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OBSAH

THE ENVIRONMENT FRIENDLY CONSUMER BEHAVIOUR AND THE „GREEN-MARKETING”IN THE AUTOMOBILE MARKET

BALÁZS Ferenc – Dr. habil. SZABÓ Zoltán PhD MBA

Abstract

The automobile industry is also a key sector in the EU and in the whole world. According to this, it is necessary to accept the important role of the environment friendly thinking, in connection of buying and using cars. we chose this topic, because we think it is important to protect our environment, and the automobile industry, according to its key position, is very important in this aspect.

According to our hypothesis, environment friendly cars are going to be more popular in this market, caused by rise of the green behaviour and the green marketing. Nevertheless it is not possible to buy an environment friendly cars at an acceptable price for many driver, so they are not very often used.If we want to study the environment friendly behaviour and the green marketing in the automobile market, first we need to understand the international and domestic position and trends of this sector. As a consequence of the new trends, as the growth of the global environmental damages, the consumer behaviour is changing rapidly.

In our research, there are qualitative and a quantitative parts. We made a professional interview with a specialist, working in the automotive industry and we sent a questionnaire to potential car buyers.

According to the respondents the main advantages of a green car are the lower fuel price and the environment friendly effects, and the disadvantages are the higher prizes and the not developed service station network.

There is an absolute positive but slowly changing trend in environmental thinking. In conclusion we can say.

Key words: green-marketing, automobile market, consumer behaviour

JEL Classification: M310

Introduction

The automobile industry is also a key sector in the EU and in the whole world. According to this, it is necessary to accept the important role of the environment friendly thinking, in connection of buying and using cars. We chose this topic, because we think it is important to

protect our environment, and the automobile industry, according to its key position, is very important in this aspect.

According to our hypothesis, environment friendly cars are going to be more popular in this market, caused by rise of the green behaviour and the green marketing. Nevertheless it is not possible to buy an environment friendly car at an acceptable price for many drivers, so they are not very often used.

If we want to study the environment friendly behaviour and the green marketing in the automobile market, first we need to understand the international and domestic position and trends of this sector. As a consequence of the new trends, as the growth of the global environmental damages, the consumer behaviour is changing rapidly. After the presentation of these changes, we study the green marketing, and we try to prove that, the business costs of being environment friendly is cleared and even are good investments. In the next part of our essay we analyse green marketing strategies, in the aspect of automobile firms. Here belongs the environment friendly product, price, place and promotion policies.

Furthermore we present our primer researches and analyses. The contents of the methodology are a professional interview and the questionnaire. The interviewee is a professional specialist, working in the automotive industry. The questionnaire was sent to potential car buyers. We think that both parts are very useful in connection of the question: what is the judgement of the environment friendly cars in the market, how has the consumer trends changed, and what are the conceptions of the future of the automotive industry, in a green aspect?

In the summary we write down our opinion about the opportunities to change the present situation and to create a green thinking and green policies in the automobile industry.

International and domestic automobile market

There was an exciting decent in the automobile market. There was a crisis, followed by an active recovery and by many new technological developments. Accordingly the firms of this sector met a couple of challenges. In this chapter we are going to study these changes, and to present the international and domestic market, focused on the environment friendly cars.

The commerce of cars was in a bad situation in the international market in 2013. In Europe there was a continuous recession for 6 years in this year, when now there is a small rate of growth. Though there are expectations saying that the global leader market will be China and the USA in 2015, long before Europe. In 2011 Europe was the very global leader, but now both countries are long before it. We can mention new growing markets as Brazil, Russia and India. There are 76 million cars sold in the very global market forecasted.

After analysing the market of green cars, we can see that, there is a higher demand of these products in the modern, western countries. However the not-environment friendly cars are still more popular. „The main obstacle of the bombastic growth of these cars, is the fact that, there are no real good innovations of the storage battery technology. The cars operated by

electricity still have many technological problems like short range and lifetime." The main forecasts show that, there will be a significant growth in this market only in 2020. (www.pwc.com1)

Now it is pretty sure, that Hungary is one of the most important centres of the European automotive industry. According to the fact, that this sector produced the 10% of the Hungarian GDP in 2013, and it has sustained workplaces for 115 717 people. The growing will continue in 2014, the domestic production of cars of this year can reach the number 400-500.

Consequently this sector is going to become the very key sector of Hungary. There are Audi, Mercedes and Suzuki factories in our country, the engines of Audi and Opel models, and many other components are produced here.

The hybrid technology is becoming even more popular even in Hungary, so mostly all of the automotive companies produce hybrid or electric cars. Nowadays in Hungary there is a continuous development of the electric service stations. Without this infrastructure there is no chance to create a significant market of green cars. There is a new service station line from Vienna to Budapest, plus there are more than 20 electric service station in the capital of Hungary.(www.pwc.com2)

New trends in the automobile market

In one of its studies PwC named five mega-trends of the automobile industry, and analysed the significant effects of these trends on the companies. The environmental protection, the urbanization, the intensifying role of the middle-class and the lack of skilled labour power, plus the rise of the eastern economies and the new technological changes.

The trend of the environmental protection involves many other ideas. The exploitation of crude-oil is decreasing, so we need alternative energy resources, like hydrogen. Moreover the importance of electric and hybrid cars is also increasing.

The process of urbanization is going on for a couple of years and it will definitely not stop in the short term future. As a consequence of this, the 70-75% of the population of the earth will live in cities in the future. The automotive industry has to pay attention to this trend, because it will be very difficult to solve the problems of the crowded cities, like big traffic jams, the lack of park places or smog dangers.

There will be a bunch of new challenges in connection of the intensifying role of the middle-class and the lack of skilled labour power. The growth of the buying-power of the middle class and the elderly society lead us to the increasing of demand. On the other hand, there will be a big competition for the skilled labour, so this fact causes the decreasing of supply. The import of labour, immigrants might be a solution.

The economic power relations will radically change, the balance will move from the west to the east. The rising eastern economies are producing 85% of the global economic growth.

This is the consequence of the increase of the manufacturing capacity and sales.(www.pwc.com3)

The automotive industry has to take notice of the new technological changes. It looks like the spreading use of the internet, the electric engineering of cars and the virtual business models determine the way of this industry.

„Green-marketing and the environment friendly consumer behaviour

The environmentally sound is even louder in connection of simple consumer behaviour. In any case consumers are going to prefer green any kind of green products, and the number of total green consumers is also increasing. As a result of this, companies try to create a green marketing and green brand, to get in this gaining market gap.

Companies must create a very effective and authentic green marketing, if they really want to produce profit in this market. Green marketing is the border-land of traditional marketing and green-thinking.

According to Coddington (1993) „environmental marketing is the part of corporate social responsibility, so companies think that environmental protection is useful for the society and is also a good investment opportunity. Consequently the aspects of environmental protection is important for the company in every function."(Németh, 2004)

This trend is also very important in the automotive industry, companies producing green cars, those are suitable for the green part of automotive market. (Kotler, 2007) We can mention the conception of greenwashing. This is a process when companies try to present their products as green products, but in reality they are not green. Green activists and the consumer protection try stop these processes since the 80's, when the most of these simulated green-marketing campaigns began.

We want to finish this chapter with a research of the KPMG International, which is one of the biggest accountant companies. The result of this research shows the aspects of car buyers in the question of choosing a car from 2011 to 2013. (Figure 1)

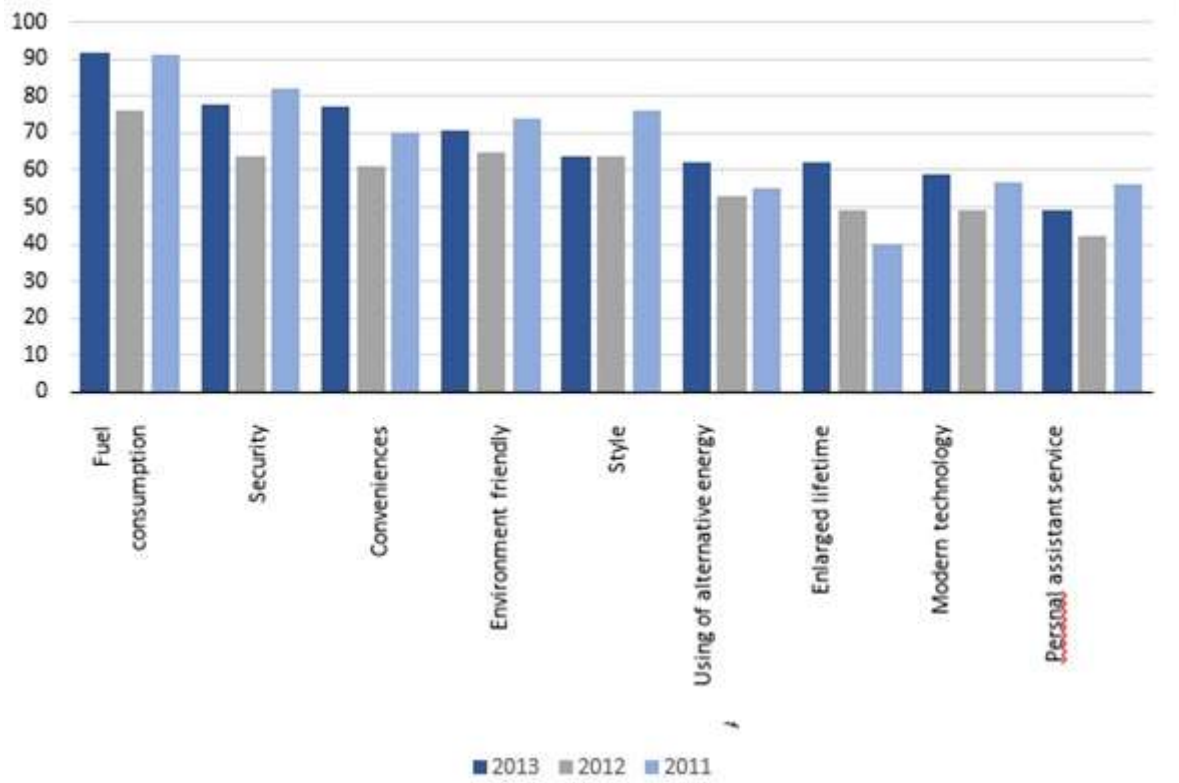

Figure 1: Changing of aspects of buying a car from 2011 to 2013
Source: http://www.kpmg.com/KZ/ru/IssuesAndInsights/ArticlesAndPublications/Documents/KPMGs-Global-Automotive-Executive-Survey-2013.pdf

The result of this research shows that, the environment friendly aspect is the second important, after the lower fuel consumption. The „green" aspect is in the top 3 aspects of buying a car since2012. (www.kpmg.com) This is a conclusion, that let us be very optimist.

