend due to the swift growth and development of the other sectors of the economy**,** as was the case in all European states since the 1950s, and the parallel ***agrarian exodus***. During the 1990s, and because of the severe conflicts and war, population movements in rural areas were quite diverse. Rural areas continued loosing population, mainly the mountainous and less fertile areas, but there was, also, an inverse movement of population into the rural areas as well, mainly by internally displaced

[4] For example, in the last decade the wheat yield has only three times exceeded a level of 4 t/ha. In the course of the 1980s the yield has reached even 5 t/ha what is inaccessibly now. In production it is utilized uncertified seed as well, while fertilizer utilization has been reduced to one third of the optimal amount.

[5] "Selection of rural areas in Serbia for rural development programming purposes" by Sophia Efstratoglou, Natalija Bogdanov, David Meredith, EU Project SRDPPS Publication No 06

Table 6. The characteristics of defined rural regions in Serbia

	Total rural	*Region 1*	*Region 2*	*Region 3*	*Region 4*
1. RURAL AREAS –					
Population density	63.10	76.83	85.93	51.32	43.40
2. POPULATION AND HUMAN DEVELOPMENT INDICATORS					
% of change in population number 2002/1991	96.35	100.00	97.34	95.04	90.69
In – out migration rate	-0.14	5.81	0.43	-7.43	-5.43
% of population 15+	16.17	15.91	15.70	18.30	15.91
% of population 65+	17.49	16.29	18.33	14.28	20.33
Population aging rate	1.08	1.02	1.17	0.78	1.28
Population > 15 years					
Without primary education	28.19	24.16	28.67	27.14	34.74
Primary education	26.69	26.41	25.42	28.62	27.51
Secondary school	36.09	41.10	36.69	36.11	27.35
Faculty education	6.95	7.53	7.29	6.55	5.87
Unknown	2.07	0.80	1.94	1.59	4.53
3. EMPLOYMENT					
Employment structure by sectors (%)					
Primary	32.98	30.75	32.68	34.20	36.30
Secondary	30.69	31.20	30.79	31.72	29.11
Tertiary	18.60	20.28	19.41	17.80	15.35
Public	14.84	15.57	14.09	13.94	15.08
activity rate	53.61	53.14	55.43	56.35	50.78
employment rate	42.18	41.23	44.51	43.26	40.46
unemployment rate	21.32	22.40	19.69	23.22	20.33
unemployment rate – female	23.44	24.46	22.27	25.86	21.68
4. GDP					
GDP per capita Serbia = 100%	73.69	96.72	70.32	54.57	51.43
Structure of GDP by sectors (%)					
Primary	32.48	33.24	30.25	24.24	38.63
Secondary	41.12	42.36	39.71	43.36	38.16
Tertiary	26.06	24.14	29.67	32.08	22.64
Public	0.34	0.27	0.36	0.32	0.57
Agriculture	29.81	29.93	28.19	22.35	36.48
Primary sector productivity Serbia =100%	87.38	128.42	74.00	47.00	69.00
Secondary sector productivity Serbia =100%	74.93	102.00	65.00	57.00	53.00
Tertiary sector productivity					
Serbia=100%	62.48	71.00	61.00	60.00	48.00
5. AGRICULTURE					
% agricultural land of total area	65.30	83.29	64.34	53.95	55.03
% forestry	25.83	5.09	27.09	40.67	36.74
Structure of agricultural land					
Arable land	62.78	87.79	60.48	25.79	47.52
Orchards and vineyards	5.59	1.77	11.05	7.10	6.51
Meadows and pastures	30.88	8.64	28.34	67.11	45.93
cattle/100 ha of arable land	24.85	14.62	37.47	47.03	23.96
pigs/100 ha of sown land	91.19	80.20	131.20	96.25	84.00
sheep/100 ha of agricultural land	31.91	13.01	57.99	61.72	26.42
Average farm size	3.94	3.53	3.72	4.76	4.25
Land productivity (GDP in agriculture/ha) Serbia = 100%	88.62	111.48	110.52	48.44	61.77
6. TOURISM					
No of beds/1000 residents	13.71	4.29	17.31	30.53	15.18
% foreigner overnights	4.88	11.71	5.68	3.85	2.13
Overnights/no of beds	78.75	80.00	67.23	96.06	73.00
7. INFRASTRUCTURE					
No of telephone users/1000 residents	284	292	292	261	274
No of residants/1 doctor	512	566	457	584	470

Source: "Selection of rural areas in Serbia for rural development programming purposes" by Sophia Efstratoglou, Natalija Bogdanov, David Meredith, EU Project SRDPPS Publication No 06

persons (IDPs) and the urban unemployed. In total, during the period 1991-2002, population in rural areas of Serbia declined by 3.6% compared to an overall 1% decline in the country's total population.

2. ***Employment trends in agriculture and in rural areas in general***. The employment structure and basic characteristics of labor force in rural areas of Serbia are similar to those in other transitional countries: age and education structure of rural employees are unfavorable compared to those of the Serbia's general workforce; the rate of unemployment of the active rural population is higher, employment is high in primary and low in tertiary sector.
3. ***Diversification of rural economy***. The economic structure of rural areas of Serbia depends largely on the primary sector and the exploitation of natural resources. About 1/3 of the active population in rural areas is employed in agriculture. Agricultural employment shares are among the highest when compared to the EU, reflecting the continuing high importance of agriculture in the national economy and the ***low diversification*** of economic activities in rural areas of Serbia, resulting in the ***lack of alternative employment and income opportunities*****.** Apart from agriculture, the rural workforce is engaged in the food processing industry, wholesale and retail trade, building construction and transport. The manufacturing sector, some other economic and the service sector are still underdeveloped in rural areas. Besides agriculture, the private sector is only recognized in the trade sector. The main limitation for the more intensive development of services and processing is obviously influenced by the non-favorable financial market.
4. ***Traditional, mono-functional agriculture*** is still dominant with Serbia ranking among the most agrarian states in Europe. The range and vitality of natural resources, the private ownership of land and experience in business cooperation, are some of essential preconditions for the diversification of the rural economy. These have not yet been put into good use in Serbia. The large share of GDP coming from agriculture, processing, mining and energy industries is coupled with the low share held by the tertiary sector and this is characteristic of the economic structure of rural areas in Serbia. Serbia's performance with respect to diversification is comparable to that of the surrounding countries, since it is under the influence of almost identical factors: unfavorable position of the agrarian sector and rural areas in developmental policies and set courses, low asset accumulation capabilities of rural households, unfavorable capital market and uncertain investment environment, limited market for the placement of products and services by rural areas, inadequately educated human resources, with low level of private entrepreneurship potential.

5. ***Agriculture*** remains the predominant activity in most rural areas, characterized by small farm units, low productivity and low farm incomes. A large number of farms are subsistence farms with very small surplus production for the market. The findings of the 2002 Census confirmed that most labor force engaged in agriculture in Serbia falls within the category of the labor force producing for their own needs – subsistence production (75%), while only 20% of those involved in farming production for the market. The proportion of women in agriculture labor force which is producing for the market is extremely low (26.1%), and that has been registered in other transitional countries as well. The remaining 5% are working in jobs requiring manual labor (employees)

Table 7. Active agricultural population according to professional skills

	Total	Male		Female	
	Serbia	No	%	No	%
Workers in agriculture – producers for the market	107407	79377	73.9	28030	26.1
Agricultural producers meeting own needs	397278	208475	53.1	188803	46.9
Workers in agriculture for jobs requiring physical strength	24551	17738	72.2	6813	27.8

Source: Census of population, households and housing, 2002

6. ***Unemployment*** in rural areas is also high (21%), reflecting again the problem of lack of employment opportunities. Underemployment seems to be another serious structural problem of Serbian agriculture and rural economy. The position of the young rural population in the labor market in Serbia is characterized by substantially higher unemployment rates and comparatively lower employment opportunities in relation to the total rural population. The unemployment rates of those up to 25 years of age are nearly three-fold higher in comparison to the average one.
7. ***Agricultural productivity***, both land and labor productivity, is below EU averages, due to the low level of input uses (fertilizers, pesticides, seeds) and use of capital (machinery, modern equipment, infrastructure). Agricultural GVA/ha of agricultural land accounts for less than 40% of the EU-25. Agricultural productivity declined severely during the 1990s, due to the war that destroyed significant upstream and downstream industries related to agricultural production (fertilizer industries, machinery factories, irrigation, marketing outlets, processing industries, support services etc) and to international sanctions. The upstream and downstream industries to agriculture are improving gradually as many of those industries are privatized, at low pace though, and the agricultural sector is undergoing a restructuring. These changes have contributed to an increase in the GDP in agriculture and in productivity in the recent years, but productivity remains below its potential, which is considered as very high one.
8. ***Agro-food sector capacity*** linked to agriculture (upstream and downstream industries as well as food processing industries) has declined dramatically during the 1990s. Most of the remaining industrial capacities need modernization and technological improvement.
9. ***Infrastructure*** in rural areas, both physical and social, is poor and underdeveloped and it affects negatively rural areas competitiveness and social basics. Maintenance of up-grading of rural infrastructure can improve rural livelihoods and it is considered as prerequisite for attracting and retaining investors. Low-cost affordable solutions are required to respond to local needs, as well as to the limited financial capacities of local governments and rural households. Establishment of innovative mechanisms for proper maintenance and paying for the costs of existing infrastructure will be the critical thing having in mind the limited financial capacity of both the local administration and rural households. The above mentioned infrastructure is primarily owned by local administration bodies, which will need to strengthen their ability to evaluate their asset base and its condition.
10. ***Rural poverty*** is a much lower incidental in relation to the urban centers. Rural poverty is likely to be high among unemployed, older people who have remained in rural areas despite the deterioration of social services, farmers in more remote areas far from markets, farmers with very small farms and/or those ones with low fertility land and minority rural populations. Regionally, southern Serbia is likely to have higher levels of rural poverty, due to the lower historical levels of household income, greater isolation of rural communities and less favorable conditions for agriculture.
11. ***GDP per capita in rural areas*** accounts for 74% of the national average and it is well below the urban GDP per capita. The 2007 LSMS results as well as those of 2002, confirm that rural poverty represents one of the crucial characteristics of poverty in Serbia: the percentage of the poor population living in rural areas increased from 55% in 2002 to 61% in 2007; rural poverty in 2007 was almost halved compared to 2002 (9.8:17.7%), but it still remains twice as much as in urban areas (9.8%: 4.3%). The gap between rural and urban poverty has been grown from 1.6 to 2.3%, as a result of less reduction of rural population compared to the urban one.
12. With regard the ***environment,*** rural areas of Serbia are rich in ecosystems and biodiversity, which are identified and protected (5 national parks). Environmental pressure from agriculture is not very high due to low input utilization up to now. However, changes in intensity and structure of agricultural production could rapidly make the situation worse. The soil erosion in the hilly land but also in the plain land seems to be an important problem. Another problem is the quality of water that has been deteriorated since the beginning of 1990s, due to lack of obsolete water supply infrastructure and water disinfection. Lack of maintenance in the municipalities' sanitary and sewage systems increase the risk of water contamination.

