Economic effectivity of fairs –
KAVA Model Testing On Agricultural Exhibitions

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Abstract: This paper discusses the first experiences with the newly-developed KAVA-model. This model works on cash basis and evaluates cash inflow, outflow and Net Cash-Flow (NCF) in connection with four different interest groups connected to the given exhibition. The model was tested on four different exhibitions: Farmerexpo (Debrecen, Hungary) in 2005 and 2006, OMÉK (Budapest, Hungary) from 2005 and Polagra-Farm (Poznan, Poland) 2006. The different fairs can be compared by their relative „economic values" that makes the auditing more reliable.

1. Introduction

Complex economic evaluation of fair and exhibition events is an actual topic in the literature. In the model running are evaluated all stakeholder groups with numerical terms, calculated with cash inflow and outflow categories. The net cash flow calculation gives (in the author's opinion) an economic value. The categories summarized give a so-called complex economic value. A KAVA numerical model was developed to carry out the calculations for the complex economic value of those events.

Fairs and exhibitions belong to the oldest marketing tools. Many authors deal with evaluation of these events, examining them from different viewpoints. In this article a model testing is presented that gives answers about this economic value, by numeric figures regarding the economic effectivity of a fair. In this paper the author presents the practical approach of the KAVA model, using it for assessment of four different exhibitions: Farmerexpo (Debrecen, Hungary) in 2005 and 2006, OMÉK (Budapest, Hungary) from 2005 and Polagra-Farm (Poznan, Poland) 2006.

2. Literature review

Participating an exhibition makes a good possibility for PR, CRM, and Direct Sale purposes, too, because an exhibition concentrates a market, making it similar to a classic free competition. "Notwithstanding the caliber of the topic, the most cited authors in the territory of marketing have no special attention concerning this type of communication and sale and the buyer-seller relationships." (*Narayandas- Rangan*, 2004)

Kotler's (1998) book contains the motivations of the exhibitors as follows: "The participating sellers want to acquire diverse advantages, for example:

- To make new contracts
- To manage existing customer relations
- Introducing new products
- Meeting new buyers
- Further sales to the present consumer public
- The "school" the consumers with printed materials, videos and other audiovisual methods."

Jobber (1999) manages the exhibitions as a part of the communications-mix. He ranks the relative significance of the sales promotion instruments comparing the exhibitions, as follows:

1. Personal sale
2. Information source of industrial trade
3. DM and printed flyers

He differentiates the fair; (concentrated place of the supply of economic sectors where not only information-exchange, but direct sale is allowed), the exhibition (offers the representative supply of one or more economic sectors, gives information, but the sales at the stands is mostly not allowed) based on the MKVSZ formulation (Hungarian Association of Exhibition- and Fair Organizers). (I1)

The objectives for a company participating in a fair can be:

1. Occasion for contacting the market-segments with special interests.
2. Strengthening the brand knowledge and building new relationships.
3. Management of existing customer relationships.
4. Possibility of introducing products.
5. Define the customer needs and modify their demand.
6. Collecting information about the competing market.
7. Market launch by newly developed products.
8. Recruiting wholesalers and/or retailers.
9. Keeping up/ development of the company image.
10. Handling the complaints.
11. Sales.

Tomcsányi (1988) differentiate the fair (market-oriented organizations of one or more economic sectors, organized regularly, on the same place, for professionals); the exhibition, or trade show (they introduce an economic sector for guidance or propaganda, and are opened for the public. The exhibition allows sales of products.) and a historic approach (market, the meeting point of sellers and buyers, which makes the product change possible). This is different from the MKVSZ's formula! He describes the exhibition as a complex advertising space where the product plays the lead. Important factors are hospitality, flyers, information collecting. In his opinion the exhibitions show a lot of common characteristics with the advertising, but belongs not to it.

In his later book (*Tomcsányi – Lehota,* 1994) he describes the exhibition, as a concentrated market, and as a part of the Sales Promotions. Here he typologies the exhibitions and the visitors, too, as follows:

- Buyer, or potential buyer
- "Buyers of buyers" (or end-consumers)
- Influentials (non-buyer, but participant in the buying process)
- Experts (engineers, specialists, etc.)