Green marketing strategies, green marketing-mix

The purpose of car selling companies and by the way all the other companies is to sale as much product as possible, in this case cars. So companies have to stimulate consumers, with the conception of corporate marketing. In this chapter we are going to present a quite unorthodox, environment friendly, corporate marketing strategy, using the well-known marketing mix, which, according to McCarthy, is referring to the set of actions, or tactics, that a company uses to promote its brand or product in the market. (Kotler, 1998) McCarthy created the four Ps, as main categories of marketing elements: product, price, place and promotion. From these categories, we are going to analyse very deeply the product element with the help of the BCG matrix. All the other three categories will be also presented.

Product

The product is seen as an item that satisfies what a consumer demands. Marketers can expand the current product mix by increasing a certain product line's depth or by increasing the number of product lines.

Marketers should consider how to position the product, how to exploit the brand, how to exploit the company's resources and how to configure the product mix so that each product complements the other. The marketer must also consider product development strategies. (Jobber, 1995)

In connection to the product category I want to present the BCG matrix, that is a method to analyse the life cycle of a company, and to study the products of this company in the function of relative market share and market growth. (Figure 2)

Figure 2: BCG matrix
Source: http://mediapedia.hu/bcg-matrix 2015. 05.11.

Table 1: Corporate strategies

Stars		
Typical parameters	**Optimal strategies**	**Examples (automob. ind.)**
High rate of growth High market share Growth stage of product life cycle Great opportunities	Reinvestment of the profit Create new products	Lexus luxus sedan Prius hybrid Land Cruiser SUV
Question marks		
Typical parameters	**Optimal strategies**	**Examples (automob. ind.)**
High rate of growth Low market share Introduction stage of product life cycle Unsure opportunities	Create new products, to become a star In case of failure, leaving of the market	Toyota Scion Camry hybrid
Cash cows		
Typical parameters	**Optimal strategies**	**Examples (automob. ind.)**
Low rate of growth High market share Maturity stage of product life cycle Limited opportunities	No need of reinvestment and new products Minimalised investments and maximized profit	Camry, Corolla sedan Innova models (Venza and MPVs) Daihatsu cars
Dogs		
Typical parameters	**Optimal strategies**	**Examples (automob. ind.)**
Low rate of growth Low market share Decline stage of product life cycle Weak opportunities	Difficult to make profit or to create new market Investment and creation of new products is very risky Leaving of the market	MR2 two-seats model Cerica,Tundra Pick-up model Crown, Cressida, Corona, Quails model

Source: own research work, 2015.

Green products should be very environment friendly until the whole lifecycle. A green car has a lower exhaust gas emission than a regular vehicle. With a good marketing it is possible to create a competitive edge from this products.

For instance BMW group follows a responsible product policy for years, and it tries to find brand new technological development to reduce all kind of environmental damages.

„Brand building has a very important role in corporate strategy and in product policy. The creation of famous brands increase the absolute price of the whole company." (Vágási, 2007) Basically this is the same in the automotive industry. Popular brands and brand loyalty are key elements in the intensive competition. What is more, the supply of this market is one of the most diversified supplies of the whole global economy.

Price

Price is the amount a customer pays for the product. The price is very important as it determines the company's profit. Adjusting the price has a profound impact on the corporate marketing strategy, and depending on the price elasticity of the product. (Rekettye, 1999)

In the case of environment friendly cars, price is a very weak point. This is the result of the fact, that green cars and any other green products are more expensive than the competitive, not green products. The most important price policy of the green car producing companies, is to inform the customers about the positive moral reasons and purposes of being very expensive.

Place

Place refers to providing the product at a place which is convenient for consumers to access. It is easy to determine in case of a product. (Szabó - Komáromi-Gergely, 2011) There are a couple of various strategies: intensive distribution, selective distribution, exclusive distribution and franchising. (Kotler, 1998)

Green companies have to choose the strategy or the combination of strategies, that are the best to supply green products for consumers. To achieve this purpose it is necessary to maintain a supply chain, in that every actor truly think that environmental protection is important. For example the transports should be very environment friendly. Companies should prefer water or railway transport, and avoid continental transport, because this creates a real high environment pollution. They have to pay attention to issues like the temporary storage of hazardous waste or recycling.

Promotion

Promotion comprises methods of communication that a marketer may use to provide information to different parties about the product. There are several main categories of promotion: advertising, public relations, sales organisation and sales promotion. (Kotler, 1998; Jobber, 1995)

Communication policy is very important for automotive companies, involves the theories and the methods of information flow. The main message for the consumers is the next: this company has a sense of responsibility for the environment, our products have no environment polluting effects.

According to Booms and Bitner there are also the model of seven Ps, that adds to the aforementioned elements the next ones: physical evidence, people and process. (Kotler, 2012) This model is used when the relevant product is a service, not merely a physical good.

Primary researches

The last part of our paper is the processing of our own researches. The first part of our primary researches is the qualitative research. We made a professional interview with a specialist, working in the automotive industry. We asked him about the corporate aspects of the environmental protection and about the changing trends of consumer behaviour.

Furthermore we are going to present and analyse our quantitative researches. The questionnaire was sent to potential car buyers. Our main purpose was to get knowledge about the judgement of the environment friendly cars in the market and the aspects of buying a green car.

Objectives, hypotheses

The main purpose of the research was to collect information and to gain knowledge about the behaviour of car-buyers, the environmental friendly thinking and about the green marketing in this market. The main aspect of the consumer behaviour is the change in function of the global trend of green effects.

These are our hypotheses:

- H1 Prices influence the consumers.
- H2 Hybrid cars are more expensive.
- H3 Environment is an important aspect of buying a car.
- H4 Environmental protection is important for the consumers.
- H5 The type of the car correlate with the living place.
- H6 Green lifestyle correlate with the using of cars.

Methodology

The interviewee is Kovács Tibor a professional specialist, working in the factory of the Audi in Győr in Hungary. He is a series leader engineer. We asked him about the profit of the Hungarian factory of the Audi, and about his results and future plans.

We wanted to know his opinion and experiences about the changes going on in the automotive industry. How have the traditions of buying a car changed? How popular are the environment friendly cars? What is the role of the green marketing in this market now? What is the future of hybrid and electric cars? Are they going to be popular enough?

Besides the interview the other part of our research is the questionnaire. We made an online questionnaire and we sent it out in emails. It involves 18 questions. Basically we tried to compose it in right logical and psychological order, but in a very simple form.

There are four categories: analysis of environment friendly ideas, analysis of green consumer behaviour, propagation of environment friendly technologies and marketing.

Now we are going to choose one part of the research and analyse that as an example. We are going to talk about the Propagation of environment friendly technologies. This part is connected with the third, fourth and fifth hypotheses, and with the next questions of the questionnaire: 12. 13. 14. 15.

An example: Propagation of environment friendly technologies

Under number 11 we asked the subjects of the questionnaire if they want to buy a car in the next five years. This is a general overview of the automobile market, and shows that the willingness of buying a car is not really often even in the round of potential consumers. (Figure 3)

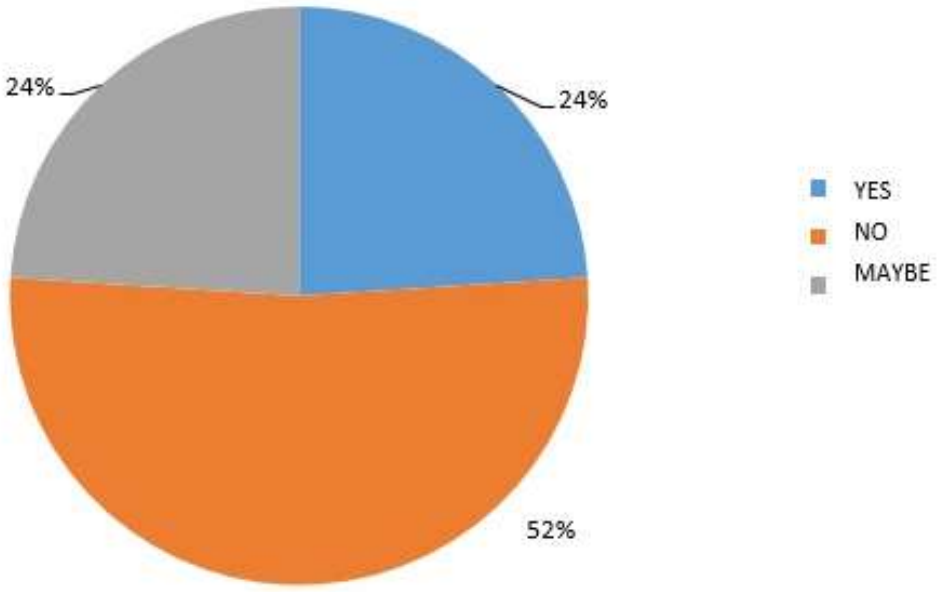

Figure 3: Willingness of buying a car
Source: own research 2015.