7. Challenges for Serbia towards multifunctional development of rural areas

In last few decades awareness was raised about need for the integrated approach to rural development in Serbia. The concept of multifunctional development of agriculture and rural areas is still present mostly in scientific and political sphere without clear explanation or interpretation as well as mechanisms of implementation. Serbia's rural space is heterogenic and devastated in different extent, and therefore extremely complicated for planning of multifunctional development. Certain moves forward have been made in order to build institutional capacity to support multifunctional development – decentralization of institutions and rural development support, adoption of legislations, upgrading of knowledge, defining and coordination of programs of support through local and foreign funds, yet the multifunctionality as a concept is still not alive in Serbia as it should be.

Serbia is approaching the definition of national rural development priorities (the social, economic and ecological ones), which should be guided by the generally accepted models of the wider environment, first of all by the EU ones. No doubt one of the basic goals is stopping of the negative demographic and economic trends, as well as preservation of natural and cultural heritage of rural areas. Implementation of the mentioned goals is caused by fulfilling of the following tasks (*Bogdanov, N., Djordjevic-Milosevic, S.* 2005):

- Strengthening of the institutional mechanisms for improvement of socio-economic status of rural areas;
- Support to diversification of rural economy ias well as preservation of cultural heritage;
- Development of sustainable agriculture and stopping of further biological degradation (semi) agricultural systems;
- Establishment of the efficient system of land management (including soil protection against erosion, polution and unadequate utilization);
- Establishment of the system for protection of forests and forest land.

Improvement of life quality in rural areas is closely linked to incentives for diversification as well as the following requirements:

- Development of communal infrastructure in rural areas;
- An incrase of the labour employment both at the farms and out of them;
- Greater participation of women as well as excluded social groups in the rural economy;
- Development of small businesses, particularly those ones that rely on traditional and territorialy specific activities;
- Education, provision of equipment, support in promotion etc.
- Education and training of young population in traditional rural arts and crafts that support development of tourism, recreation, services for environment as well as quality of products;
- Development of tourism in general.

Any further improvement of Serbian rural economy, based on the requirements of the multifunctional development principles, according to recent experiences and knowledges, require several necessary structural and institutional changes as well as adjustments:

1. Strengthening of the local government capacities for the activities linked with implimentation ot the rural development programmes and projects;
2. Establishment of the local partnership and cooperation at all levels;
3. Construction od decentralized system of support to rural development throught strengthening of extension services, partnership between the public and private sector as well as the governmental and non-governmental ones.

In order to enable active support for rural developmen, Srbia has to intensify decentralization processes in such way that the process of da proces of individual competences' taking over should be followed by strong support at local level. Delays and problems that arise at the moment, despite good initiatives at the national level as well as an active financial support of the state, coming from the fact there is neither decentralized system of support nor institutional network for integral approach to the mentioned problem. In order to be utilized available own funds as well as EU funds in the most rationalized way, it is necessary to be constructed capacities for rural development at the local level.

Support for development of specific activities linked with agricultural multifunctionality, as well as the support for low-profitable activities with complex significance for development of rural ambient, have been identified in the governmental programmes as the necessary ones. Apropriate supporting system has not been formulated yet. Support for multifunctional development has necessary be carried out with the assistance of donor funds, but first of all in the transfer of necessary knowledge.

8. Conclusion

The Serbian rural economy is experiencing a number of problems. While some rural communities in Serbia continue to prosper, others are experiencing problems of socio-economic adjustment. Differences between rich North and poor South are drastic. Rural areas live in completely opposite social environment form – extremely rich, with living standard on the urban level or higher, to the extreme poverty lacking even basic infrastructure including electricity and water supply, access to transport, social and physical infrastructure, economic infrastructure etc. Opportunities for employment and wealth creation are very limited, mainly due to the lack of diversification and creation of new and innovative opportunities. This contributes even more to the poverty in rural areas and preventing its overcoming as a persistent problem. The quality of the environment in many parts of rural Serbia has also suffered in the face "misled industrial development" or intensive farming, contributing to the shift of population from rural to

urban areas and often generating sharp tensions between conservation and development.

Although most of these problems stem from broad social, technological and economic changes which go far beyond the national boundaries of the Republic of Serbia, only the national agriculture and rural development policy framework in last few years is trying to address them. However, national policy is still addressing all problems of rural areas integrally, although some rural areas and some sectors of the rural economy of the country have experienced problems of structural adjustment, while others face limits on dynamism and diversification. Redesigning rural development policy and multi-annual programming should in the future overcome these problems. The policy framework is considerable changing and adjusting to comply with EU policies and best practice.

In short, as rural areas are subject to the impact of big social and economic forces, oftentimes of international origin (globalization), rural life is changing rapidly and, for the weakest sections of the rural population, to the worst. The government cannot stop these forces, but it can influence substantially some of the changes and help rural areas to adjust, by elaborating and implementing appropriate policy measures. Depopulation of rural areas as a result of poverty, bad employment opportunities and low living standard is the most critical issue. Rural Serbia is despite of various favorable conditions for rural economy development loosing its rural social capital and population itself striving to reach urban areas. This is not completely new trend, but emerging phenomena observed is that this process is again speeding up despite of economy crisis in urban areas. On the other side there is an interest of surplus of industrial labor to move back to rural areas, however their access to land and credits, or any other prerequisite to start not just living in rural areas, but do economy to survive is terribly unfavorable.

Parallel to this Serbia is in sector of agriculture facing two parallel and key physical processes, and that is intensification of rural economy, including pressure on natural resources in lowland areas and extensification in mountain areas (but also some lowland areas with bad soils), afforestation and deforestation, development and abandonment. These complex processes result in reductions in biodiversity driven by both overexploitation and neglecting or under-management. High mountain/upland farm areas are extremely vulnerable to social, economic, and political changes in Serbia, leading to further depopulation of rural areas and landscape as well as ecological decline.

The lack of regional levels of government will be overcome by providing space for public-civil sector partnership and activation of capacities of local self-authorities to provide more efficient use of available funds from national budget, as much as to address on time problems in light of future absorption of EU funds. Through these channels will be conducted also work on establishment and/or strengthening of existing local action groups (multi-stakeholder and multi-sector groups) is central task in order to ensure future absorption of EU funds.

References

Bogdanov, N., Đorđević-Milošević, S. (2005): Multifunctional Agriculture – Concepts and Institutional Framework*,* chapter in Multifunctional agriculture and Rural Development, pp: 14-23; IEP, et al. COBISS.SR-ID 127317260; ISBN 86-82121-30-1

Bogdanov, N. (2008): Challenges for the Serbian agriculture and food sector in the EU accession process, chapter in Agriculture in Western Balkan and EU integration, edt.by Rednak M., Slovene Association of Agricultural Economists, Ljubljana, Slovenia, str.69-91; 338.43(497.1); 63(497.1):339.923:061.1EU; ISBN 978-961-91094-4-1

Bogdanov, N., Meredith, D., Efstratoglou, S. (2008): A Typology of Rural Areas of Serbia, Economic annals, 177/2008, pp. 7-29, Faculty of Economics, University of Belgrade, DOI:10.2298/EKA081770078, UDK:333 ISSN 0013-3264

Bogdanov, N. (2009): Structural Changes in Agricultural Sector – Experience after Two Decades of Transition, chapter in *"Agriculture and Rural Areas of Serbia – The Sensitive Points Of Transition And Comparison With Other Countries"* edit. by Zakic Z., Tomic, D., DAES, Belgrade, Serbia, ISBN 978-86-86087-18-8, COBISS.SR-ID 171544588

Bogdanov, N. (2010): Review of Agriculture and Agricultural Policy in Serbia, draft report, FP7 project Agripolicy, http://www.europartnersearch.net/agripolicy

Subić, J., Vasiljević, Z., Cvijanović, D. ***(2009): Strategic Planning in the Function of Sustainable Agricultural and Rural Developmentin Republic of Serbia,*** in the 4th International Congress „Aspects and Visions of Applied Economics and Informatics“, 26th-27th March 2009, Faculty of Agricultural Economics and Rural Development, University of Debrecen, Hungary, ISBN 978-963-9732-83-4, pp. 1005–1012.