Their goals can be:

- To come to know new products and developments
- Collecting product and technical information
- Tightening the connection with the sellers
- Getting new ideas

The model of *Spiropoulos* et al. (2006) includes six major event stakeholder groups. These are the "Host organization," the "Host community," the "Co-workers" and the "Event sponsors," the "Media," and the "Participants and spectators" *(See Figure 1).*
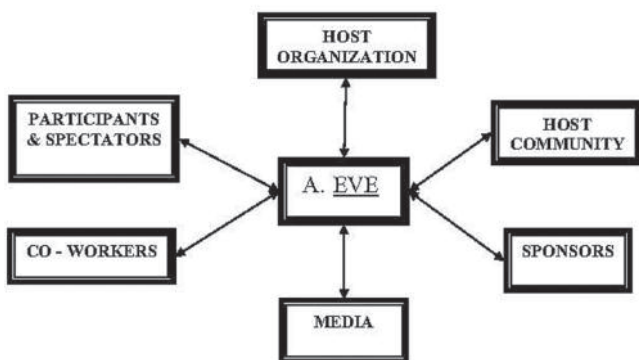

Figure 1. The relation of stakeholders to events.
Source: Spiropoulos et al., 2006. (* "A. EVE" stands for "A.ctual EVEnt")

Getz (2007) and his colleagues summarize the major stakeholder roles similarly to six groups, but different ones, as we can see in *Figure 2.*

The basis for elaborating this model was the one published by *Varga – Karpati* (2006), see in *Figure 3.*, where the authors evaluated the fairs stakeholders qualitatively in a complex way. This article served as a basis for creating the complex economic model of fairs' evaluation that was named as KAVA after the family name of the authors.

Figure 2. Major stakeholder roles
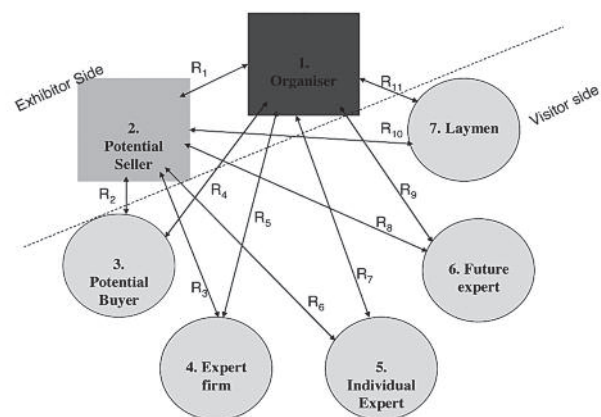Source: Getz et al. 2007.

Figure 3. Relationship Network in the Exhibition Business
Source: Varga-Kárpáti, 2006.

The first step of measuring the economic value of the exhibitions was the calculation of attractiveness radius (*Varga,* 2008) and the modification of this radius (*Karpati,* 2008).

3. MAterials and Methods

The main approach of the KAVA model is to evaluate separately the stakeholders' role of a given fair economically and by summarising them to determine the complex economic value of the fair. The main stakeholder groups in connection with a fair can be distinguished, as below:

- a) organizer
- b) exhibitor
- c) professional buyer
- d) expert company
- e) individual expert
- f) future expert / student
- g) ordinary visitor / layman
- h) region / settlement (the laughing third = beneficiaries of positive externalities)

The list above contains all the stakeholders who somehow are connected financially to a fair / exhibition and that is why their role can be calculated in money terms in

connection with an event. In the KAVA model any stakeholder has three money flow categories, as below:

– money inflow for the given stakeholder, that is called yield value in the model
– money outflow for the given stakeholder, that is called cost value in the model
– net cash-flow, calculated as money inflow minus money outflow, that is called economic value in the model

The task is, therefore, that the yield and cost values have to determine at each stakeholder separately, then to determine the economic value by subtraction. In using the model we have to take into account that there are numerous values that for one stakeholder it means money inflow, but for the other one this value means money outflow. Take the example of the admission fee that is cash outflow for the visitor, but cash inflow for the organizer. Due to this characteristic of the model calculation the yield and cost values are containing accumulations. The way of calculation, namely the subtraction for the economic value, however, filters this accumulation out of the model. In the KAVA model, therefore, the figure of economic value shows the real money value of the fair for a stakeholder group that can be either negative or positive, due to the "net characteristic" of this figure. When we summarize the economic values of all the stakeholder groups by their sign and absolute values, the complex economic value of the fair / exhibition is determined.

