

A GLOBALIZÁCIÓ HATÁSA MEZŐGAZDASÁGI VÁLLALATOK DÖNTÉSI FOLYAMATAIRA
IMPACTS OF GLOBALIZATION IN THE DECISION MAKING PROCESS OF AGRICULTURAL ENTERPRISES

István Fehér¹, Nikolett Mihály²

¹Emeritus Professor, ²PhD

Szent István University, Faculty of Economics and Social Sciences

E-mail: Fehér.Istvan@gtk.szie.hu, Mihaly.Nikolett@gtk.szie.hu,

Összefoglalás

A tanulmány magyar mezőgazdasági vállalkozások körében vizsgálja, hogy miként hat a globalizáció a vetőmagok kiválasztásának döntési folyamatára. Először az objektív hatásokat és azok következményeit elemezzük a hazai mezőgazdasági szektorban. Ezt követően pedig azokra a döntésekben előforduló tipikus "heurisztikákra" fókuszálunk, melyeket a gazdák a vetőmag kiválasztás során alkalmaznak. Az emberek jellemzően akkor használnak heurisztikákat, amikor bizonytalan helyzetben vannak, és megpróbálnak valószínűségeket és gyakoriságokat bejósolni.

Abstract

The study focuses on the impacts of globalization on the decision making process of choosing seeds in some of the Hungarian agricultural enterprises. First of all, we analyze the objective effects and their general consequences in the Hungarian agricultural sector. Then we concentrate on the typical "heuristics" in the decision making process when the owners choose seed products. Heuristics are used when people are in uncertain situations and they judge probability and frequency.

Kulcsszavak: Globalizáció, Mezőgazdaság, Kereskedelem, Heurisztikák

Key words: Globalization, Agriculture, Selling, Heuristics

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Introduction

In the following sections we briefly show how globalization affects the agricultural sector in Hungary and what kind of changes happened in seed selling. After that we shift to the personal level focusing on the cognitive decision making processes. Our idea is that heuristics change the owners' perception of their opportunities and views connected with the seed market.

How globalization affects the agricultural sector in Hungary

There is an increasing demand to fulfill sustainability agriculture. International agreements and obligations react on the climate change and soil degradation. The greening process of the European Common Agricultural Policy also gains ground. Farmers receiving the EU payments have the opportunity to produce any goods on their land but they are obliged to keep their land in good agricultural and environmental condition. Farmers have to respect environmental, food

safety, phytosanitary and animal welfare standards. There is fine if farmers do not meet these standards; in this case their payment will be reduced. Recently the main focus is on biodiversity, water management system and environmental friendly agricultural food production. An increase in organic farming development and a decreasing loss in the food product chains can be seen nowadays. (Hungarian Statistical Yearbook, 2015)

There are mushrooming trends in the application of information technology and network building. It makes it easier to get information and change information between people; adaptation for continuous changes is crucial. Naturally it is connected with the increasing demand to achieve the up to date market information. Price volatility is more hectic so the internet significance and the number of agricultural applications is also increasing. Using IT equipment changes the advisor's work style and methods. There is a significant demand to assist farmers in the knowledge transfer methods and information technologies. The institutions and their functions connected with agriculture (e.g. government institutions) are modernized consciously.

Agricultural sales in Hungary

The natural endowments of the country are specially favorable from the point of view of agricultural production and selling. As a result of terrain conditions, climatic factors and extremely fertile soils, agriculture has developed to reach high standards in Hungary. The proportion of agricultural areas, including arable land, in particular, is high even in an international comparison. Fifty seven per cent of the 9.3 million-hectare area of the country is cultivated for agricultural purposes. The most important types of land use include arable land that takes up about four fifth of total agricultural areas, and grasslands representing 14%. (Hungarian Statistical Yearbook, 2015) Traditionally, agriculture and the food sector have played a significant role in the national economy of Hungary. The agri-food sector has decreased in the macroeconomic indices in the past two decades tallying with international tendencies.