Vasiljević, Z., Ćejvanović, F. (2006): Good agricultural practice as precondition for food safety and agricultural sustainability**,** "Rural Area Sustainable Development", Bucharest Academy of Economic Studies, Faculty of Agro-food and Environmental Economics, Institute of Agricultural Economics – Belgrade, Institute of Agricultural Economics – Bucharest, Romania.

Vasiljević, Z., Subić, J., Cvijanović, D. (2009): „Coopération régionale transfrontalière dans le domaine du développement rural multifonctionnel". Les Annales de l'Université Valahia de Targovişte Section: Sciences Economiques, pp. 137-142, ISSN: 1453-820

THE FUTURE ROLE OF AGRICULTURE IN MULTIFUNCTIONAL RURAL DEVELOPMENT

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Abstract: This paper is focused on analysis and evaluation of the future role of agriculture in multifunctional rural development in Ukraine and also reviewing of the significant basic factors which have influence on it.

Key words: multifunctionality, rural development, agricultural potential, Ukraine

Introduction

Multifunctionality has progressively become a central component of modern agriculture. Multifunctionality in agriculture is generally defined as pointing to the benefits of farming rather than just producing food. Some of these benefits include but are not limited to the increase of food and environmental quality, production of bio-energy, facilitating recreation and tourism, and sustaining a viable habitat for animal welfare. Proponents of multifunctionality also purport that it also is responsible for shaping the landscape and positively effects social and cultural systems. In essence, a combination of all these benefits fundamentally contributes to a country's economic growth. It has not been long since this concept was introduced in the country, yet, it quickly found numerous followers. In order to discuss the role of agricultural multifunctionality in the rural development, it becomes imperative to discuss its three main dimensions, namely economical, social and environmental. The economical aspect of the agricultural multifunctionality embraces the characteristics of Ukraine's current agricultural status.

Results and Discussion

Ukraine occupies an area of 603,67 square km and is one of the largest European countries being the home to 46,2 million people. Ukraine is a land of wide, fertile agricultural plains, with large pockets of heavy industry in the east. Ukraine's agricultural sector represents an essential part of the country's economy. Throughout Ukraine's history agriculture has played a dominant role in the development of rural areas and in the shaping of rural landscapes. After the collapse of Soviet Union, the situation in the Ukrainian economy as well as in the agriculture started worsening from year to year, which resulted in weakening of Ukraine's leading position on the world agricultural arena and in the lost of its huge profits gained due to the effective development of agriculture. Ukraine lost a lot of effective production technologies during 1991–2006, what made a negative impact on the development of the country's agriculture and economy in general. However today, agriculture still remains a key economic activity and vital aspect of the creation of wealth and employment in many rural areas.

Ukraine possesses a significant amount of arable lands and therefore the majority of the national lands are suitable for crop production. Arable lands account for more than half of Ukraine's total land area *(Table 1)*. Of this, agricultural land covers approximately 69% or 41,7 million hectares of its territory. The largest areas of agricultural lands are concentrated in the Central and Southern parts of Ukraine (Chernigiv, Poltava, Dnipropetrovsk, Kharkiv, Zaporizhzhya, and Odessa regions). Taking into consideration that the most fertile black earth covers 60% of Ukraine's area, the land resources represent one of the country's most valuable assets.

Table 1. Land distribution by their type as of January 1, 2008 (in 1000 ha)

All lands, total	**60 354,8**
Agricultural lands, total	42 868,7
Including farm lands, total	41 650,0
Including:	
Arable Lands	32 433,7
Fallow lands	383,9
Perennials	899,0
Hayfield lands	2 419,8
Pastures	5 513,6

Source: Ministry of Agrarian Policy of Ukraine

Through the property ownership reforms in the 1990s, the ownership rights of smaller lands farmed by large collective farms had to be returned to its local rural residents. However, the majority of these local residents faced some difficulties

and was neither ready to farm these fragmented farmlands on their own because of financial constraints nor were they able to unite and form a more powerful business structures. Hence, farming of the lands was done on the basis of land lease meaning smaller farms were mainly rented to companies delegated on the basis of the former collective farms. Today, large agricultural enterprises comprise a higher percentage of arable land than compared with smaller individual farm households. These individual farms use substantial portion of its land for hay production and for orchards. The structure of current land use in Ukraine is shown in *Table 2*.

Table 2. Farm Land Use as January 1, 2009, (in 1000 ha)

	Farm lands	**Including arable lands**
Total Ukraine	42 844,8	32 473,4
Including:		
Rural residents (individual households)	15 604,0	11 374,6
Agricultural enterprises	17 252,2	15 695,4
Private family farms	4 031,9	3 817,0

Source: State Statistics Committee of Ukraine

According to the data of Ministry of Agrarian Policy of Ukraine, in 2007 over 14,9 thousand agricultural enterprises of various organizational forms were engaged in the economic activity, among them were 7,4 thousand economic partnerships, 4,2 thousand private enterprises, 1,3 thousand production cooperatives, 0,36 thousand state enterprises, 1.6 thousand enterprises of another incorporation forms. To assure equity and enforcement the functioning of those entities is regulated by the Law of Ukraine "About Economic Partnerships", "About Agricultural Cooperation", "About Enterprises" and by the number of the other legislative acts. These agricultural enterprises retain 17,5 million agricultural lands for their use, mostly attracted through lease of the peasants' land shares. If classified by the area of land use, agricultural enterprises remain the largest of all agrarian entities. The average land use size in one enterprise constitutes 1200 hectares. Additionally, during the years of reforms farms have become an integral component of the rural economy. Organizational and legal principles of their operation are regulated by the Law of Ukraine "About Farming Enterprises" (2003). At present the number of farmers in Ukraine approximates to 135 000 persons. 43 thousand of farms plant about 3,7 million hectares of agricultural land. On the average, one farm cultivates 85 hectares and 50,4% of farms cultivate the areas of more than 500 hectares.

Currently, Ukraine contains nearly five million individual peasant households which operate nearly 15,7 million hectares of agricultural lands. Individual households have become a stabilizing factor of employment for persons leaving agricultural enterprises. The number of persons involved in individual households reaches 3 million people. Individual peasant households started an effort at revitalization after the CMU Decree "About Land Plot Privatization" which was approved in 1992. Prior to this Law, land plots were transferred for free into private ownership in order to run individual households. Maximal size of such plots was increased to 2 hectares. Further expansion in size of such households was affected through the addition of land plots received as the land shares during reformation of collective agricultural enterprises. Organizational and legal framework for individual peasant household operation is regulated by the Law of Ukraine "About Individual Peasant Households" (2003).

All these agricultural organizational entities face a challenge to operate efficiently based on the outdated agricultural infrastructure. However, there have been some progress on their pace of improvement the technical base of the Ukrainian agriculture. Agricultural enterprises are gradually increasing investment into fixed assets, thus outrunning the industry sector and the economy in the whole by the increment rate. Although the portion of buildings, structures and transmitting devices in the agricultural fixed assets has decreased, the portion of modern machinery, equipment and means of transportation has grown. Thus, the Ministry of Agrarian Policy of Ukraine provides the following information: in 2007 the stock of machinery and tractors in agricultural enterprises contained 182,5 thousand of tractors (10 pieces per 1000 hectares of arable land); 44,3 thousand of grain combine harvesters (4 pieces per 1000 hectares of grain crop acreage without corn); 7,7 thousand of beet harvesters (15 pieces per 1000 hectares of beet crop acreage); 4,2 thousand of corn harvesters (7 pieces per 1000 hectares of corn crop acreage). Power capacity in agricultural enterprises reached nearly 5932 million h.p. (322 h.p. per 100 hectares of crop acreage). Individual farmer and other households due to their smaller production volumes possess less machinery, namely 150,1 thousand tractors and 16,5 thousand harvesters.

The labor force in the Ukrainian agricultural accounted for 3,6 million people in the year 2007. The number of farmers approximates to 135 thousand persons and those, involved in individual households reaches 3 million. However, Ukrainian farmers play far more important role to Ukrainian society than just work in within the agri-industrial complex. Sometimes farmers are considered to be the

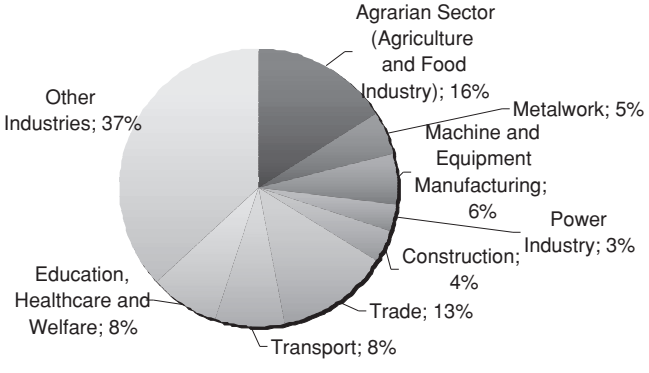

Figure 1. Agrarian Sector in Gross Domestic Product (GDP) of Ukraine
Source: Ministry of Agrarian Policy of Ukraine

guardians of rural customs and traditions and of an age-old way of life. The rural customs and traditions continue to be passed on to future generations through the farming population, but they can also be perpetuated through clubs and cultural associations whose non-farm members share a profound appreciation of traditional rural values.