In the following points the theoretical method of determination of economic values in case of each stakeholder group is shown.

3.1. Organizer

a) Determination of the yield value
The yield value for the organizer can be determined by addition of the factors below:

– income from the inner and outer space sold
– income from equipment rented out
– income from the admission fee
– state and local subsidization
– collected parking fee
– other cash inflows

b) Determination of the cost value
The cost value for the organizer can be determined by adding together the cost categories listed below:

– cost of the hired space (inner and outer) and the equipment hired
– cost of exhibition construction, such as logistic cost, cost of hired labor and premium wage for the own labor force
– transporting, accommodation and meals for the labor force
– cost of security service
– cost of public utility and other public services
– public relations and promotional cost

– insurance cost
– any other cash outflow connected to the organizational activities

c) Determination of the economic value
As it was shown above, the economic value for the organizer of the fair / exhibition can be determined as a product of yield value minus cost value. This calculation is the same at each stakeholder group, so in the following points it is not further shown in the paper.

3.2. Exhibitor

a) Determination of the yield value
The yield value for the exhibitors can be determined by addition of the factors below:

– average direct sales at the fair
– expected potential sales surplus supposing N years' lasting positive effect of the fair
– potential savings due to the non-executed partner visits (because they are also on the spot in the same time)
– potential savings due to the non-executed competitor visits
– potential savings due to the non-executed visits to neighboring concentrated market-place (replacing effect)

b) Determination of the cost value
The cost value for the exhibitor can be determined by adding together the cost categories listed below:

– cost of the direct sales at the fair
– surplus cost due to the surplus sales as an effect of the fair (see the point above)
– booth and space hiring fee
– cost associated with equipment purchase or hiring
– hired labor cost, premium for the own employees
– labor transporting, accommodation and meals cost
– PR and promotional cost

3.3. Professional buyer

a) Determination of the yield value
The yield value for the professional buyers can be determined by addition of the factors below:

– potential savings due to the non-executed partner visits (because they are also on the spot in the same time)
– value of savings due to special fair's discount
– "professional welfare effect" due to the professional content of the fair

b) Determination of the cost value
The cost value for the professional buyer can be determined by adding together the cost categories listed below:

- traveling cost
- cost of accommodation and meals
- admission fee

3.4. Expert company

a) Determination of the yield value

The yield value for the expert company can be determined by addition of the factors below:

- potential savings due to the non-executed partner visits (because they are also on the spot in the same time)
- "professional welfare effect" due to the professional content of the fair
- expected direct expert income connected to the fair

b) Determination of the cost value

The cost value for the expert company can be determined by adding together the cost categories listed below:

- traveling cost
- cost of accommodation and meals
- admission fee

3.5. Individual expert

The methodology of individual experts is the same as the expert company (4.4.). It is worthwhile to create a new category, however, because the individual experts are generally connected to much less partner than the expert companies.

3.6. Future expert / student

It is a novelty to create this category among the stakeholders since not any publication dealt so far with students of higher education as a separate group. For them the professional experience acquired in the fair can be potentially utilized during their studies that can be materialized as more credits, higher scholarship and as a result of that a potentially higher salary after the graduation.

In the cash outflow side in addition to the admission fee one can count on the traveling and subsistence cost in case of the visiting students.

3.7. Ordinary visitor / layman

The ordinary visitor / layman does not raise any professional question in connection with the fair / exhibition, but he / she visits this event basically for its entertainment value. For them the "money inflow side" can be determined as spending a good free time or enjoying entertainment, this hypothetical value can be compared to the cost of the admission fee. We can create several categories among the laymen from those who like the fair very much and evaluate its entertaining value equivalent 10 times of the admission

fee, until the category where the people consider the admission fee as the money lost. A market research is needed to determine the number of visitors who belong to one of the categories described above. A random sampling is suggested in this case.

The cost value incorporates the admission fee, and the cost of traveling and subsistence.