About half of the agricultural area is cultivated by individual farms and nearly 40 per cent by business organization. The average property size is 5.4 hectares, which is 308 hectares in the case of business organization. The property structure is dual, with the presence of small farms in parallel with a small number of large farms that use a considerable part of agricultural areas. Ninety per cent of farms are below 10 hectares. (Hungarian Statistical Yearbook, 2015)

After the regime change (1989) the agricultural sector has had a huge change in the concentration of input supply systems. There is a strong oligopolistic market competition, multinational and national enterprises are also on the market. The demand of complete packaging is significant mainly in the input supply products there is a significant demand for complex integration process as a service towards smaller and medium-sized producers. Generally this packaging consists of free of charge services (advice, quality control etc.) and physical services for money (crop and harvest). The input supply is led by the bigger owners and dealers. Which seed is chosen depends on the owners' experience in the previous year, the dealer's marketing activities and communication between the farmers. The small owners rebuy the successful seeds and do not deal with the newly innovated opportunities.

The seller has to build up contact and visit every farm where he/she wants to sell. Each farm, each operation, each individual in the decision making process is different. It is worth knowing the owners buying styles, what they like and dislike, what they want to do by keeping the

customers focused on the specific benefits of the product. The value of the product that the customer perceives is the result of their past experience, their current goals and their hopes for the future as well as the salesperson's attitude. Customers look for a salesperson who is organized, very professional and who understands their business, while at same time can empathize and relate to them at the personal level. Selling should not be viewed as something you learn once. It is a constant evolution. The industry changes, the product changes, the competition changes, the regulation changes-they all affect the ability to sell and the way in which the dealer will sell. Continuing education or training is critical that feeds creativity. Sellers have got to understand what the customer might be thinking and feeling about purchasing an item. Selling in agriculture means solving problems and uncovering opportunities by helping your customer select and use products and services that meet business goals.

“The heart of the salesperson's job is to put the potential value of the company's products and services to work in a customer business- and in the process to create real value for that customer.” The following series of steps and associated skills can be found in the selling process:

- prioritizing and prospecting
- selling strategy and call plans for top accounts
- building a relationship with selected accounts
- uncovering account needs, opportunities and values
- presenting a solution or value bundle that account needs
- answering questions and overcoming objections
- closing the sale
- following up to ensure satisfaction

(Downey et al., 1983)

Distributors get products from manufacturers and re-sell or distribute them to local retail businesses and large producer customers. As we see later, they are really different in the buying style and thinking. But first of all let us see what kind of typical buyers are according to their buying style following Downey et al (1983)'s categorization.

Relationship buyer

She/he has been involved in a local farm supply organization for years and purchases inputs only from that business. She/he expects the salesperson to be a trusted confident, a friendly, dependable buddy who looks out for her/his best interest. They look for regular contact with the salesperson. They trust information sources they know -friends, neighbors etc.. They think their salesperson gives them a good and fair recommendation.

Economic Buyer

They are interested in product or service cost and carefully look at the service/ product they purchase. They are competitive and often want the cheapest price possible. They are not particularly interested in service and would rather rely on their own information sources. They often make buying decision on factual product attributes without spending time and effort on in-depth analysis.

The Business Buyer

The business buyer looks beyond costs and elements of the relationship. They synthesize the dominant motivations of economics and relationships. They often do research alone on the products. He or she can look for trials, objective research by various institutions, trade press and trusted experts or scientists. Relationship with them can be built on profitable results.

Connecting with these three types, we can also separate the buyers according to the buying situations. “*New task buying*” happens when a brand new solution requires thoughts, calculation and speculation, it motivates the customer to seek the salesperson. “*Modified Rebuy*” happens when the customer has some experience in the solution but has become dissatisfied and is now looking for something new or more suitable. “*Straight Rebuy*” takes place when we buy standard items from the same vendor regularly.

But not only is the quality of manufacturer, distributor retailer/dealer and buyer attitude and personality but also “framing” important when the owners buy a new product. Framing consists of two processes: the five steps of the buying process and how the new knowledge and innovation opportunities have been used. Let us see these two cognitive processes and then the heuristics which can modify the rationale in the decision making process.

Rationalization of the decision process in the input buying activities and heuristics

There are different types of farmers using new knowledge in the input buying decision. The *innovators* are risk takers and keep in touch with the new opportunities, mostly they are extrovert and extensively read in general. They could also be the “*early adopters*” who first adopt a new process or product. They can learn fast from the success and failures and they enjoy high social status. The “*late adopters*” are conservative and mostly rely on neighbors and friends but are afraid to take a new step in their field. Like the “*laggards*” who are the least progressive and maybe the less educated.