Ukraine's agricultural sector makes a significant contribution to the national economy. The input of agri-food sector to the GDP equals to such important industries as metallurgy, machine building, power and construction all together *(Figure 1)*.

During 2007 agrarian enterprises paid taxes and dues to the consolidated budget totals 10.4 billion UAH or 2,2 times more in comparison with 2000. In particular, agricultural sector revenue was almost 1.4 billion UAH or 2,4 times more than the figure of 2000.

Introduction of market changes to the Ukraine's agrarian sector had a positive impact on the dynamics of the country's agricultural production. Since 2000 in all categories of agricultural entities a gradual increase in the gross output volumes of agricultural production had been observed *(Figure 2)*.

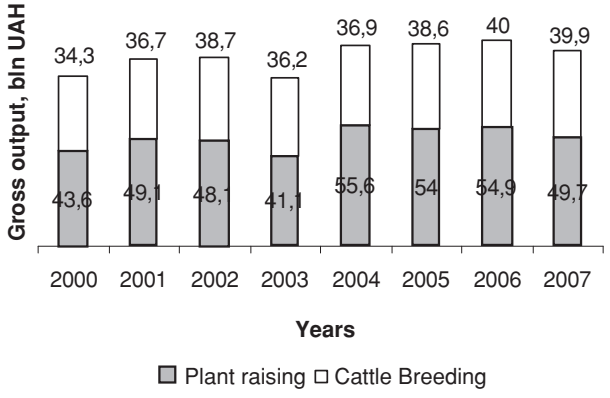

Figure 3. Gross Output of Agriculture, bln. UAH (against the 2005 prices)
Source: Ministry of Agrarian Policy of Ukraine

As previously mentioned, in 2008 the volume of agricultural production has slightly increased in comparison with the previous years and reached 150,8 billion UAH. Gross output of plant crops is provided by agricultural enterprises and individual households in the proportion 1:1,2 and more. Agricultural enterprises are the major supply forming subjects at the grain, sunflower and sugar beet markets, while individual peasant households prevail at the potato, fruit and vegetable markets. In 2000–2006 over 70% of cattle breeding products were provided by individual peasant households. They play the leading role in supply formation at the milk, beef and pork markets. At the same time, production balance between individual households and agricultural enterprises is gradually changing in favor of the latter. In 2007 agricultural enterprises increased manufacturing of cattle breeding products by 7,1%, while individual households reduced the production by 7,3%. Agricultural enterprises account for nearly 70% of the poultry meat production. The reason is the increasing importance of the agricultural production effectiveness and its innovative character. Thus, in 2008 in the agricultural enterprises of all types of ownership the volume of production has increased for 1,5%, and in the individual farm households – decreased for 1%. Regardless of the numerous positive figures in the preceding examination, in the time of current economical crisis, the agri-industry needs state support even more than before. Ukrainian agriculture enjoys a significant fiscal support from the state coming in a form of Budget expenditures and Tax expenditures (tax privileges, tax arrears, and tax write-offs).

The current trend shows agriculture is growing in terms of government expenditure and industry revenue.

The total fiscal support to agriculture and rural areas grew almost threefold, fluctuating around 2% of Ukraine's GDP. This figure has been much higher in Ukraine, since significant non-fiscal measures benefit domestic agricultural producers as well. In the 2007 budget of Ukraine financing of agriculture grew 2,8 times in comparison with 2003 and constituted 4,5 billion UAH. From this amount, nearly 812 million UAH were forwarded to maintain educational institutions and 97,2 million UAH to carry out scientific researches *(Table 3)*. Within 2008 state support measures will become more sophisticated in line with the WTO requirements; however this will not impact negatively the total scope of support.

Table 3. Financing by the State Budget from the Ministry Expenses in 2003–2007, mln. UAH

Expenses	2003	2004	2005	2006	2007
Ministry of Agrarian Policy total	2291,8	2476,0	4887,3	6278,3	7952,0
including:					
Agriculture	1608,9	1614,4	2246,0	3057,9	4556,1
out of them:					
Support to manufacturing products of cattle breeding and crop planting		540,5	753,1	2017,0	2313,0
Financial support to agribusiness through cheap loan mechanism		95,4	415,1	333,5	551,3
Education	270,8	341,2	523,3	667,4	811,8
Science	281,5	20,9	56,5	63,5	37,6
Other directions	130,6	499,5	2061,5	2489,5	2546,5

Source: Ministry of Agrarian Policy of Ukraine

The Ukrainian government provides financial support to the agriculture in other forms of direct and indirect subsidies. According to the existing in Ukraine practice the country, Ukrainian's government provides its support to the agricultural producers in different forms. An additional form of state support to agriculture come as a state financing of land plants development programs, cattle breeding and live stock breeding programs, fishery development programs, reclamation projects development and environmental

programs, financial support to agricultural producers through special loans, gardening sector support programs, veterinary development and safety protection programs, agricultural science development, rural infrastructure development, rural sector's social infrastructure development programs, programs on support to producers of agricultural equipment, etc. Clearly, many of these traditional items, which are included into the list of the supporting measures, cannot be considered the agricultural subsidies. For example, rural infrastructure and social development programs as well as agricultural science development programs cannot be considered as those agricultural subsidies. However, other subsidies can be the subject of such agreement. In any case, it's crucially important to know the existing in Ukraine structure of state financial support to the agricultural sector with a breakdown on specific measures, in which this support is directed.

The total agricultural budget expenditures (TABE) are allocated through different ministries, e.g., Ministry of Agrarian Policy, Ministry of Finance, State Committee for Land Resources, etc., are the main source of direct and indirect subsidies. These monies grew from 1,47 billion UAH in 2002 to the planned UAH 6,68 billion for 2006. At the same time the share of TABE in total budget expenditures has been growing from 3,3% to 4,9% over 2002-2006. If we compare the dynamics of both types of expenditures to 2002 benchmark then total budget expenditures grew by 3,1 times in 2006, whereas TABE grew by 4,5 times over the same period. The ratio of tax proceeds from agriculture to TABE shows that the agriculture sector received almost two times more from the budget than contributed to it, which together with significant tax expenditures creates an imbalanced tax burden on Ukrainian economy, thus potentially decreasing whole economy competitiveness.

The highest weight in the total structure of the state support to agricultural sector has land plants development programs, which obtains 16% in the total amount of support. Those items, which are not subjects to the WTO regulations reclamation projects development and environmental programs – 12%, programs on support to producers of agricultural equipment – 9%, rural infrastructure development – 9%, agricultural science development – 6%, veterinary development and safety protection programs – 3%, rural sector's social infrastructure development programs – 2%. All in total the non-related to WTO restrictions items accounts to some 41% of the total amount of subsidies coming to the Ukrainian agriculture. As on the state of 2004 the absolute amount of money, which was transferred for these six items accounts to around UAH 2 billion (USD 394 million), while the rest of the items, which can be considered as related to the WTO agreement items, was UAH 3,1 billion (USD 584 million).

Analyzing planning and execution of the state support programs over several years, one would definitely observe some important facts, revealing problems with budget expenditure planning. The existence of a particular program in a state agenda is not sustainable and lacks continuity. This reveals that Ukrainian government and Ministry of Agrarian Policy in particular do not have a long-term strategy for use of the budget funds on agricultural and rural development, which reflects that Ukraine does not have any officially adopted strategy of agriculture and rural development yet. Budget programs are often underfinanced and not uniformly distributed over the whole year. This lack of strategy and erratic expenditures pattern makes long-term investment planning for agricultural enterprises in the sector very difficult and increases entrepreneurial risks.

However, the amount of agricultural subsidies to the Ukrainian producers (i.e., farmers) was rather virtual than real one. These were not transfers of the financial assets from the state budget to budgets of the producers. Although the state budget has been fixing the certain funds to be transferred as an agricultural subsidy it was almost never transferred to the final recipients (i.e., agricultural products producers) in a full amount. Final recipients of the agricultural subsidies were able to receive only a certain portion of the planned amount of subsidy. According to the data of the Ukrainian State Statistical Committee in 2001-2003 the average annual arrears on agricultural subsidies accounted some 36% of the planned amount of subsidy. This reflects the low level of fiscal discipline, which exists in the country and lack of financial resources, which government was planning to spend for subsidies.

Tax privileges remain one of the most used forms of Ukraine's state support to agriculture. They are huge compared to other sectors, exceeding even budget expenditures, should have compensated the lack of funds in a budget. However this was not the case. A bulk share of Ukrainian tax expenditures is excluded from WTO domestic support reduction commitments, meaning the absence of external leverage to eliminate them. Since the agrarian lobby is considerably strong in Ukraine, it is very likely that tax privileges for agriculture will persist in the future. Unfortunately, agriculture contributes much less to the budget than it gets from it, thus creating a tax burden bias in Ukrainian economy. Fiscal support, from an economic point of view, should leverage government policies to increase productivity and competitiveness of the agriculture and food value chain. If the efficiency of fiscal support is neglected and dominated by the influence of particular lobby groups in specific sub-sectors, the impact of fiscal support can become negative. Relying heavily on different production subsidies, however the Ukrainian government ignores efficiency and productivity as an objective for agricultural policy. Instead, the government pursues the goal of food self-sufficiency by increasing output utilizing high subsidies, import tariffs and non-tariff barriers. Therefore policymakers try to sustain existing farm structures and procedures of granting aid and tax privileges to producers. Fiscal support is designed so as to stimulate large agricultural producers, for whom it is much easier to get financial assistance from the budget than for private farmers, for example. Finally, agricultural policy makers implicitly rely on agricultural producers in providing social services in rural areas and their development, thus delaying structural reforms in the sector.