The answers to question 12 showed, that only two from 50 potential car-buyer want to sure buy a hybrid or electric car, and only two do not know yet. This is quite said in our personal opinion. (Figure 4)

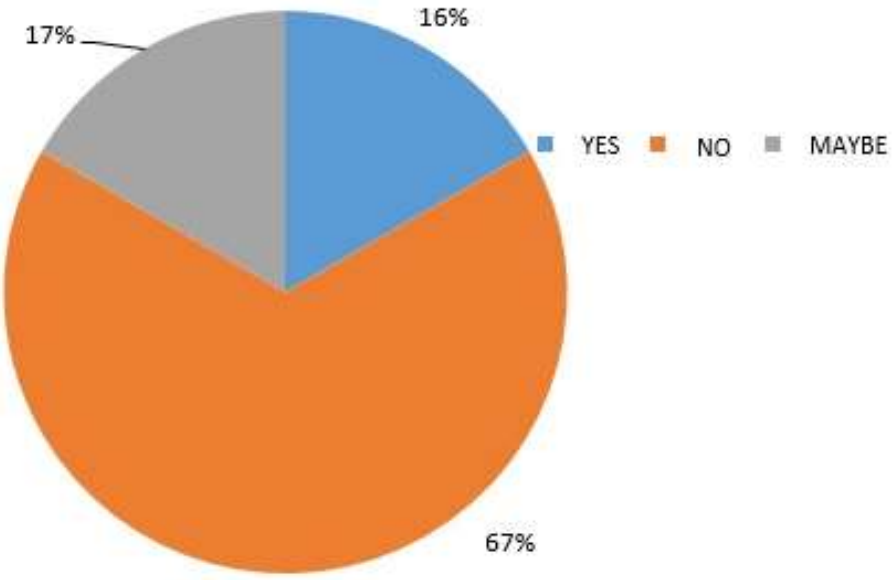

Figure 4: Willingness of buying a green car
Source: own research 2015.

With question 13 we wanted to know if the questioned subjects would buy an environment friendly car, with the financial support of the government. Generally speaking would electric or hybrid cars be more popular with a certain amount of financial support. (Figure 5).

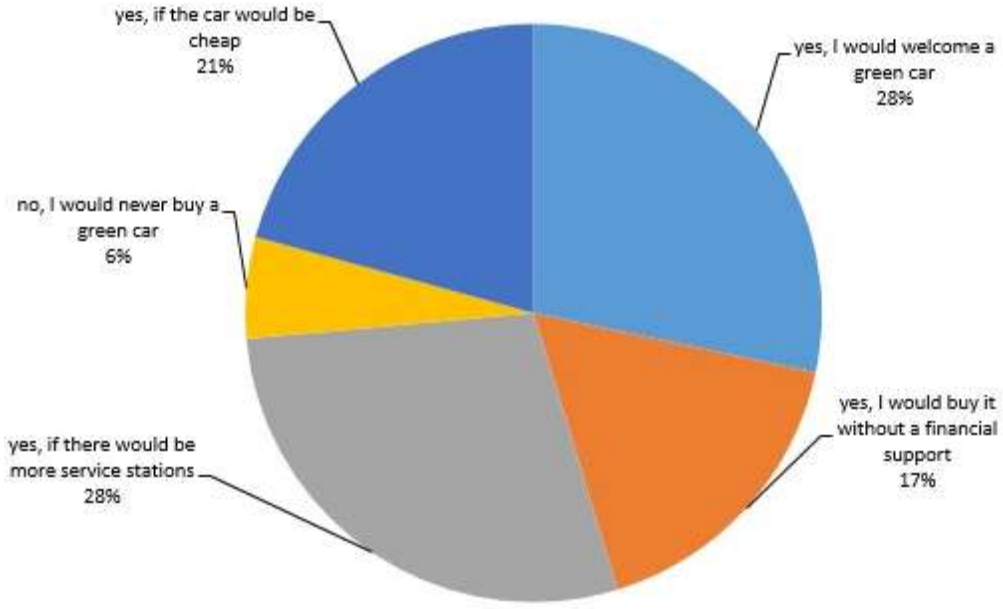

Figure 5: Would you buy an environment friendly car, with the financial support of the government?
Source: own research 2015.

We are of the opinion that this is a very positive result, but it depends on the financial support of the state and the infrastructure of service stations. We can see the hypothetic positive effects of a supposed stat support.

Now we will work with question 14. Would you generally use an electric or hybrid car? 21 people answered with yes, 29 with no. In connection to this question we want to present a chi square test. It is only possible to do it when there are only two possible answers, like yes and no in this case. The χ^2 test is a kind of an independence test.

We wanted to analyse the correlation between the answers of these two questions: Do you live in Budapest or in the countryside? And would you generally use an electric or hybrid car? The frequencies of the questions are in this table. This is called contingency table. In this case this is a 2×2 table:

Table 2: Contingency table

	He / she would use an electric or hybrid car	He / she would not use an electric or hybrid car
Living place: Budapest	5	11
Living place: Countryside	16	18

Source: own work. 2015.

χ^2 =1,116 with 1 degrees of freedom. P = 0,2907 =29,07%

The value of P shows the percentage of the probability of that, our result is not accidental and there a correlation. After the necessary calculations we can see that, there is no real strong correlation between the living place and the willingness of using a green car. After all we can say that the fifth hypothesis is not true.

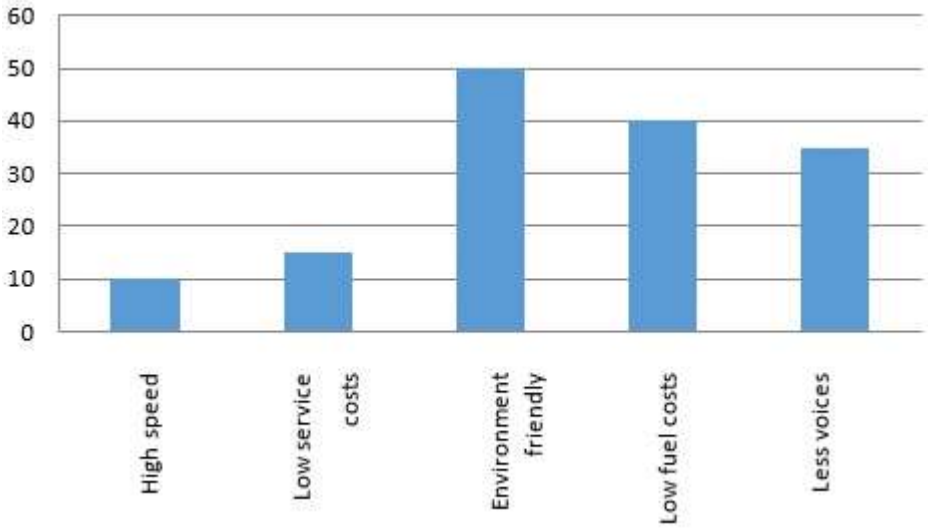

Figure 6: The advantages of electric or hybrid cars according to the respondents
Source: own research 2015.

Question 15 of the questionnaire is focused on the advantages and disadvantages of electric or hybrid cars. What do people think? (Figure 6 and 7)

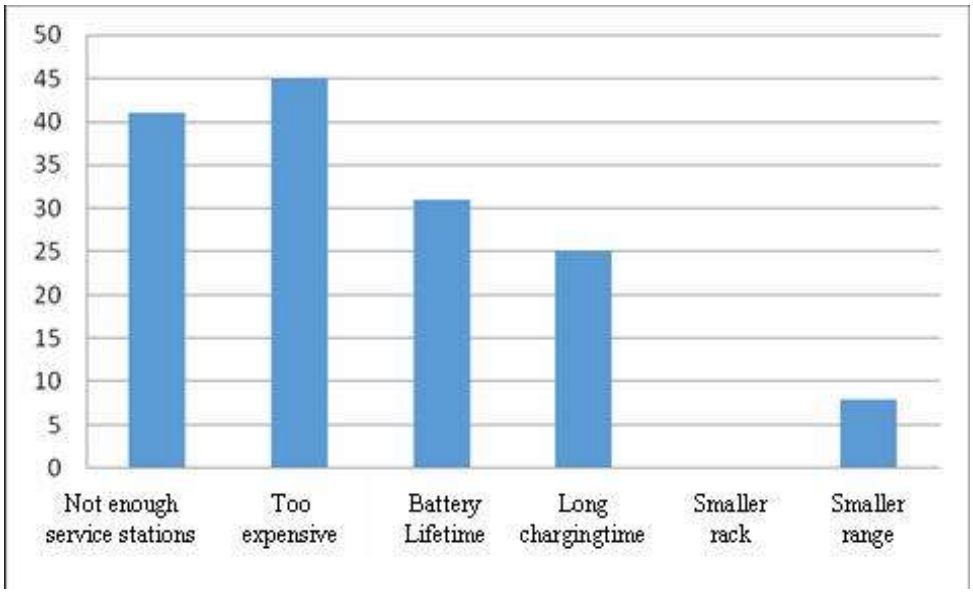

Figure 7: The disadvantages of electric or hybrid cars according to the respondents
Source: own research 2015.

Consequences and Suggestions

The main purpose of our researches is to analyse the collected information and compare the results to the other literature. We studied the change of the consumer habits in the automotive market, the popularity of the environment friendly technologies and the role of green marketing. After the overview of the relevant literature and our researches. We made these conclusions:

- The global number of motor vehicles is increasing with 50-70 million in one year. Forecasts say that the total number will reach 2 billion in 2020. Consequently we need new technological developments, to reduce the environment polluting emission. Unless we do this, there will be an irreversible contamination of nature and the lack of resources.
- After studying the market of green cars, it is obvious that there is a higher demand of environment friendly cars in the western economies. In spite of this the not-green cars are now still more popular.
- The Hungarian situation is not very good now, but there is a growing process. It is the result of the developing of the service station network and the vehicle of the public network system.
- The number of green-thinking consumers is increasing. As a result of this companies should accommodate and renew itself. The connection of environment friendly behaviour and traditional marketing is the green marketing.
- There are several new technologies in this market: hydrogen as alternative resource, electric and hybrid cars.

There are many new applied methods and the developed old methods to use. The Jedlik Ányos Klaszter is a governmental organisation that is operating with law changing and several other measure to help the spread of electricity in traffic. There are many new

innovations to increase the efficiency of the vehicle using. It is very important to develop the service station network, not only in Budapest but also in the big cities of the countryside. The most effective solution would be the direct governmental financial support.