The decision process consists of five steps according to most marketing models: need recognition; information search; examining alternatives; choice; post purchase evaluation. According to another theory: exposure to the products or services, attention, perception, learning and attitude toward the product or services, purchase. There are several cognitive research in this process, many perspectives and frames on consumer decision making have been considered including the ‘value perspective’, the ‘information processing perspective’, the ‘emotional perspective’ and ‘cue utilization theory’. But this introduction does not deal with them. (Hansen, 2005)

We agree that consumers do not use their cognitive and affective skills independently, rather, they affect each other and rationalization processes modify the rational decision processes. In that case “rational” means careful and wide search for information and choose the option giving the biggest utility in terms of money. E.g. before an owner chooses seeds they analyze the written and electronic news about the optional species or hybrids, communicate with professionals and dealers, take notices of last years’ experience, further outlook and the quality of his/her soil. Rationalization/justification means that the owner does not take these steps and is disappointed with the achievements and wants to show more than she/he did for the best choice. The justification rate depends on the earlier discussed sale procedure, personality, external circumstances and “shortcuts”.

External circumstances could be e.g. the size of the field or the farmer's experience. Where the risks are bigger (e.g. the "living" depends on it, or in a bigger owner's case) the information search is more well-established. (Smaller farmers do not search for information because they think it is not worth spending time, mostly they follow the best or farmers' attitudes in the given region.) The success of this process also depends on the size of the market, the power of the opinion leaders and the cognitive skills of the buyer. We will not discuss them in details. Instead, let us see the typical shortcuts raising the role of heuristics.

Heuristics in the owner's thinking

The current direction of social cognition leads us to believe that people usually take shortcuts (out of necessity) when understanding the world. Heuristics are mental shortcuts, rules of thumb when we make decisions. In most cases we do it due to lack of time for full processing, we are overloaded by information, when the issues are not important and when we have little solid information to use in decision making. Kahneman and Tversky (1974) differentiated between three main kinds of heuristics: 1. Representative heuristic; 2. Availability heuristic; 3. Adjustment and anchoring heuristic.

In the *representative* heuristic the focus is on the similarity of one object to another to infer that the first object acts like the second. The basis is the stereotyping process. "Many of the probabilistic questions with which people are concerned belong to one of the following types: What is the probability that object A belongs to class B? What is the probability that A originates from process B? What is the probability that process B will generate event A?" (Tversky and Kahneman, 1974, 2p). E.g. all expensive wines must be good or "Foods with goofy, childish labels cannot be nutritious" (Consumer Reports research).

The "*availability heuristic*" judgments are based upon how easy it is for us to bring specific examples to mind. "There are situations in which people assess the frequency of a class or the probability of an event with which instances or occurrences can be brought to mind." (Tversky and Kahneman, 1974, 5p) E.g., death by shark attack vs. falling airplane parts – the last one is more common.

In the "adjustment and anchoring heuristic" what is "true" is based upon your feelings for things." In many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer. This is, different starting points yield different estimates, which are biased toward the initial values. We call this phenomenon anchoring (Tversky and Kahneman, 1974, 5p) e.g., to assume that President's plan is bad because you do not like him. In this circle there is an interesting phenomenon the "Halo Effect" or "False Consensus Effect" in which general impression influences all our ratings E.g. if somebody is beautiful we ascribe more positive features –he or she also kind and tight etc. False Consensus Effect: Assumption that others are like what we like (we overestimate reality).

Research

Our research is based on telephone interviews and collected experience during the field visits. The number of the subjects: 12 farmers from East Hungary and South Transdanubia aged 24-68; 11 men, 1 woman. mainly small farmers (2-40 hectare), one person has more than 100 ha, and one who has more than 1000 ha. They have mainly crops- corn, wheat, sunflower, colza, barley. It can be sad generally, that the interviewees were really open, helpful and seemed honest. The

interview questions were separated into three parts according to the following topics: globalization, decision and personal features. The key questions were the following.

- Have your purchase of seeds changed in the last 10 years? If so, how?
- What are the advantages / disadvantages of the new buying seeds system?
- What decides which breed to choose on the basis of information sources?
- Is there a community that actively supports decision-making?
- What factors influence other agricultural decisions?
- What information would we need for better choices?

According to the answers we could separate two bigger, well characterized groups: the smaller farmers and the bigger farmers.