The next point which should be outlined within this paper is Ukraine's agricultural production and trade during the period of increasing world food prices, or in other words, in the frameworks of global financial and economic crisis. The world food crisis both poses challenges and presents opportunities for Ukraine. The solution to the challenges lies in the appropriate macroeconomic policies and targeted social support, not in the interventions on the food market. Measures to protect the poor and vulnerable from the food price increases need to be separated from agricultural market policy, so that Ukraine can seize the emerging opportunities:

An appropriate agricultural policy framework and public investment program would provide incentives for private investments so needed to build Ukraine's export-oriented and competitive agriculture sector. An increase of productivity in agriculture would also make Ukraine less vulnerable to possible low harvests. Ukraine's accession to the WTO and the beginning of negotiations on a free trade agreement with the EU provides key impetus to the required reforms, and the Ministry of Agricultural Policy of Ukraine has already taken several initial steps.

Some key reform and investment areas include:

- trade policies (including refraining from export restrictions);
- transportation, storage;
- market information infrastructure and agricultural statistics;
- institutional framework for land market;
- access to finance and risk management instruments;
- research and extension, and vocational training of agricultural specialists and farm managers;
- veterinary and food safety control system compliant with regulations in target markets.

The negative impact of the increasing domestic food prices as a result of global food crisis should be cushioned by targeted social assistance programs, complemented with tighter macroeconomic management to reduce overall inflation. Ukraine already operates a number of targeted social transfer systems that are quite efficient at identifying and supporting the most vulnerable subjects. For instance, the "last resort" program for the very poor has a targeting efficiency of 73% among the poorest population. Support to single mothers and to young (0-3 years) children is also effective. These programs could be scaled up to support those most affected by rising food prices. This would be cheaper and more sustainable than the blanket increases in all social payments implemented in recent years. At the same time, numerous benefits that do not effectively target the poor, such as housing subsidies, could be scaled back.

In order to help national economy to overcome the crisis, the Ukrainian government created a number of state programs that support the agricultural sector. Some of these programs are briefly discussed next.

The Government of Ukraine has established a program for the 'Agroindustrial Complex and Development of Rural Areas' which, if implemented, would make a significant contribution to escalate the sectoral competitiveness and reduce disparities between the rural and urban areas of Ukraine. This program is based on the three pillars: rural development, competitiveness of agriculture, including quality and safety issues, and natural resources management and environmental sustainability. It includes provisions for the improvement of social and physical infrastructure in the rural areas of Ukraine, for the development of key markets associated with agriculture (finance, land, insurance), for the adoption of international food safety and quality standards, for a transition to efficient mechanisms of state support (decoupled payments), and for enhancement of efficiency in agricultural based on innovations and knowledge transfers.

On the other hand, the Ministry of Agricultural Policy of Ukraine has prepared an advanced draft of a national program for rural development until 2015. Citing relevant laws such as the Law of Ukraine "On basis principles of national agrarian policy for the period until the year 2015", the Law of Ukraine "On state support for the rural economy of Ukraine", and the Law of Ukraine "On the priority of the development of rural space and agro-industrial sector in the national economy", MAP has prepared a detailed draft of a national program aiming at improving Ukraine's competitiveness on domestic and foreign markets, ensuring food security for the country, and the preservation of rural way of life and peasantry as the carrier of Ukrainian identity, culture, and spirituality.

If implemented effectively and timely, the above mentioned measurements can create favorable conditions for the recovery of both the agricultural sector and the national economy as a whole. But there are still some other factors which should be taken into consideration in order to fasten the process of the economic revival in Ukraine.

First of all, public and private investments are particularly needed to improve the efficiency of the marketing systems of agricultural products. Even if spreading of excessive price on agricultural goods due to export restrictions was completely eliminated, farmers in Ukraine would still get less for their products than their counterparts in other countries because of the high marketing costs.

Another policy priority is a completion of institutional arrangements for the property rights registration (including land) and removal of the moratorium on land sales. Land purchase and sale would not lead to rapid, dramatic changes, but it would set in motion a virtuous circle whereby the availability of collateral increases investment and productivity in agriculture, which in turn leads to the increase in land values, which makes yet more collateral available, and so on. It would also, together with the enforcement of bankruptcy procedures in agriculture, increase the pressure on less efficient farmers to leave production and make the resources that they have been using poorly available to other more efficient farmers. One of the largest handicaps that Ukraine's agriculture has to face is the persistence of a very high proportion of highly inefficient farms, many of which are subtracting rather than adding value as they produce.

Compliance with international quality standards will be critical for Ukraine's further integration into the global

economy. Ukraine has recently completed its lengthy negotiations on WTO accession, and has entered into negotiations with the EU on a free trade agreement (FTA). The extent to which Ukrainian agriculture benefits from WTO membership and a FTA with the EU hinges on its ability to comply with international quality standards. For example, Ukraine is currently able to export most livestock products (meat, milk) to only a small number of mainly former Soviet countries. If agronomic practice and product quality do not comply with market requirements and internationally recognized guidelines and standards, it will result in the lower quality products for domestic consumers (food safety), delays in completion of trade agreements, and in the inability to access to high-quality-high-price foreign (and domestic) markets.

The Ukrainian government has also to revise country's handling, storage and transportation infrastructure. Ukraine's agricultural market and supply chains continue to be characterized by significant post-harvest losses, high transaction costs, and in transparent price formations due to the information asymmetries. This leaves producers with unnecessary unfavorable deals and limited marketing options, causing further low farm-gate prices and hence creating disincentives for private investments in agriculture. It also increases consumer prices. Public investments, especially in to the infrastructure with public good characteristics, such as road and rail networks, waterways, can intensify the competition by reducing regional market power, and therefore can act as an important catalyst for private investment in other links of the supply chain. For example, incentives to expand on-farm storage capacity (which would enable farmers to avoid being forced to sell products into the post harvest glut markets) depend on reliable, low cost transport channels to more than one possible purchaser.

And finally, Ukrainian agriculture urgently needs centers of excellence in higher education and research to produce future agribusiness leaders, analysts and experts in administration, who will form the human resources needed to ensure the steady growth of Ukraine's agroindustrial complex and its economy as a whole.

The characteristics and issues of the Ukraine's agricultural sphere described its economical role in the multifunctional rural development. The next dimension of multifunctionality is presented by the social function of agriculture. Despite numerous positive trends in the economic matters of agriculture, the examination of its social aspect revealed a number of problems that rural areas are facing today. Regardless of the general positive tendency of increasing wages and reduction of the poverty in the entire country, rural areas remain the milieu with the highest level of poverty. This fact presents a real problem for the country, since more than 30% of the Ukrainian population permanently lives in the countryside *(Table 4)*.

Disparity in the material status of the rural residents is best uncovered by their expenditures. Thus, in 2007 total consumptive spending of one rural resident were 20,1% lower than those of an urban resident and accounted for 566,92 UAH per month (in comparison to 709,95 UAH similar spending of urban residents).

Table 4. Correlation between the urban and rural population in Ukraine in 2005–2009

Year	Urban Residents		Rural Residents	
	mln persons	%	mln persons	%
2005	32,0	67,7	15,3	32,3
2006	31,9	68,0	15,0	32,0
2007	31,8	68,1	14,8	31,9
2008	31,7	68,3	14,7	31,7
2009	31,6	68,5	14,6	31,5

Source: State Statistics Committee of Ukraine

After 9 months of 2008 the average total spending of a rural resident was still lower than its equivalent of an urban resident, and reached 2203 UAH against 2743 UAH, which is 19,7% difference. Life conditions in the rural areas are also complicated by the absence of necessary road network and telecommunication systems (more ¼ of the rural settlements do not have bus stops, only 44,5% have asphalt roads, only 7,3% have street lights); appropriate water supply (134,3 thousand rural residents do not have permanent access to water), few social-cultural entities (70,3% of villages do not have kindergartens, 51,1% – schools, 58,8% – post offices, 33,2% – hospitals). During the years of administrative economy agricultural enterprises were responsible for development and functioning of the social infrastructure objects. Today mission of these enterprises that are participants of market relations does not include protectionism of the social sphere. However, satisfactory condition and availability of social sector would have fostered development of commercial activities in the rural areas, improved socio-demographic situation, etc. Problems mentioned above caused another negative tendency in the rural area which is the ongoing shrinkage of the number of rural settlements. In the beginning of 2006 there were 28,57 thousand villages in Ukraine. 227 of them, which is 0,8% from the total amount, did not have any population left. Quantity of the rural communities with population less than 50 persons accounted for 13,8% of the total amount. Therefore, rural areas in Ukraine have traditionally been associated with underdevelopment and backwardness. A major share of young rural generation strives to migrate to urban areas in pursuit of a "better life" in the form of better facilities, social and physical infrastructure, etc.

The next component in analyzing the social status of Ukraine's rural areas is to describe major trends in the rural employment. As indicated in Table 5, a significant share of the rural population is engaged in agriculture (about 10%), but approximately the same share is employed in non-farm sector (education, healthcare, extracting industry, etc). On the other hand, approximately 71% of the rural population is non-employed. These include those seeking work but not able to find it (unemployed), pensioners, pupils, students etc.