Summary

By writing our essay, we got know a global picture about the consumer behaviour in the Hungarian and international automotive market. We also learned a lot about the green marketing. We wanted to recognise the reasons of the unpopularity of environment friendly cars. Why is there a big difference between the Hungarian and the Western systems.

In our research, there are qualitative and a quantitative parts. We made a professional interview with a specialist, working in the automotive industry and we sent a questionnaire to potential car buyers. We chose one part of the research (Propagation of environment friendly technologies) and analyse that as an example. We have studied the potential effects of a governmental financial support on buying hybrid or electric cars. There is an absolute positive hypothetic effect.

We analysed the correlation between the living place and the willingness of using an environment friendly car. We also created a contingency table and presented a chi square test. The necessary calculations show that, there is no real strong correlation. According to the respondents the main advantages of a green car are the lower fuel price and the environment friendly effects, and the disadvantages are the higher prizes and the not developed service station network.

There is an absolute positive but slowly changing trend in environmental thinking. In conclusion we can say. If there were a governmental support system in Hungary, here also would be a development. This is an absolute positive future vision.

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Author addresses

BALÁZS Ferenc
fbalazs2001@yahoo.com

Dr. habil. SZABÓ Zoltán PhD MBA
Szent István University Gödöllő
2100 Gödöllő, Páter K. u. 1.
Szabo.Zoltan@gtk.szie.hu

Lector: Dr. PAPP János, Szent István University Gödöllő, Hungary

ANALYSIS OF THE HUNGARIAN HOUSEHOLDS' SAVING HABITS AND WILLINGNESS

BARANYI, Aranka PhD - SZÉLES, Zsuzsanna PhD – SIDLOVICSNÉ TÓTH, Ildikó

Abstract

Our research work objective is to present and consider how the willingness and the opportunity of the Hungarian households' savings changed in the last period. Hungarian households and the banking sector have also preferred investments promising higher yields, but involve greater risk bearing financial instruments before the financial crisis. Due to the crisis financial products have significantly lost value, it has shaken the confidence in the financial service. One of the most significant loss touched the share Unitholders (share holders), but the investment funds are performing well nowadays. However, the yield has not returned to the pre-crisis performance after the crisis. In case of the traditional savings deposits nowadays they refer negative yields, which means that the savings structure is facing another restructuring. The state aid pension savings, investments and government securities get preferred. The introduction of the interest tax, the use of transaction fees, costs due to account management fees all point in the direction that the structure of savings will be further changed which will hopefully also leads to safe operation. Bankrupts in the circle of financial institutions have strengthen further weakening of confidence in the financial system. Hopefully, more and more strict enforcement of compliance with the prudential rules will improve in the near future and cause substantial strengthening in confidence. The population has improved propensity to save, but the size remains a concern in real incomes, after the financial crisis. The willingness is necessary but not sufficient condition to actually grow in a seed cleaning. Many households have indebted during the years before the crisis. In addition, the rise in interest rates on foreign currency loans and the depreciation of the forint significantly increased the debt burden. The gradual repayment of debt in net terms means savings. The precautionary household have accumulated savings for the past few years, built on the crisis caused negative experiences (unemployment). The aging population also strengthen the role and the need of savings, particularly in the social contribution tax paid by the employer does not form the basis for individual pension insurance, so by all means savings are necessary. The net financial assets of households have increased since 2010, it has reached historically high levels in recent years, while the gearing ratio has fallen to the level of the pre-crisis years.

Key words: saving, household, saving habits

JEL classification: E21

Introduction

Our basic objective is to introduce different possibilities for savings. The topic, unfortunately, has become more relevant than ever because people intending to save are looking for those

investment opportunities which offer extra profit disregarding the risks of possible misuse. Following the financial crisis the returns of pre-crisis period cannot be expected. That era when low risk could be paired with good return seems to be over. The period of negative returns has arrived while the base rate is also permanently declining, therefore no change can be awaited in the near future. The general situation of savers and the credit institution sector has been negatively affected by the events of the recent days which basically question the prudent operation of financial enterprises and other institutions and further destroy the trust in the sector.

The credit institutions have records about 9,8 million clients in relation with savings, according to the statistics of the Hungarian Central Bank, on the basis of data from December, 2014. This figure seems to be nice but it also means that one client can have savings in several banks including current accounts. (Horváthné – Széles, 2014) With the help of professional literature references, the study provides a review of savings alternatives in Hungary and detailed analysis helps to support the saving assets managed by credit institutions, including the structure of liabilities at credit institutions, comparing the sectoral changes with the main items of asset portfolio. As regards the forms of savings, the net assets of investment funds were analysed in more detail in order to find out how the instrumental composition of funds changed and what is the composition of fund assets.

Savings can occure in several ways while from the banks point of view they are crucially needed for being support for credits. Why are credits important? Why cannot we shight credits as an outside source? What kind of relation does it show with the trends of the savings? (Baranyi – Borszéki – Széles, 2008)

„If one splends less than his/her income it is a saving, on the other hand if he/she spends more it is over spending." (Kohn, 1998) In one's life there are different aims for distributing income. This is the target of many saving theories of economics.

According to Keynes (1936) the consumption is depended on the current income and there is not over spending and consumption in advance. The analysis of consumption and saving is inseparable while the saving is nothing else but retained future consumption. (Tóth – Árvai, 2001)

According to the TÁRKI survey in 1998 40-50% of the households had savings and 28-40% had debts. What does the saving willingness and debt taking depend on? (Samuelson-Nordhaus, 1993):

- Income conditions
- Future income conditions
- What motivating influences the future consumption brought to present mean for the person

Different possibilities of collecting resources (Gál, 2011):

- Collection of deposits

- Issuing bank securities
- Borrowing from the central bank or interbank borrowing
- Discounting
- Capital increase.

Definition of deposit collection, classification of deposits

It is an outstanding dept on the basis of a deposit contract or savings contract concluded according to the Civil Code, including also the positive account balance on the basis of a bank account agreement. According to the content of the deposit contract, anybody can be the subject of the contract as a depositor. The contract can be concluded as an independent agreement or in the frames of a bank account agreement. The building society savings can be made only as independent contract or as so-called house savings. The main content items in deposit contracts are: interest rate, maturity date, termination of deposits, deposit insurance. The record of money receivables can take the form of an account deposit or issuance of deposit certificate. The demand deposits are held on payment or cash accounts. Only the minimum interest rate is credited. The call risk is high at the bank, therefore the interest that the money institution is willing to pay is rather low. The banks typically offer a credit facility for the current accounts thus attracting the clients. The low interest rates are not very seductive.

Specific features of fixed-term deposits:

- Offer alternatives within and over a year.
- Simple fixed-term deposit – also known as European or continental – these deposits have fixed maturity once or permanently.
- Deposits redeemable at notice – Anglo-Saxon form: the minimum period is fixed for the client to give notice of redeeming the deposit.
- Savings account: combination of fixed-term and redeemable deposits. Specific features: minimum balance is required, the number and amount of cash withdrawals is fixed, the deposit amount is minimum.

Maturity over one year:

- The typical features of accounts connected to the index are: minimum guaranteed return and changing interest rate.
- Deposit combined with life insurance.
- Long-term investment account: deposit can be made only in the opening year, this is the cumulation period followed by 3-5-year maturity period.
- Minimum amount is 25.000 HUF, payment can be requested after 3 years, savings tax is 10%, after 5 years the savings are exempt from savings tax.
- Deposits can be placed directly through cash payments or transfer from account.
- There is no interest payment following the maturity of the deposit.
- Savings deposit contract: the credit institution is obliged to take the money from the depositor against passbook or other certificate and pay back the amount according to the

contract. The depositor can be a natural person exclusively. There are joint deposits, which means that there are several owner-beneficiaries.

Rights and obligations of parties: Receipt of funds as deposit, issuing savings book. If the depositor does not have the documentary form of the deposit, there is a possibility to enforce the claims following the annulment proceedings carried out by a notary, considering the intervention of the credit institution.

The National Deposit Insurance Fund (NDIF) is obliged to start the payment of deposits in 15 days following the freezing of deposits and should finish it in 20 days, according to the regulations laid down on January 1, 2010. The process can be prolonged once for 10 days if justified.

Following the financial crisis, the saving clients could more and more frequently experience – first only from press reports, later, unfortunately, in person, too – the consequences of bankruptcies among financial institutions. The compensation case of „Jógazda" Cooperative Savings Bank in January, 2011 was the first action of the National Deposit Insurance Fund – even within the European Union – with a substantial payment (9,1 billion HUF) and group of depositors (5329 persons) since the introduction of the accelerated (20 workdays) compensation in 2010. (http://www.oba.hu/hu/oba/kartalanitasi-tapasztalatok, Országos Betétbiztosítási Alap „Fehér könyv"a„Jógazda"Szövetkezeti Takarékpénztár betéteseinek kártalanítási eljárásában szerzett tapasztalatokról)

The case of Soltvadkert and Region Savings Bank which happened in summer 2012 was the quickest compensation procedure involving the highest-ever amount. The 15334 depositors concerned received more than 33 billion HUF (approx. 120 million EUR) compensation which amounted to the third of the total assets of NDIF – calculated at market value. The NDIF accomplished major part (98,4%) of the substantial payment volume by the half-time of the deadline (20 workdays) as required by law. (http://www.oba.hu/hu/oba/kartalanitasi-tapasztalatok, Fehér könyv a Soltvadkert és Vidéke Takarékszövetkezet betéteseinek kártalanítási eljárásában szerzett tapasztalatokról)

According to Meir Kohn (1998) the deposit insurance means much stronger guarantee for the depositors than the existence of a last refuge.

Role of securities in savings

The concept of security: the security is an unconditional and unilateral commitment with several basic legal statuses.