Smaller farmers are less informed and have limited professional relationships. They get information mainly from the journals, internet and neighborhood farmers. They have wrong experience in the service processes. The seed choice is determined by the own experiences, unwritten traditions and offers from the dealers. They are in the „Modified Rebuy” category where the customer has some experience with the solution but has become dissatisfied and looks for something new or different. E.g. “If something is good, then I am not used to hurt, it is primarily determined by the distributor selection”. The smallest farmer was a typical “laggard” who said: “We take corn for ourselves. Once purchased, French maize was particularly good, but we did not go after it, that would be like one more into account”.

Naturally, the *bigger farmers*’ decision process is more complex. There are several influencing facts like other advantages which are offered by dealers; the achievements of “try crops experiments” etc.. Who are less satisfied (e.g. due to poor soil quality) have problems with the dealers and are more pessimistic about the future. The big sellers deal mainly with the bigger farmers (over 70 hectare). They are in the „early adapters” group. Based on quick diagnosis, the information technologies are used slightly in the bigger farms. Only the bigger ones have better knowledge transfer ability and acceptable higher qualification. There was only one farmer who had more than 1000. His attitudes, well-informed personality and his optimism is quite different from the other respondents.

Globalization affects the seed market purely marked in most of the answers. There was only one exception: “Instead of grains and leguminous plants we buy. But the whole legislation is so "dumb" that I have had enough of it.... “*Plant variety*” is bullshit”. Interestingly (and sadly), there was one farmer (20 hectare) who did not detect any change in seed sales in the last 10 years. The knowledge transfer in small sizes farms has backlogs, community activation is almost fully missing in Hungary; it seemed to us that the power of opinion leaders is growing at a local level.

The most visible distortions are found in the “availability” and “adjustment/anchoring” heuristics. Typical “anchoring” heuristics is that the farmers who are generally pessimistic due to the bad weather or the size of their field are inclined to generalize that feeling to other areas. E.g. one of the smaller farmers (12 hectare) said that he did not have relationship with the farmers’ club or organizations (“maybe not worth it...”) and “the bigger can expand more”. Another one: “I do not trust so much in the blogs. Everyone likes to praise his own horse. The farmers may have more to say about what is used. Perhaps, that is not so good. (In that case also “cognitive dissonance” can be recognized: once you have bought it, it must be good. It is self-justification.)

There is the typical dissatisfaction with distributors, which also has a distortive adjustment heuristic effect. E.g. “It is a slow extra service if they do what they promise... then the late shipping of the seed causes significant crop losses. Or I bought grass seed, and it was pure garbage. But I have a bill account ...” This farmer flatly declared that the distributors are lying and the entire seed sales system is faulty..

Summary

In modern agriculture, in the developed countries in particular, attention is focused on the positive and negative externalities of agricultural production. On the one hand, the reason is that environmental pressure (soil, water and air pollution), as a consequence of intensive production, became measurable, while social tensions (rising unemployment, deepening of income disparities) have increased as a result of the slowdown in earlier economic growth rates and especially today's crisis.

Our results showed that agriculture is a business today where this year's decisions always impact next year's potential. Agricultural input uses are part of that environment. When the input transaction is prepared, it is not an end of a process, customers and salespeople can take it together.

As a number of big and financially strong farmers is increasing, input suppliers intensify their contacts with farmers as end-users. Based on the farmers' survey, the effects of globalization on the seed market were purely marked in most of the answers but the bigger farmers' decision making process is more complex, though. The most visible distortions in rationalization are “availability” and “adjustment/anchoring” heuristics.

The farming system must undergo revolutionary changes. Sustainability should form an integral part of the adjusted agricultural policy. The alteration of basic principles should be carried out in a way that the environmental, economic and social aspects of sustainability contributing both to environmental values and competitiveness are brought into focus. New rural and agricultural policies need to be more tailor-made based on production and financial capacity including a different production mix. That is, they need to offer in all types of farms and all size-categories the opportunity to develop and modernize further to be able to increase their competitiveness. They also have to offer special opportunities expressly to (young) and qualified people who want to start a farm and can adapt the innovation. In order to protect this inclusiveness (which should be considered as an expression of democracy), the rise of mega-farms needs to be halted since they threaten and push family farms out of the market and move farming further away from meeting the public objectives.

In order to achieve these objectives CAP needs to radically alter the interrelation of its Pillar 1 and Pillar 2. It needs to move from juxtaposing these two elements to an integration of Pillar 1 within the wider framework of Pillar 2.

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