3.8. Region / settlement (the laughing third)

The title of: "the laughing third" refers the situation that the settlement / region also can make profit from the fair / exhibition, although they do not do too much for the goals of this event. In the following points the main factors to take into account in this case are summarized.

a) Determination of the yield value

The yield value for the region / settlement can be determined by addition of the factors below:

- number of non-local visitors and their average spending
- surplus spending in the hotels including the potential extra "fair rate" in the region
- surplus spending on meals in the region
- surplus tourist tax income
- savings of local promotional cost due to the fair's "piggyback" effect
- potential long-term effect of increased number of tourist and their spending margin in the region

b) Determination of the cost value

The cost value for the region / settlement can be determined by adding together the cost categories listed below:

- cost ratio of the income categories listed above at point a)
- surplus costs in the region in connection with the environment protection, cleaning and security services
- higher surplus in accidents due to the increased number of visitors and the material loss caused by it
- higher criminal activity in the region and the material loss caused by it

4. the observed exhibitions

4.1. Farmerexpo

From the very first moment, FARMER-EXPO has consciously endeavored to create opportunities for widening relations, deepening partnerships, supporting agribusiness sector. In accordance with the description above Farmerexpo provides a forum for all the agribusiness employed, and also for the domestic or foreign companies connected to the agricultural sector to introduce their products and services.

The professional program of the exhibition has been widening year by year. Among the programs there are professional conferences, forums for agricultural experts to collect new, important knowledge, the latest research results and other practical, useful experiences.

The show had been developing dynamically – taking both the net exhibition area and the number of exhibitors into consideration – until 1999, when an other exhibition organizing company got interested in Farmer-Expo.

This fact and the hardenings of agriculture contributed to 30% decrease in the exhibition area and a 20% decrease in the number of exhibitors. In year 2000, the National Agricultural and Food Industrial Exhibition (OMÉK) – held in every 4 year – moderated the interest towards the exhibition, still a 10% increase could have been noticed. In 2001 the net exhibition area increased 40% (from 12.197 square meter to 17.000 square meter), and the number of exhibitors about 12% (from 369 to 412). This growth continued both in 2002 and in 2003. In 2004 expectations in terms of joining the EU and reduction of costs were typical for the companies, that resulted in a small decrease in the number of exhibitors.

The professional programs provide various subjects from business meetings through plant breeding symposiums to agricultural political forums. The Hungarian Animal Breeders´ Association acknowledges FARMER-EXPO as its official live-stock exhibition. Since 1994 – when as first member of the live-stock exhibition the pig appeared – the organizers has consciously broadened the live-stock exhibition year by year. Today 7 species of animals are shown at the exhibition – pig, horse, poultry, cattle, sheep, goat and rabbit.

FARMER-EXPO has been acknowledged as one of the most visited exhibitions. In the last 8 years, an average of 40,000 visitors came to see the four day long event. A considerable amount of visitors (approx. 50%) return to the show every year. The compound of visitors reflect the professional characteristic of the exhibition, since 70% of the visitors have some kind of relation to agriculture. (I2)

4.2. OMÉK

The first Hungarian pedigree animal breeding exhibition was organized by István Széchenyi at the turf, in 1829. The initiative of Széchenyi belongs in historical view to the oldest animal exhibitions, such as "Royal Show" in England, or the exhibition in Bern in 1804. Miklós Szabó reports over 53 rural exhibitions between 1867 and 1909. After the World War I. in 1921 participated Minister of Agriculture Nagyatádi Szabó István and Minister President Teleki Pál. After the World War II the first "bigger" international exhibition was located at the area of agricultural exhibitions in 1971: the I. Hunting World Expo. The OMÉK 1990 was represented by numerous participants of research and educational institutions (*Varga – Kárpáti,* 2007.).

"OMÉK the International Exhibition of Agriculture and Food is the oldest and largest farming exhibition in Hungary. The history of OMÉK begins with the 1896 Millennial Exposition in Budapest when Hungary celebrated its first thousand years. In 2005 will witness the 74th time this event that welcomes both representatives from the field and the general public as well. It will also see the historic first time the exhibition is being held within the European Union.