According to this, the security can be made about:

- Money claims: bill of exchange, checks, bonds, treasury bills, certificates of deposit, mortgage bonds, shares, venture capital fund tickets.
- Rights resulting from membership: shares.
- Property rights or other rights: warehouse receipt.

The regulation of securities is made on the basis Act CXX of 2001. The securities must have the accessories as laid down by law and the law enables the issue of the security. The security can be a charter or a computer signal. The rights connected with securities can be practiced by the certified owner. The claims fixed in a security can be validated or disposed only by the security, by owning the security.

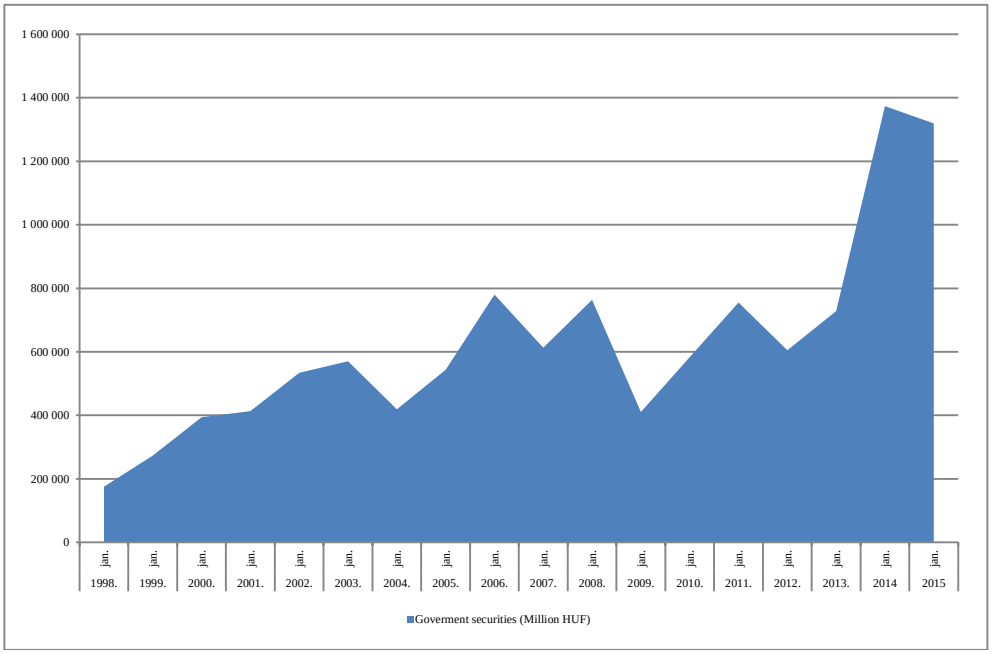

Figure 1: Stock changes of government securities and Central Bank bonds in the assets of investment funds

Source: http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The following figure shows the changes in the portfolio of short-term treasury bills. In the period between 1998 and 2015 there has been a steady interest in securities supported by government guarantee, as it is also proved by the direction of the trend line. In order to ensure self-financing capacity, the state regards the reallocation of domestic savings from bank sector a strategic question in terms of state financing. The outcome is also obvious concerning the composition of assets of investment funds: there has been a significant rise since 2013.

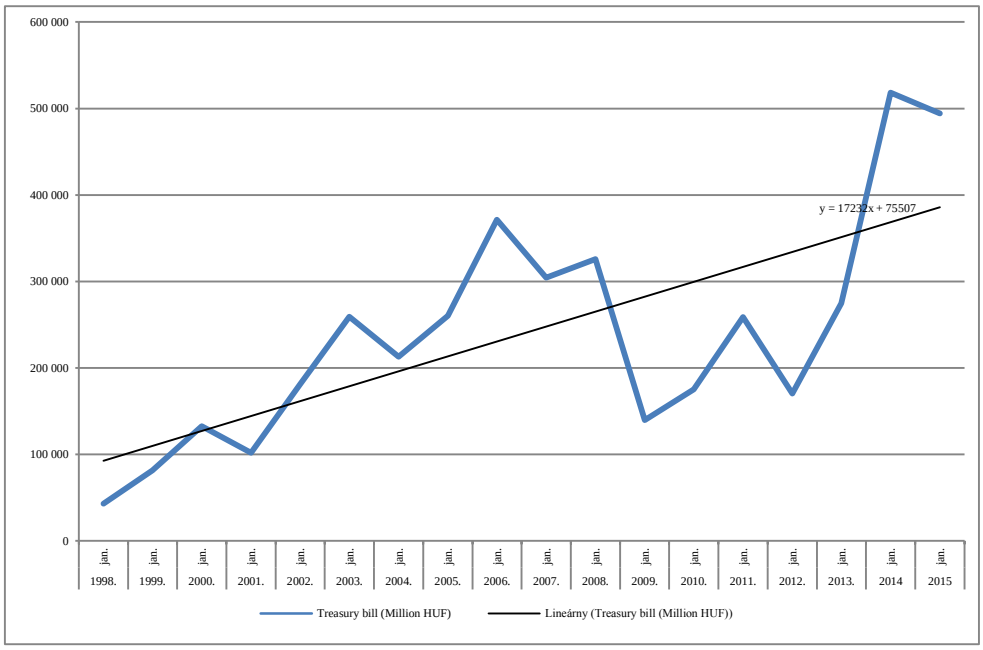

Figure 2: Stock changes of treasury bills in the net asset value of investment funds
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The following figure introduces the changes of other corporate bonds within the net asset value investment funds. As regards investment policies, the low bank rates as well as the increasingly shrinking government bond yields have contributed to the introduction of less safe but well predictable corporate bond investments in the asset portfolio. The trend shows that the growth is unbroken within the portfolio.

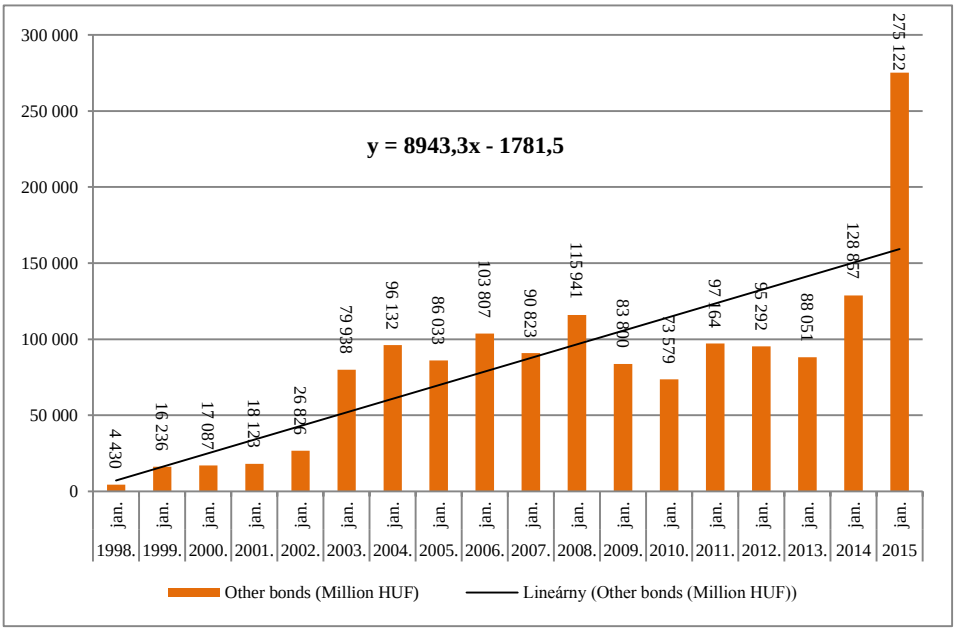

Figure 3: The stock of other corporate bonds within the net asset value of investment funds
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

Hereinafter the net asset value of investment funds operating in the domestic market can be seen. The top performance observed in 2007-2008 has considerably decreased after the financial crisis due basically to the declining value of financial instruments managed by the funds and subsequently, the diminishing assets of the funds. Many investors became uncertain at that time and turned to their financial partner concerning the liquidity of investments.

The increase of assets of investment funds restarted from 2013 and the asset by now exceeds the values prior to the crisis. (Lendvai-Gál, 2012)

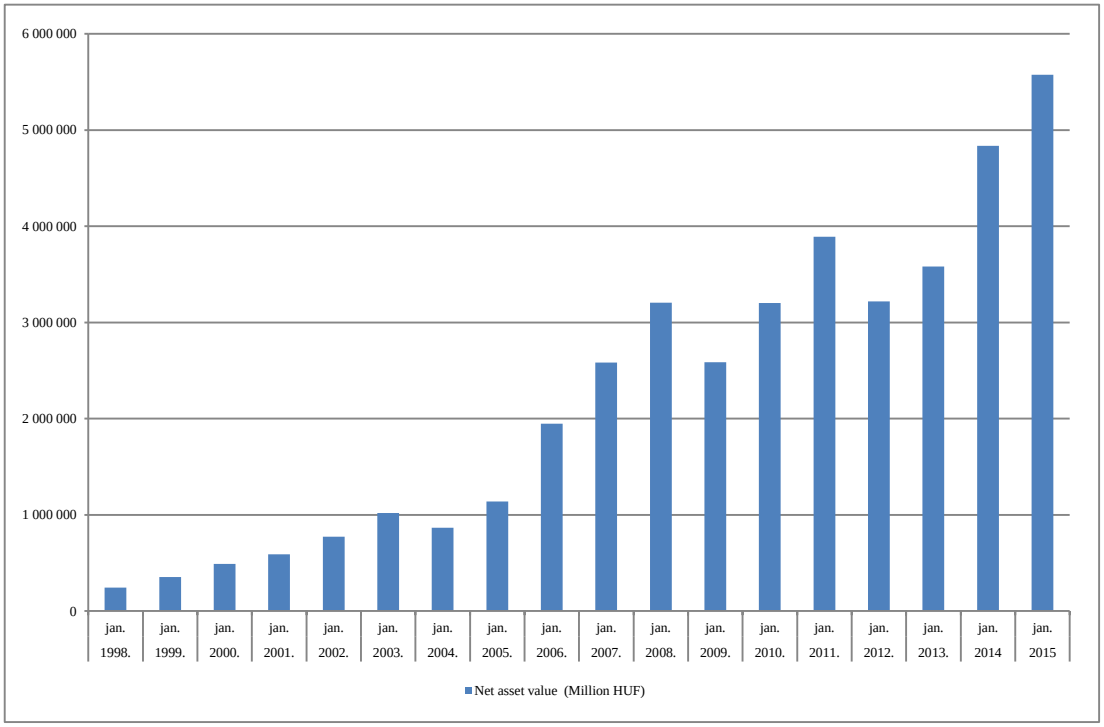

Figure 4: Net asset value of investment funds
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The following figure demonstrates the net asset value of closed and open-end funds. It is obvious that the shape and direction of open-end funds corresponds to the total asset value in Figure 4 which means that the asset of the funds is basically determined and formed by the open-end funds due mostly to their specific features. The liquidity of closed-end funds is limited, the buying and selling time is preliminary fixed while the open-end funds can be mobilized anytime, the owners have great freedom when they want to modify the investment policy, the investor can track down the asset changes even daily thus enabling quick reaction concerning the portfolio management.