However, one should take into account the specifics of rural life in Ukraine. Most rural households, including those involved in nonfarm sector, tend to spend a considerable amount of time on subsistence or subsidiary farming as well. For example, rural, households produce about 2/3 of Ukraine's total raw milk production. Moreover, according to official statistics, households produce about 60% of the gross agricultural produce of Ukraine. The rural non-farm employment profile is more or less similar across all regions.

Table 5. Sectoral profile of rural employment of primary occupation in Ukraine, 2004,%

	Branch of activity	Ukraine	West	North	Center	South	East
Self – employed	Agriculture	9,27	4,76	11,09	9,92	13,58	10,48
	Fishery	0,11	0,09	*	0,03	0,16	0,23
	Extracting industry	0,50	0,38	0,25	0,40	*	1,82
	Processing industry	2,12	2,63	2,46	2,07	0,83	2,05
	Electricity, gas and water supply	0,62	0,71	0,86	0,58	0,42	0,89
	Construction	1,55	1,68	1,28	0,99	2,56	1,29
	Whole- and retail sale	1,95	1,74	2,43	1,65	156	2,65
	Hotels	0,25	0,39	*	0,33	0,29	0,18
	Transport and communication	1,60	1,11	2,64	1,84	1,67	1,52
	Finance	0,13	0,12	0,15	0,04	0,25	0,15
	Real estate	0,04	0,05	*	0,10	0,03	0,07
	State government	2,07	2,56	1,91	2,53	1,71	1,79
	Education	3,83	4,05	3,59	3,35	4,29	3,22
	Healthcare	2,05	1,96	3,17	2,08	1,85	1,73
	Public services	0,45	0,55	0,29	0,37	0,86	0,13
	Servants	0,01	0,03	*	*	*	*
Non-employed (pensioners, pupils, students, unemployed, children, etc)		73,43	77,07	69,85	73,71	69,94	71,76

Note: * no records

Source: Calculation of Institute for Economic Research and Policy Consulting in Ukraine on the basis of household survey conducted by the State Statistics Committee of Ukraine in 2004

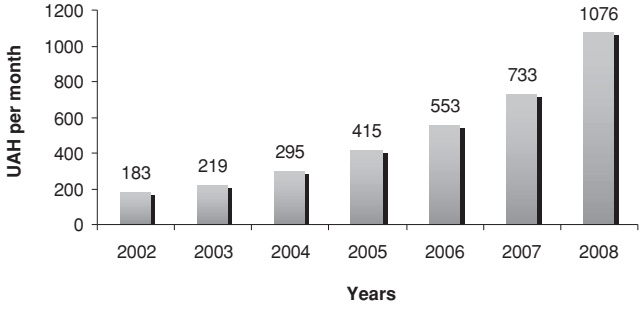

Figure 3. Dynamics of the average monthly salary of agricultural workers, UAH

Source: State Statistics Committee of Ukraine

The most popular sectors, in terms of rural employment, are the food processing industry, wholesale and retail trade, transport and education. The relative importance of employment in agriculture largely reflects the degree of regional agriculture specialization. For example, in the leading Southern and Eastern regions higher percentages of the rural population are employed in agriculture than in other regions.

Agricultural production in Ukraine remains the economic activity with the lowest level of wages. According to the information of the Ministry of Agrarian Policy in January – November 2007 average monthly salary of an agricultural worker account 712,2 UAH or 54% of the average salary rate among all sector of economy. In 2008 it did grow for 95%, but stayed among the lowest if compared to the other industries *(Figure 3)*.

Taking into account the fact that the majority of rural inhabitants are employed in agriculture, low wage together with other economic factors, such as high unemployment, poor living and working conditions, appear to be the key factor which forces them to look for a better place of work not only in urban areas of Ukraine, but also in foreign countries. The official data provided by Ukrainian Ministry of Statistics has proved this fact, indicating that net migration is positive only in urban areas while it is very negative in rural ones *(Figure 4)*. In 2007, for example, migratory growth in cities and towns was equal to 0,3 people per 1000 inhabitants whereas the number of dwellers in countryside decreased by 1,7 per 1000 population due to intensive external migration.

Realizing the importance and depth of the aforementioned issues, Ukraine's government makes an effort to revitalize the area and help its dwellers through its policy and programs.

Thus, state policy in social and economic development of rural settlements includes such objectives as promotion of policy implementation for integrated development of the rural locality by means of close cooperation between governmental agencies, local self-governments, rural communities, NGOs and private sector. Ukraine's authorities try to introduce mechanisms for partnership and support to rural social area development by the state and

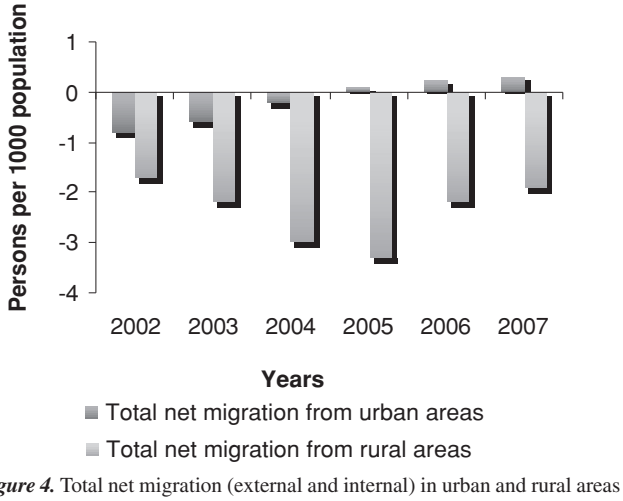

Figure 4. Total net migration (external and internal) in urban and rural areas of Ukraine (persons per 1000 population)

Source: State Statistics Committee of Ukraine

local budgets, enterprises and organizations located within the rural territories, in line with the programs of community social and economic development. The government also strives to improve the quality of life in rural localities, personal enhancement by approximating the quality of education, medical and cultural services, living conditions and rural infrastructure to the urban one. Government's expenditures on rural development in includes following several state programs, managed by Ministry of Agrarian Policy of Ukraine and other ministries: state privileged crediting of individual rural builders; restructuring and development of public utilities in rural areas; development of physical training and sports among rural population; investments in health-care institutions, gas supply networks, roads, seaports, development of financial services in rural areas, etc.

And the last, but not less important issue to be discussed in the framework of multifunctionality is the environmental status of Ukraine's agriculture. The natural conditions and climate in Ukraine are fundamentally favorable to agriculture. Ukraine's soil is widely recognized as a major national asset thanks to its tremendous fertility and outstanding agricultural qualities. According to data compiled by the State Committee for Statistics, agriculture currently occupies 72% and forests 17,2% of the total land area (60,4 million ha). However, the Ukraine is one of the countries that exemplify the seriousness of land degradation in the region as described in the Regional Implementation Annex for Central and Eastern Europe, of the Convention.

During the era of the Soviet Union, the mass intensification and expansion of agriculture resulted in soil degradation. In 1998 changes took place in the structure of land resources. In comparison with 1997, the area of arable land decreased by 27800 hectares, with the area of tillage being reduced by 223400 hectares. While some of these changes are the result of expansion of previously planted protective forest plantations and strips, silt-catching basins and river-bank reinforcements, most of the change has occurred due to the change of ownership and abandonment of previously intensively-tilled agricultural land. Through this, the redistribution of land has contributed to a considerable decrease in the amount of land conservation and restoration activities in the last decade. The ecologically sound proportion between areas of arable lands, pastures and forests has been neglected. Low productive plots, including river meadows, marginal lands and slopes were reclaimed into crop production without proper fertilization and up-keep. Anti-erosion measures, such as planting shelterbelts and terracing slopes have been almost non-existent in the last decade. The amount of irrigated lands has been decreasing due to the difficulties in their maintenance. With no recultivation and gradual deterioration of soil and water conservation systems after a long span of unsustainable practices, agricultural land faces a crisis with intensified erosion, nutrient depletion and loss of protective forest coverage. The annual rate of soil dehumification in Ukraine runs as high as 0,6 to 1,0 thousand hectares, and the eroded land area measures now 40% of the total territory. Up to 500 million tons of soil are washed from hillsides annually, which results in the loss of 11 million tons of humus, 500 thousand tons of nitrogen, 400 thousand tons of phosphorus and 700 thousand tons of potassium. The average annual rate of increment of eroded area is 80 thousand hectares. The negative balance of the soil nutrition elements reaches 100 kg per hectare and more, and nearly all the tillage soil is over-condensed. Serious concern arises from the fact that in some regions soil does not receive enough important microelements such as molybdenum, manganese, and iodine. The total environmental and economic damage is estimated at about 4 billion USD.

Another major concern of the environmental aspect of agricultural multifunctionality is the use of fertilizers in agriculture. In Ukraine the level of their use started to increase from the mid-1960s onwards. During the period from 1966 to 1970 an average of 1,4 million tonnes (or 46 kg/ha) of fertilizers were applied annually. In the second half of the 1980s this figure reached 4 to 4,7 million tonnes of fertilizers. The increase in the application rates of mineral fertilizers influenced favorably the yields of agricultural crops. After the collapse of the USSR, state financing was reduced at the time because of a general crisis in the Ukrainian economy. Private investment became the source of finance for fertilizer manufacturers. The exportation of fertilizers was the only means of covering the cost of reconstruction of the enterprises, due to the insolvency of the agro-industrial sector in Ukraine.