OMÉK's role has always been twofold: one, to give an account of where the sector has gone in the previous five years and of what has been achieved; and, two, to set a course for the coming years and outline the tasks that lie ahead in terms of growth and progress. With OMÉK 2005, this dual role has become all the more important in the light of our accession to the European Union: a report must be made on our experience of little more than a year as an EU member-state, one which discusses EU requirements and options for farming and the regions as well as evidence of suitability for EU membership." (I3)

4.3. Polagra

Poznań International Fair (MTP) was established in 1921. It is one of the trade show organizers with the longest history. The 1st Poznań Trade Fair, a domestic trade show, was organized between 28 May and 5 June 1921 at the initiative of Poznań merchants. In 1927 MTP joins UFI, the Global Association of the Exhibition Industry. In 1929 – General Domestic Exhibition (PWK) was an overview of the economic and cultural achievements of Poland. The exhibitions, organized on a space of 650,000 square meters, attracted 4.5 million visitors. In the 1930s the Poznań International Fair flourished and was ranked the fourth European organizer of international trade shows. In the late 1940s, the trade grounds, which were badly destroyed during the Second World War, were rebuilt. In the following years the Poznań International Fair developed its exhibition program and gradually added new exhibitions and trade shows to the program. Old exhibition halls were rebuilt and expanded and many new halls as well as other facilities were built. 1956 – a general strike against the communist rule in Poznań; the events of 28 June 1956 were witnessed by thousands of trade fair guests from Poland and abroad. 1958 – a decision to organize trade shows twice a year – in spring and in autumn. In the '60s – a rapid development of the Poznań International Fair and problems with the traditional exhibition space. Exhibitions are additionally organized around Lake Kierskie, in Edwardowo and in Wilson's Park. 1973 – the traditional June show is divided into International Technical Fair held in June and International Trade Fair of Consumer Goods TAKON held in September. In the same year specialist trade shows were organized – Salmed, Poligrafia, Drema, and Intermasz. 1990 – the Poznañ International Fair transformed into a limited liability company with the State Treasure as one of its shareholders. Every year the Poznań International Fair changes its image, upgrades the old exhibition halls and builds new pavilions and facilities. Presently the Poznań International Fair organizes over 60 events every year – different trade shows

prepared for over 100 sectors of the economy. Every year it attracts over 300,000 visitors and more than 11,500 exhibitors (I4)

Polagra Farm was a complex agricultural exhibition, including the machinery, buildings, animal husbandry and the crop production, organized yearly with it's complementary: the Polagra Food. Nowadays the Polagra brand is divided for three exhibitions: Food, Tech and Premiery.

5. Discussion – Complex economic value of exhibitions

The main findings of the calculations based on the KAVA-model can be seen in Table 1. The interested parties are divided into 8 groups, and where it was needed, also into subgroups. The calculations were refined according to the special interest of these (sub)groups.

Table 1. Economic values of different exhibitions

Category	ECONOMIC VALUE							
	FE2005		FE2006		OMÉK		POLAGRA	
	Sum (1000 HUF)	Share (%)	Sum (1000 HUF)	Share (%)	Sum (1000 HUF)	Share (%)	Sum* (1000 HUF)	Share (%)
1. Organizer	30 690	10,9%	43 364	13,0%	936 120	50,4%	1 079 975	39,5%
2/a. Exhibitor (big)	67 292	23,8%	78 669	23,7%	79 300	4,3%	290 442	10,6%
2/b. Exhibitor (midseized)	42 320	15,0%	44 065	13,2%	821	0,0%	71 132	2,6%
2/c. Exhibitor (other)	-12 951	-4,6%	-13 915	-4,2%	-87 913	-4,7%	-37 250	-1,4%
2. Exhibitors (alltogether)	96 661	34,2%	108 819	32,7%	-7 792	-0,4%	324 324	11,9%
3/a. Professional visitor (big)	37 800	13,4%	41 800	12,6%	124 500	6,7%	198 056	7,2%
3/b. Professional visitor (midseized)	22 860	8,1%	25 110	7,6%	12 600	0,7%	9 567	0,3%
3/c. Professional visitor (other)	17 900	6,3%	17 910	5,4%	21 600	1,2%	21 667	0,8%
3. Professional visitor (alltogether)	78 560	27,8%	84 820	25,5%	158 700	8,5%	229 290	8,4%
4. Expert firm (Consultant)	7 960	2,8%	9 042	2,7%	18 080	1,0%	77 642	2,8%
5. Personal expert	202	0,1%	403	0,1%	1 320	0,1%	2 280	0,1%
6. Future expert	1 802	0,6%	1 552	0,5%	2 976	0,2%	8 608	0,3%
Expert visitors (alltogether)	215 875	76,3%	248 000	74,6%	1 109 404	59,8%	1 722 119	62,9%
7. Laymen visitors	1 090	0,4%	1 460	0,4%	3 800	0,2%	-30 000	-1,1%
Experts + Visitors (Alltogether)	216 965	76,7%	249 460	75,0%	1 113 204	60,0%	1 692 119	61,8%
8. Region	65 875	23,3%	83 120	25,0%	743 166	40,0%	1 044 648	38,2%
Exhibition (alltogether)	282 840	100,0%	332 580	100,0%	1 856 370	100,0%	2 736 767	100,0%