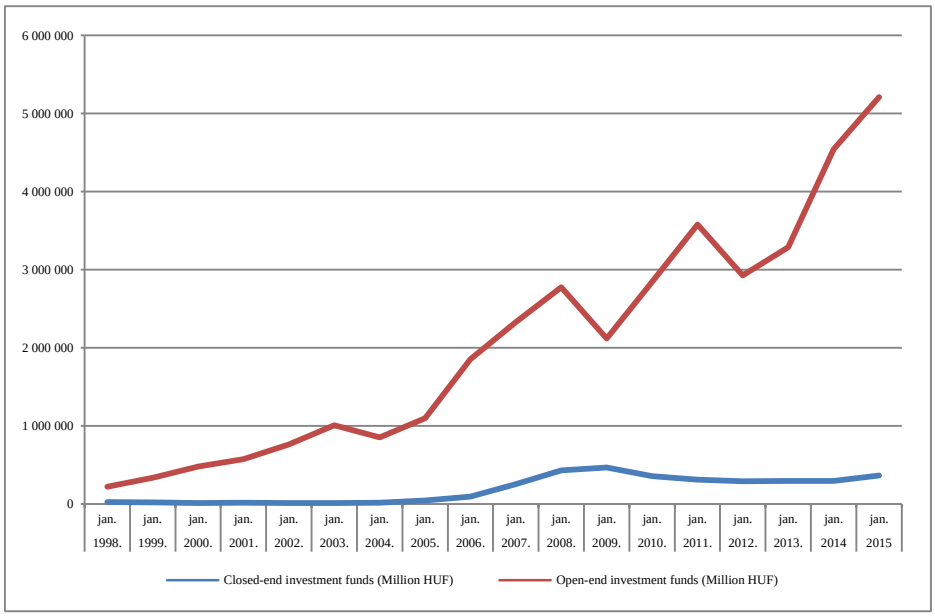

Figure 5: Net asset value of open and closed-end investment funds
Source: Own edition by www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok 2015. 03.22.

Typical risk indicators (Gál, 2011):

- Dispersion: it measures the deviation of the performance of the given investment fund in respect to the average return.
- Beta: shows the risk of the given portfolio compared to the market as a whole.
- Tracking error: expresses the dispersion of monthly differences in return (portfolio-benchmark)
- Alpha: the excess return above the expected return of the portfolio.
- Sharpe index: comparison of two investment funds with different investment strategies.
- Treynor index: indicating excess return compared to the risk-free return.

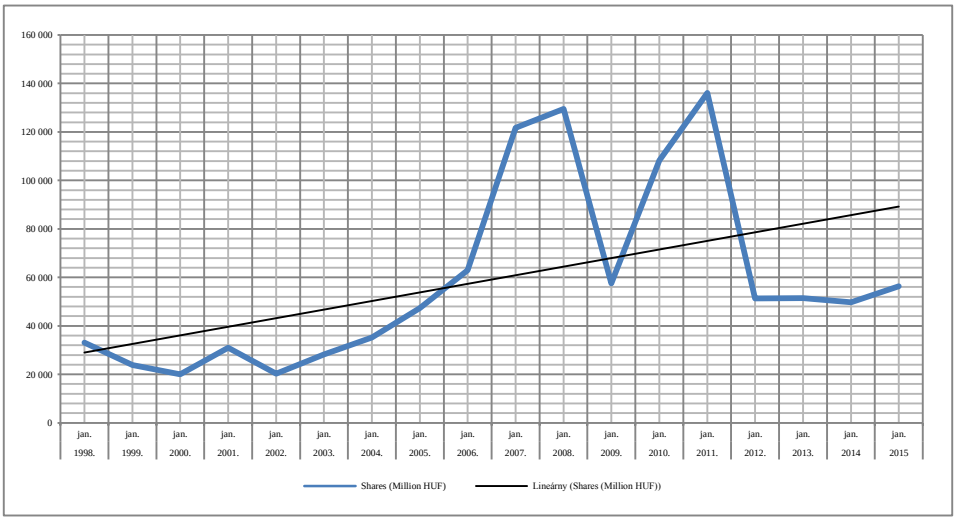

Figure 6: Ratio of share investments in the portfolio of investment funds
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The asset mix of invesment funds is determined by bonds as well as shares in regard to the investment portfolio. The portfolio has changed rather hectically in the recent period.

Altogether there has been a moderate increase. The exchange rate of shares has determined the net asset value of the funds.

The investors of the domestic investment funds come from the group of domestic savers. The following figure helps to track down, on the one hand, the increasing net asset value of funds, and on the other hand, the ownership structure.

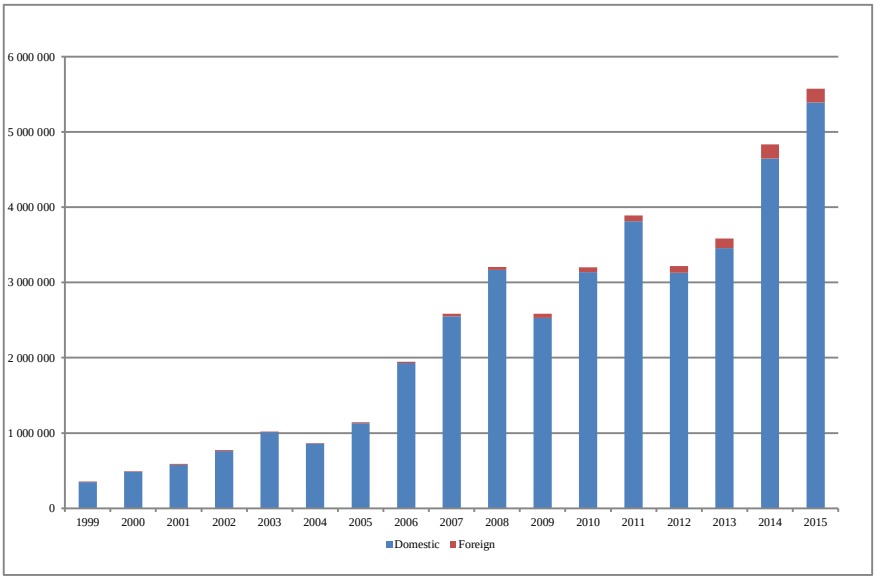

Figure 7: The distribution of month-end net asset value of investment funds according to owner sectors (data in million HUF)
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

Below the ratio of household savings can be observed. The investment funds offer saving opportunities mostly to the households and the institutional investors.

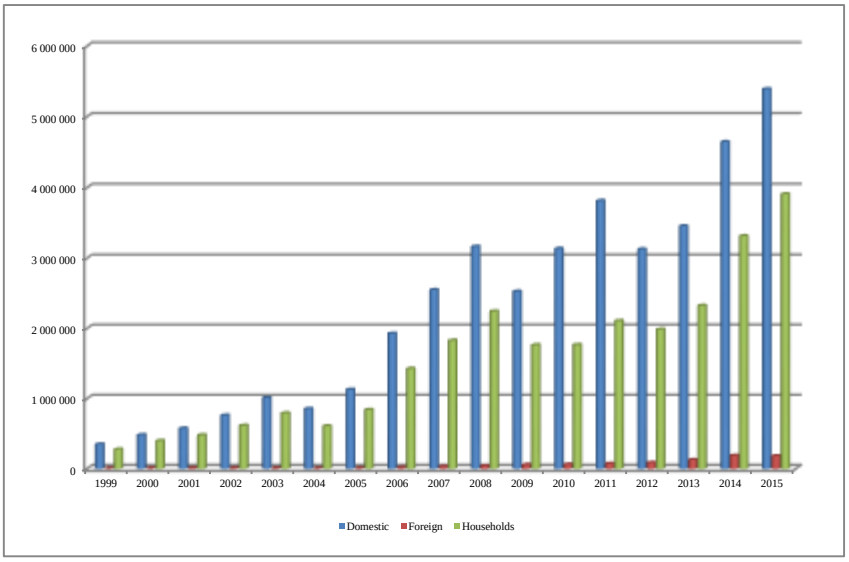

Figure 8: Ratio of household savings in the asset of investment funds
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The ownership structure of households is introduced on the following figure. It illustrates the above detailed processes even better.