According to the official statistics, fertilizer consumption fell from 4,2 million tonnes of nutrients in 1990 (when admittedly fertilizer was excessively and wastefully applied) to 424 thousand tonnes in 1999. There is no shortage of mineral fertilizers in Ukraine and the fall is due to unfavorable economic conditions in agriculture. In 2002, 456 thousand tonnes of mineral fertilizer nutrients were applied *(Figure 5)* or 14,6 kg/ha. This is 28 percent more than in 2000. The present consumption level of mineral fertilizers is very low compared with 1990, particularly in the cases of potash and phosphate. In 2005, nitrogenous fertilizers accounted for 72 percent (in 2000, 80,1 percent) of total nutrient consumption, phosphorus and potash for 18 percent (13,5 percent) and 10 percent (6,4 percent) respectively. In 2004, mineral fertilizers were used on 45,5 percent of the total area under agricultural crops (6,4 million ha), while in 2000 less than a quarter of the sown area was fertilized.

Because of the sharp decline in the quantities of organic and mineral fertilizers applied on the majority of farms in Ukraine, the balance of nutrients has generally become negative. There has been a 5 to 13 fold decrease in the use of organic nutrients, mostly from manure, in the different zones of Ukraine. This has

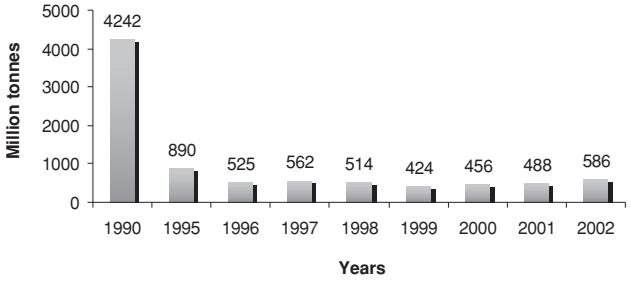

Figure 5. Fertilizer consumption in Ukraine
Source: State Statistics Committee of Ukraine

resulted in a sharp deterioration of the humus balance in the soil. Dehumification is of particular concern in Polissya region, where during the last 10 to 15 years the humus deficit has increased five times. In Ukraine as a whole, the balance of nutrients during the past decade has deteriorated sharply. In particular, the balance of nitrogen has changed from -3,1 to -41,5 kg/ha, phosphorus (P2O5) from +24,9 up to -16,1 kg/ha and potassium (K2O) from -0,5 to -56,4 kg/ha. Besides more than 4 million tonnes of fertilizers, about 175 000 tonnes of chemical pesticides are used annually in agriculture. Of 170 pesticides used in Ukraine, 49 are particularly harmful as highly toxic, supercumulative and stable. However, the tendency towards a decrease in the use of chemicals and an increase in the use of biological plant protection has begun to appear in Ukraine only in recent years. Since the current stage of the development of agriculture in the country is characterized by complications in the ecological situation, the government once again steps in and provides a support for agriculture. Spending on environment protection is precisely determined within the framework of the state programs, e.g. protection and effective use of forest and water resources etc.

Conclusions

Summarizing, it should be said that agriculture remains an important force in sustaining operation and growth of the whole Ukraine's economy. In 2008 this sector alone composed 16% of the Ukraine's GDP and taking into consideration the resource potential of Ukraine's agriculture, it will most probably continue further expansion in the long run. Thus, 18,9% of the total are sod Europe's agriculture is concentrated in Ukraine, including 26,9% of its arable land. According to FAO experts only 40% of agricultural potential in Ukraine is properly used. Specialist from World Bank has also positively evaluated the potential of the country and concluded that Ukraine's agricultural production can be doubled in case of proper management and suitable governmental support.

Hopefully, future growth of the agri-industrial sector, and consequently the increase in the budget sum, will make it possible to foster the development of the infrastructure and social-cultural sphere of the rural areas. Unfortunately, current situation is characterized only by existence of negative trends. Poor condition of streets and roads in villages, insufficient number of schools, hospitals, post-offices, libraries, etc, high unemployment rate and migration from rural areas of Ukraine represent only the top of the list. The condition of the countryside is neglected to a degree, where little improvement can be done without government intervention and financial support. State police should target the maintenance and dynamism of rural communities, since it's basic to sustaining agro-ecology and improving the quality of life of rural residents. Later on, more attention should be paid to social viability, which includes maintenance of the cultural heritage of the rural areas, since numerous societies in Ukraine still identify intensely with their historical origins in agrarian communities and rural lifestyles.

The environmental function of agriculture relates to land use and can have both beneficial and harmful effects on the environment. At this time there is a number of environmental problems observed in Ukraine. Improper use of the arable lands has exhausted them and was followed by soil degradation and its dehumification. These issues are often underestimated due to the large amount of arable lands in Ukraine. However, without accurate land management the country might soon find itself facing food crisis, since one of its major agricultural resources will be devastated.

The relative importance of the three aspects of the agricultural multifunctionality (economical, social and environmental) expressed in the article will depend on the future strategic choices at the local and national levels. Since the multiple functions of agriculture may be relevant at many scales, from local, over national and regional, to global, and operate over different horizons it is extremely important for Ukraine to integrate into global community and incorporate world experience in order to enjoy overall economic and environmental benefits of the country's multifunctional agriculture.

Additional research and analysis needs to be conducted on this subject to allow Ukraine to truly utilize its agri-industrial complex in the most efficient and effective means and aspire to its highest potential. Knowing and understanding the immense benefits of multifunctionality is key, and will inevitably lead to a more successful and prosperous future of Ukraine.

References

Artyushyn V. – Pugachov M.: Підприємництво в сільській місцевості в контексті подолання бідності, Kyiv 2009

Chapko I. – Kobuta I.: Сучасна політика підтримки сільського господарства в Україні, Kyiv, 2007

Food and Agriculture Organization of the United Nations: Fertilizer use by crop in Ukraine, Rome, 2005

Hryvniv L.: Country Report on the Present Environmental Situation in Agriculture – Ukraine. Department of Economics, Lviv State University, 2000

Institute for Economic Research and Policy Consulting in Ukraine: Rural Non-Farm Employment in Ukraine, Kyiv, 2005

Kyzyma I.: Determinants and Consequences of Female Labor Migration from Rural Areas: The Case of Ukraine, Kirovohrad National Technical University, 2008

Nivyevskiy O.: Fiscal Support to Agriculture in Ukraine, Kyiv, 2006

Sikachyna O. – Zhygadlo V.: perspectives of Agricultural Production Development: Ways and Development consequences, August 2007

Strubenhoff H. – Movchan V.: Політика України у сфері сільського господарства біоенергетики та харчової промисловості – дослідження, висновки та рекомендації, Kyiv, 2009

Sviatnenko V.: Ukraine Agriculture Sector Report, Kyiv, 2008

Ustenko O.: Features of the agricultural subsidies in Ukraine. Brandeis University, 2004

STRATEGY FOR SOIL PROTECTION IN CROSS-BORDER REGION OF HUNGARY AND ROMANIA

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Abstract: Within the Hungary-Romania Cross-Border Co-operation Programme for 2007-2013 the University of Debrecen and the University of Oradea is to elaborate a soil strategy for the Nyírség and Bihor Mts region. Project partners expect the strategy will support and strenghten national, regional and local soil policies and contribute to the competitiveness of the region by protecting and developing various soil functions. Project partners also expect to prevent cross-border problems with soil and reduce the competition caused by cost differences. The elaboration of the strategy includes the problems of erosion, deflation, compaction, water-deficiency, inland water-threat, problems induced by the usage of fertilizers, loss and substitution of soil organic matter, amelioration (bentonite, sewage sludge, fermented biogas). Based on summarised data of former examinations and new experiments a concise database will make it possible to calculate and apply the Sustainability Index Model, which may be useful in order to address EU supports properly based on objective calculations, and may be useful to determine the optimal culture. The project also encourages the farmers to keep in mind the cross-compliance, since EU gives financial support to realise sustainable soil strategy based on EU directives. This may enhance the options to initiate the take off of rural areas with shrinking export facilities, to mitigate social tensions and the effect of migration processes.

Key words: ???

Introduction

The European Commission adopted proposals for a Soil Framework Directive under the Thematic Strategy for Soil Protection on September 22, 2006. The comprehensive strategy takes into account all the different functions that soils can perform, their variability and complexity, and the range of different degradation processes, while also considering socio-economic aspects. Hungary-Romania Cross-Border Co-operation Programme for 2007–2013 is based on the results and experiences of the past Interreg IIIA in Hungary and Phare CBC programmes in Romania. The goal is to bring the people, communities and economic actors of the border area closer to each other in order to facilitate the joint development of the co-operation area, building upon the key strengths of the border region. The programme provides for two Priority Axes, such as (i) improvement of the key conditions of joint, sustainable development in the co-operation area, and (ii) strengthen social and economic cohesion of the border area, which reflect the main streams of cooperation. This means, that cross-border region of Hungary and Romania is ahead of the game and establish firm bases for co-operation. The project entitled "Elaboration of a Sustainable Soil Strategy for the Nyírség and Bihor mountain region" is a good example of cross-border co-operation to enhance and realise EU politics. The goal of the project is to elaborate a sustainable soil strategy for two landscapes of different characteristics (hilly region and sandy plains), both with disadvantageous social and physical geographical background in accordance with Soil Framework Directive, COM (2006:232) and Soil Thematic Strategy, COM (2006: 231).

Background to the project

Soil can be considered a partly-renewable resource, as it takes hundreds of years to produce a few centimetres of fertile layer, yet soil degradation is accelerating in many regions of the European Union. Some threats are naturally occurring such as erosion by water or wind. Other soil problems are linked to industrial sites, mining, illegal or poorly managed landfills, sewage sludge, and certain agricultural practices. Some problems are linked to the sealing of soil for housing, roads and other infrastructural purposes, and the effects of floods and landslides. Soil degradation has a strong impact on other areas such as water, human health, climate change, nature and biodiversity protection, and food safety. The soil strategy ensures that soils of Europe remain healthy and productive.