Source: Own calculation. (*with an average exchange rate in 2006 1 PLN = 67,81 HUF)

If we take a closer look on the table above, we can see that the highest economic value is characteristic for the Polagra, what is depending basically on the size of the country, and the arisen higher distances, the exhibitors and visitors have to travel. (This information is also highlighted in the *Figure 4.*) The higher values of OMÉK are bounded to the length of the event (10 days) and the higher of visitors and exhibitors, compared to the Farmerexpo's two years' numbers. The change in case of the Farmerexpo can be explained by the quick date-changes the organizers had to make, because of the time-schedule of the OMÉK, what is a five-years-organized-event, and disturbed the usual timing of the Farmerexpo in 2005.
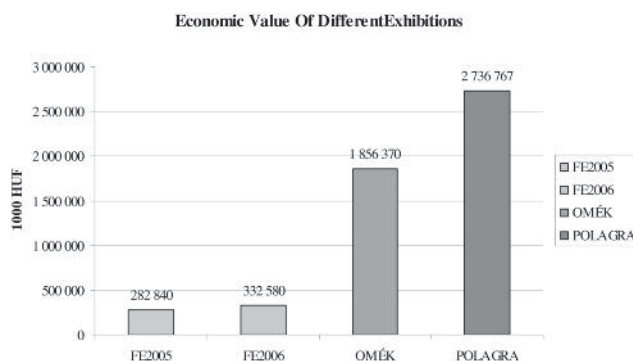

Figure 4. Calculated Economic Value of Different Exhibitions
Source: Own calculation. (*with an average exchange rate in 2006 1 PLN = 67,81 HUF)

Going further in the analysis, and taking a look on the shares of the different exhibitions, we can see, that not all stakeholder groups have a positive balance regarding the events. The other exhibitors (the smallest ones) and the laymen visitors may have a negative one, since their costs may be higher, than the benefit they gain from participating the fairs.
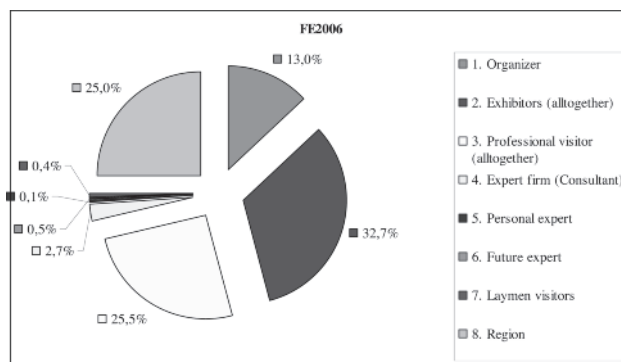

Figure 5. Share on Economic Value in Case of Stakeholder Groups at Farmerexpo in 2006
Source: Own calculation.

In the *Figure 5.* there is a graphical illustration of the share of different stakeholder groups benefiting from the exhibition. (It gains the data from the Farmerexpo in 2006, where all categories had a positive balance. The four main beneficiaries are the Organizers, the Exhibitors, the Professional visitors, and the Region, while the other groups have a marginal role only.

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