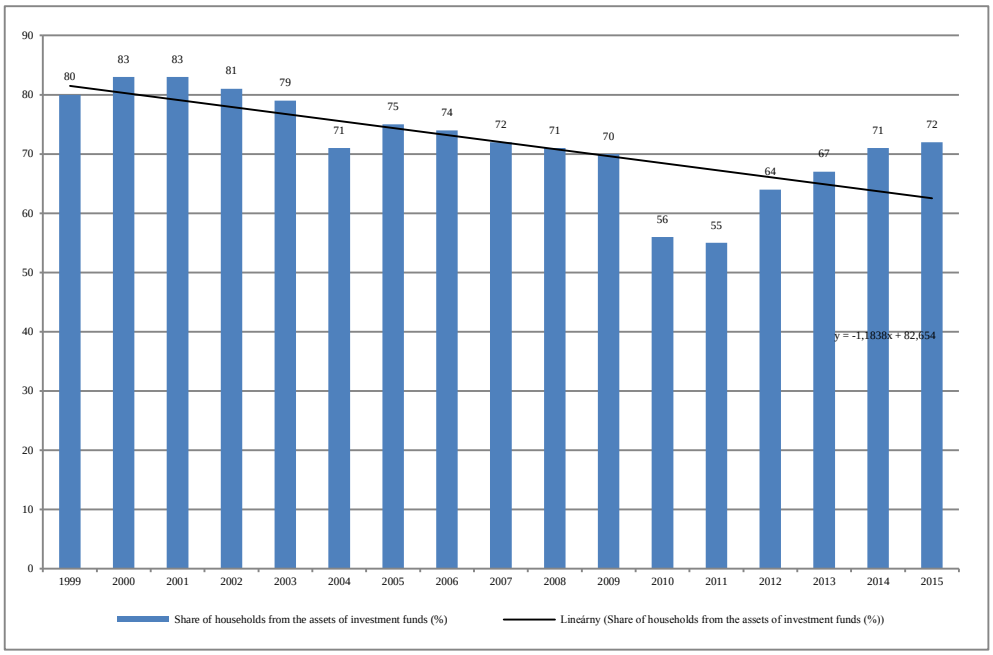

Figure 9: Share of households from the assets of investment funds (%)
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

The demand for investment funds has definitely grown after the financial crisis. The increase was also due to foreign investors as it is proved by Figure 7, too. The return of investment willingness of households is rather slow and affected by other factors, like e.g. the savings which were mobilized for early repayment. The households increasingly prefer the less risky government securities which offer safe return. This explains the slight decline regarding the data of 2015 compared to 2001-2002 but this ratio is substantially higher than the low point in 2010-2011. The value of financial instruments making up the asset value has also contributed to the changes of the ratio. The index published in connection with securities is the Unified Security Return Index similarly to the Unified Deposit Rate Index (EBKM).

Other banking liabilities which are discussed hereinafter in detail:

- Basic loan capital: unlimited matury, min. 5 years, fixed interest rate up to 10 years
- Subordinated loan capital: at least 5 years maturity
- Collateral loan capital
- Central bank credit
- Interbank loans.

The following figure demonstrates the liabilities of the credit institutional sector on the basis of data from December 2014.

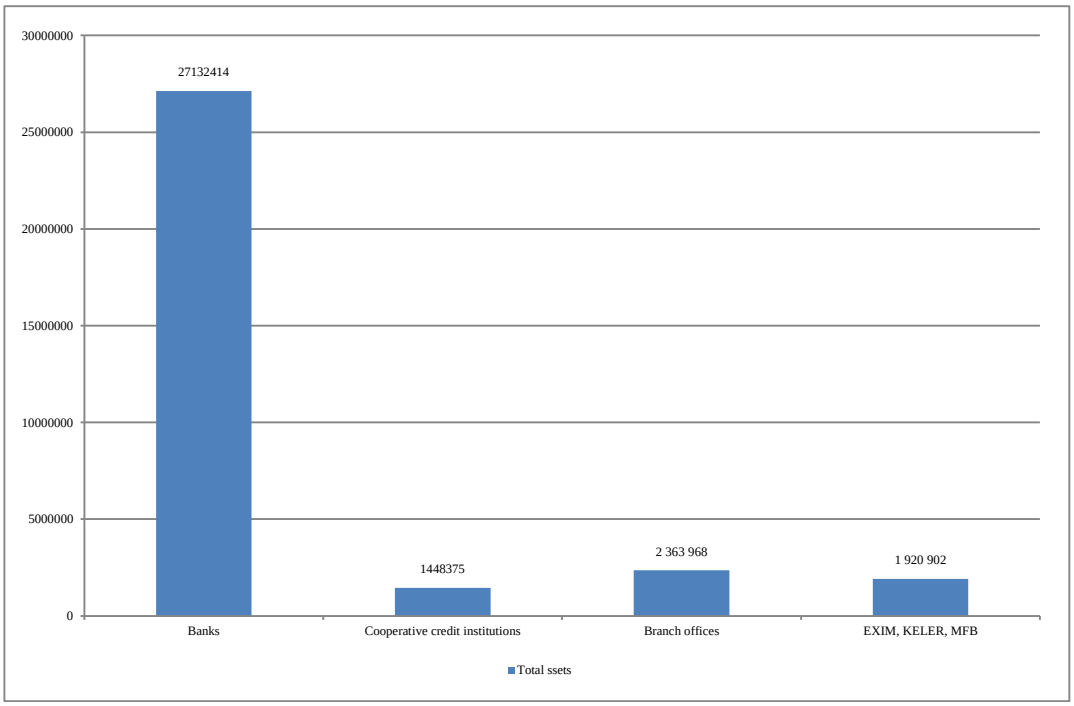

Figure 10: Composition of liabilities of the credit institution sector (Million HUF)
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

Major part of liabilities in the credit institution sector are connected to banks, followed by the liabilities of branch offices, then the three financial institutions registered as other credit institution and finally the cooperative credit institutions.

The ownership ratio of cooperative credit institutions is rather low, although the government makes efforts to increase this ratio to the detriment of banks. The target is to reach 30% share both in regard to loans and liabilities.

The cooperative credit institutions represent a significant force on the European bank market. There are about 4.500 cooperative banks operating all over Europe with 60.000 cooperative branches and altogether about 20 percent market share. They have 140 million clients and approximately 720.000 staff. They manage one-third of financial institution savings in Finland and 60% of these savings in France. According to the data of MNB/PSZAF (Central Bank of Hungary/Hungarian Financial Supervisory Authority) published in 2013, the cooperative credit institutions have almost 1.700 branch offices (they are present in every second settlement on average), employ about 8.000 staff that is more than 20% of all the employees working in the bank sector. In the last two decades, however, the number of savings cooperatives has been halved, declined from 260 to 130 and the number of cooperative members has shrinked from several millions to approximately a hundred thousand. In order to substantially increase the market share and lending activity of cooperative credit institution sector in Hungary, it is inevitable to implement a network-like operation, unify the levels of services and strengthen the capital position of the sector. (http://www.szhisz.hu/integracio/szovetkezeti-hitelintezetek-nyugat-europaban)

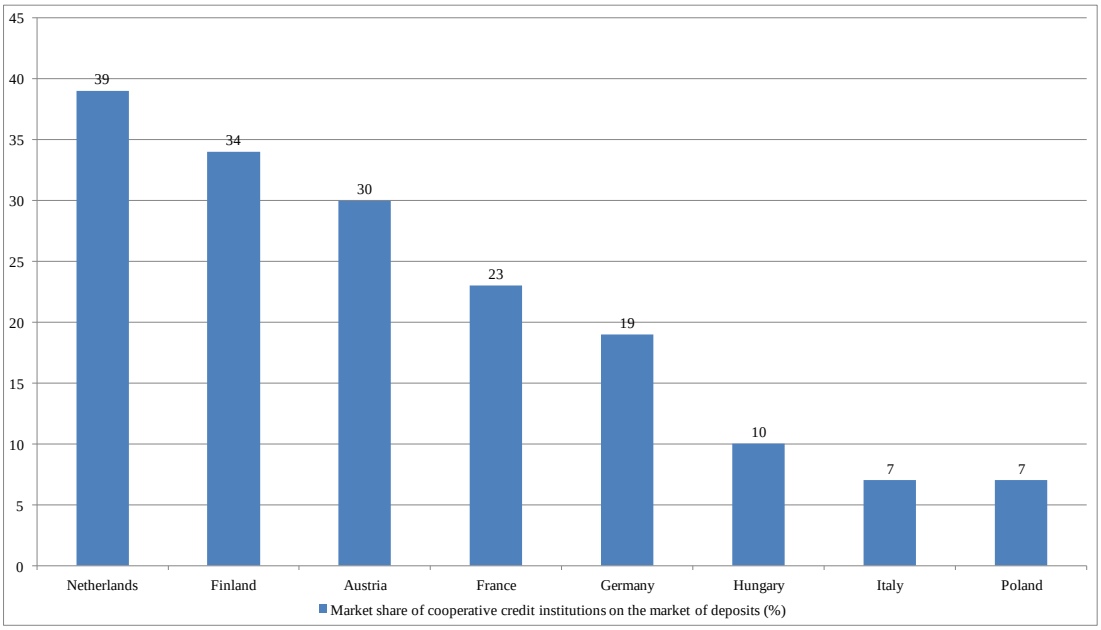

Figure 11: Market share of cooperative credit institutions on the market of deposits (%)
Source: Own edition by http://www.szhisz.hu/integracio/szovetkezeti-hitelintezetek-nyugat-europaban 2015. 04.18.

The figure clearly describes that there is room for improvement regarding the share of cooperative credit institutions in Hungary. Only the cooperatives in Italy and Poland have less share on deposit market than in Hungary.

In order to increase this share, however, it is inevitable to improve, to substantially increase the capital position. The growing number of bankruptcies of financial service providers in our days do not really help to build the trust of small investors in credit institutions. Hereinafter the share of banks is introduced, clearly demonstrating that the large banks dominate on the investor market.