The propose of soil strategy is to establish a common approach across the EU, but leave national governments flexibility to implement this approach in a way which fits local situations best. Public authorities in EU countries will be required to undertake activities to tackle threats such as landslides, contamination, soil erosion, and sealing of soil

wherever they occur, or threaten to occur. Soil Strategy for cross-border region will provide a framework for soil protection of sandy soil and through better organic matter management it will contribute to handle the challenges set by climate change. Soil degradation was identified as a pressure for water quality, but only with respect to erosion and contamination, but relevant information on organic matter decline, deflation, compaction and soil microbiological activities are limited. On the other hand, farmers receiving direct payments in the region are subjects to compulsory cross-compliance standards.

General and specific objectives of the project

The major threats to soil, as identified in the Thematic Strategy for Soil Protection, include: erosion, decline of organic matter, compaction and loss of soil biodiversity. Soil Strategy for Nyírség and Bihor takes into account all the different functions that soils can perform, variability and complexity of soils in the region, and the range of different degradation processes, while also considering socio-economic aspects. The overall objective is the protection of soil and preventing further soil degradation. Technological information is vital in terms of enabling farmers to achieve improved agricultural productivity, to make effective use of the natural resources, increase their income, and produce quality food that is safe, accessible and available to all. The study identifies, describes and evaluates reasons that directly or indirectly contribute to the mitigation of the soil threats and measures taken by the farmers of the Nyírség region under Cross Compliance (CC) to improve the soil management.

The project has three main objectives:

1. The assessment of the soils in the 2 regions, the promotion of mitigating degradation, the enhancement of sustainable land-use, increasing the competitiveness of the 2 landscapes as rural regions
2. Mitigation of soil degradation and enhancement of environmental consciousness due to the soil assessment and better knowledge on driving processes
3. As a result of the above mentioned, the productivity and the competitiveness of the region may improve

As the region is characterised by increasing poverty and high natural reproduction rates, the sustainable management of soils is inevitable to maintain and enhance the subsisting capacity of the agriculture in this rural area, in order to decrease the migration of population masses towards overpopulated urban centres and also to mitigate social tensions. Specific goals include:

Efficient dissemination of results among the target groups

Elaboration of know-how of application of Sustainability Index (SI) Model for the 2 areas
Creation of database serving as basis for the SI model
Creation of maps using SI model for the 2 territories

Better assessment of status and processes of soils in the 2 areas

Databases and maps regarding the present status of soils
Experiments, data and maps of processes on the 2 territories
Optimal soil management and amelioration

Objectives of the project are served by conference, books published for farmers; newsletter published on best management practices. Results and proposals will also be published on the internet. These efforts will contribute to the protection of soils from further degradation, as threats of compaction, nutrient loss, wind-erosion, misuse, water-deficiency etc.

Short summary of the project activities

Elaborating and applying the Sustainability Index Model for the Nyírség: The Sustainability Index Model aims to create variables easily identifiable to allow land use decisions in relation to subsidies and land use policy. It further allows for comparisons between soil cultivation methods, which aids the society to allocate resources to participatory approach based programs, environmental schemes and in policy making. Three factors, Condition (C), Impact (I) and Benefit (B) are weighted on a simple scale from 1 to 5; 1 being positive and 5 being a negative effect of the land use. The current condition of the land is valued using site or land use specific methods (e.g. presence of A horizon, SOM, vegetation cover on rangelands). The impact (e.g. fertilizer pollution, danger of soil erosion) is valued separately and it considers different threats. The benefits of each practice are balanced against needs. Subsidies or aid can be determined and given if the SI meets certain criteria.

Examination and evaluation of the potential deflation in the Nyírség: In the first phase of the work the experts using the results of 50 formerly sampled soils and examining 50 more samples, thus creating a dataset containing 100 samples, undertake to evaluate the potential soil erodibility based on textures, and also to visualize the results on maps of erodibility while enhancing public access to data. Beside creating a map of erodibility based on soil textures (one feature), more sophisticated comprehensive maps – containing few more features influencing the potential erodibility – will also be produced. The investigations include the determination of the critical wind velocity on different dry and wet soils (without vegetation) and on soils with different crops sown. The second-third parts contain field observations and measurements of soil erodibility and wind velocity at sites with different land-use, vegetation cover near Nyíregyháza, Kisvárda and Nagykálló using wind-velocity samplers. These investigations examine the role of shelter-belts of different types. In the 4th part of the investigations we create a database using aerial photographs to map and evaluate the shelter-belts, and try to give proposals for the enhancement and modification of the shelter-belt-system to create a comprehensive system enhancing the efficiency of

the present status. Based on these examinations a digital potential map of erodibility will be composed.

The environmental assessment of the hydrological features of the Nyírség: Experts undertake to digitize data of monitoring wells and to evaluate the results using the created and purchased databases, in order to visualize the results on maps offering greater publicity. The first phase of work includes the evaluation of surface waters, canalisation processes, the capacity and present-day exploitation. The second phase comprises the examination of long-term ground-water trends, types of ground-water oscillations. A series of ground-water maps on the Nyírség is to be created: highest level ever, lowest level ever measured, 10 year averages, average of long-term minimums, average of long-term maximums, oscillation of ground-water levels calculated both on altitude above sea level and on depth measured from surface. In the third phase of our examination we investigate the connection between precipitation, surface water levels and ground-water levels, determining which factor from among the aforementioned 2 has greater influence on the latter at certain terrain types using the methods of mathematical statistics. A special task force will deal with the identification of inland water threat using satellite pictures and GIS methods.

Instruments of sustainable nutrient-management in Nyírség region: The goal of sustainable agriculture is to bring together people and resources, to promote an agriculture that is efficient, profitable, socially acceptable and environmentally sustainable for the indefinite future. The primary objective is to provide a model where the agricultural system and community are taken into account as a whole, in which agriculture is not separated from the natural ecosystem of a region. The most critical challenge is to consider the needs of agriculture and society, and to provide an educational environment for local inhabitants. Developing an appropriate crop rotation scheme is one of the most challenging tasks for sustainable agriculture. Green manure crops play an important role in regenerative soil conservation strategy. Green manure adds organic matter to the soil, assists in dissolving nutrients, brings up nutrients from the subsoil and improves the water holding capacity of the soil. The crop rotation system should improve soil condition by including deep rooted plants and plants with a fibrous root system, to improve the stability of soil aggregates. There is also evidence suggesting that an improved soil structure increases biological activity in the soil and enables plants to utilise soil moisture and nutrients more effectively. Crop rotation can also contribute to soil conservation strategy.

Amelioration of sandy soils in the Nyírség: Our aim is to investigate how the different properties of Nyírség sandy soil under different cultivation influence the quantity of soil microorganisms, quality components of microbes, as well as to the soil biological activities. In the course of laboratory investigation the quantity of total number of bacteria, numbers of microscopical fungi, some important physiological groups of bacteria, as well as some important soil enzymes' activity are in the focus. We investigate the effects of bentonite and bentonite+manure as soil amendments on the physical, chemical and microbiological properties of sandy soil. The bentonite contains high amount of mineral colloids, manure contains high amount of organic matter, so they can be used for amelioration of sandy soil. Fermented biogases will have increasing role in the future in substituting nutrients. Another possibility of supplying nutrients for sandy soils is the usage of compost. Mulch, organic matter, farmyard manure and microbiologically fermented products also have effect on nutrient-supply.

Soil erosion and agriculture on hilly regions: The Romanian project partner will examine the role of erosion on physical features of soils formed on slopes, the role of erosion on chemical features of soils formed on slopes, the effect of soil erosion on the hydrology and water-management of hilly areas. Activities include measuring soil loss caused by erosion, the effect of erosion on the productivity, developing agriculture and the application of fertilizers on mountain regions.

Cross-border impacts

The overall objective of the soil strategy is the protection and sustainable use of soil in Nyírség region, preserving its functions and preventing further soil degradation. Most important direct beneficiaries of the project are local farmers and their organisations were involved in the planning of the project. Indirect beneficiaries are those, who are living in the region and their local communities. Furthermore both countries can be considered indirect beneficiaries, if the results of the project provide possibility to enhance the agricultural capacity of the area, as migration processes (depopulation) and social tensions among the inhabitants will decrease offering a sustainable way of livelihood on the long run.

Despite the increasing soil degradation and its negative consequences on human health, natural ecosystems and climate change, as well as on rural economies, Hungary and Romania has no specific legislation on soil protection. Through its various work programs and activities – like conferences, field demonstrations, and publications – scientists, administrators, policymakers and extension workers in the region are given not only the chance to share and exchange technological innovations in the field of agriculture, but also the opportunity to strenghten international technical cooperation with neighbouring countries. It is the first experiment ever to draw up a sustainable soil strategy based on EU directives, therefore its effect (adaptation) may be borderless. The impacts on soil are also regardless of borders especially in connection with surface, and subsurface waters.

References

1. Communication (COM (2006) 231): Sets the frame of the Thematic Strategy for Soil Protection. EU Brussels, 2006.
2. The proposal for a framework Directive (COM(2006) 232): Establishing a framework for the protection of soil and amending Directive 2004/35/EC. EU Brussels, 2006

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-Stimulating innovation through cooperation
-Improving food safety and quality: policy implications
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