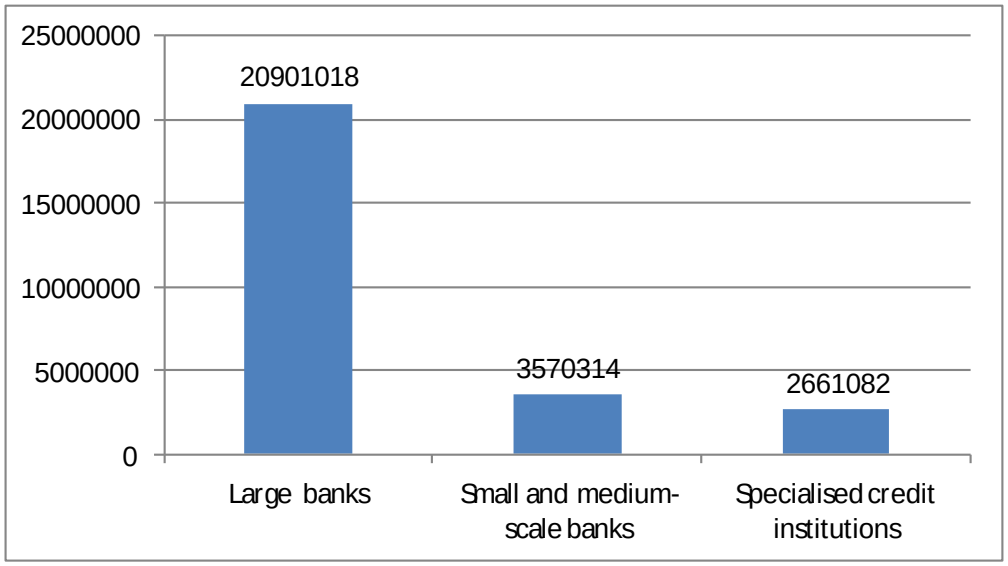

Figure 12: Liabilities of banks (Million HUF)
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

Large banks on the basis of data issued in December 2014

- BUDAPEST Credit and Development Bank Zrt.
- CIB Bank Zrt.
- ERSTE BANK HUNGARY Nyrt.
- K&H Bank Zrt.
- MKB Bank Zrt.
- OTP Bank Nyrt.
- RAIFFEISEN BANK Zrt.
- UniCredit Bank Hungary Zrt.

As regards the number of small and medium-scale banks, 24 credit institutions are distinguished. The data prove that the domestic bank market is more and more concentrated, the government has been gaining increasing influence in shaping the market developments. The data also clearly show that the large banks are dominant in the Hungarian bank market and this ratio is even more determinant if we consider that the specialised credit institutions are connected mostly to these banks.

The market is rather concentrated, considering, however, the number of cooperatives, small and medium-scale banks, it is rather segmented. Of course, the same processes are valid regarding the composition of liabilities. In the recent years, there has been a lot of communication about the necessity to improve our financial culture, the role and importance of self-care. The increasing savings may be due primarily to the level of indebtedness of a household.

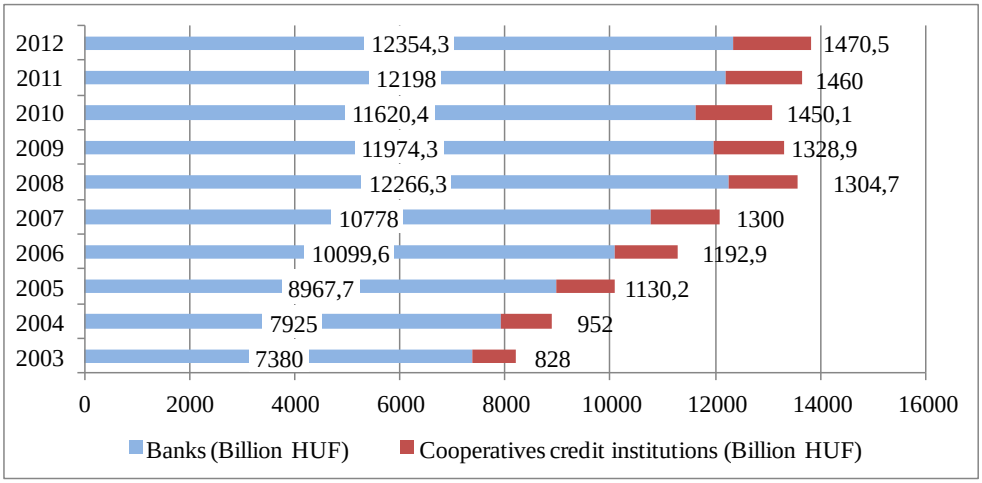

Figure 13: Deposit stock of banks and cooperatives
Source: Own edition by http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok

On the basis of the examined period it can be concluded that the willingness of households and other savers can be regarded permanent both in respect to banks and the cooperative credit institutions. The financial crisis, however, caused a slowdown in this area, too, but the savings portfolio still exceeds the level recorded in 2003. Both the banks and the savings cooperatives could increase, but minimally, their portfolio up to 2012. In 2014, the ratios were

relatively unchanged, major part of savings was taken to the banks and lesser part was given to the savings cooperatives. The ratio of insurance companies and private pension funds represented a relatively small value. Besides households. the amounts of receivables on the accounts of enterprises were also substantial in the portfolio. These were mostly non-fixed liabilities but still should be regarded liabilities.

The pension fund sector had managed the assets amounting to more than three thousand billion HUF of more than three million members– until 2011. By the end of September 2014 only 61,5 thousand members remained in the system with 205,4 billion HUF assets. In addition to the substantially decreased membership and fee revenue, the legislation fixed the eligible costs in 0,9% as against to the former 4,5% and the asset management fee could not be more than 0,2 percent of the asset (it was 0,8% earlier which was planned to be decreased to 0,4% by 2014). The regulations have changed again from January 2015. The eligible costs have become 2,5%, while the asset management fee has grown to 0,4%. The legal regulations valid from January 2015 (as it is detailed below) contain several other important regulations, too. (http://www.azenpenzem.hu/nyugdijam/magannyugdij/)

Table 1: Features of market players in 2015

Funds	**Minimum of the** monthly membership fee **(HUF)**	**Nuber of members**	**Size of the asset (Billion HUF)**
Horizont (AXA)	500	39 000	130
Budapest	200	7 263	20
MKB	1000	4 400	18
Szövetség (former Allianz)	400	10 600	30

Source: Own edition by http://www.azenpenzem.hu/nyugdijam/magannyugdij/

Table 2: Yields achieved by funds in 2014

Funds	**Portfolio**		
	Classic	**Balaced**	**Growth**
Horizont	6,73	10,91	9,81
Budapest	5,97	11,46	10,91
MKB	3,93	9,28	10,51
Szövetség	2,70	11,11	10,24

Source: Own edition by http://www.azenpenzem.hu/nyugdijam/magannyugdij/

The voluntary pension funds increased the property of their members to a really fantastic degree in 2014. Although the yield environment is lower and lower, the funds could sometimes get above their results of 2013. The winner on the top list compiled on the basis of http://www.azenpenzem.hu/cikkek/nagyot-hizott-a-nyugdijpenz/2333/ was a fund with 18,5 percent return. The pension funds – fighting for their survival – had achieved

amazing returns and fattened the assets of their members. The members of voluntary pension funds could also be satisfied in 2014. The most interesting thing is perhaps to see where the richest fund members are grouped. The average asset per one member of volunatery pension funds increased from 831,5 thousand forint to 932,1 thousand forint, compared to the same period of the previous year, which is a 12 percent jump. This dynamics exactly corresponds with the asset growth of OTP members (since this is the largest fund, it is logical that it affects the average more). The highest gain, more than 16 percent, was reached by the members of Aegon. The richest members can be found in the sectoral, company funds. Besides nice returns, the assets have also been considerably increased by the individual payments. It has been confirmed that more and more people realize that it is extremely worth fattening the accounts at the funds due to the tax benefits and the current low interest rates. In 2014, the individual payments exceeded the previous year level by 20 percent, amounting to a total of 61,2 billion HUF. Cheerfully, the amount of employer payments also increased last year, amounting to altogether 36,4 billion HUF in 2014. (http://www.azenpenzem.hu/cikkek/itt-a-penztarak-toplistaja/2341)

As regards the capital position of credit institutions, the size of deposits and loans is followed by the ratio of own capital, too. The dominance of large banks can be traced in this area, too. They can boast with the best capital positions, while the small and medium banks and cooperative credit institutions are the most vulnerable in this regard.

The banks have improved their capital adequacy ratios but their shock tolerance has not always grew with this. The rates often show a nicer picture about the capital position of a bank because the financial institution changed the structure of its riskier asset portfolio or the method of weighting the assets – as it was stated by Bloomberg referring to the annual report of Bank for International Settlements (BIS). The regulators should examine the internal risk-measuring models of banks for laying down appropriate capital adequacy requirements and these should be compared with indicators disregarding risk weights – explains the annual report of BIS which also laid down the Basel rules. The indications from the market highlight that the improvement of equity ratios of banks has been mostly due to the optimisation of risky asset portfolio while their shock tolerance, however, has not changed parallely. This make-believe raises the question whether the internal risk models of banks are appropriate for determining the regulatory capital requirements – the report says. BIS has joined the group of those regulators who consider it necessary to regulate the simple leverage ratio besides other capital requirements. The United States also plan to increase the minimum expectation of the leverage ratio from 3 to 6 percent. The banks often simply changed the measuring of risk weightings of their assets or they just replaced them to less risky instruments (e.g. government securities). (www.portfolio.hu/vallalatok/penzugy/bazel_csak_latszolag_javult_a_bankok_tokehelyzete.185696.html 2013. június 24)

The size of components in the composition of own capital of credit institutions is described by the following figure. The components clearly show that the result of year 2014 was not really beneficial for the stability and increase of capital position. The size of

general reserve making up 10% of profit is still determinant in case of large banks and it can be used by the credit institution to finance the losses connected with its activities. The large banks are outstanding both in terms of authorized capital and capital reserve.

Summary

Our objective was to give a review of the savings habits and willingnes of Hungarian people. Secondary data were used to support the review.

The secondary data clearly prove the relation of Hungarian people to savings and how quickly they react to the occuring changes evoked either by changing legislation or economic, financial or political actions. It is important to highlight the structure of financial savings before and after the economic crisis.

Before the crisis, people with savings preferred the investment funds and some riskier instruments beside the traditional government securities and bank deposits. It cannot be disregarded, however, that loans and not necessarily savings provided the basis of consumption, therefore the savings portfolio has been restructured after the crisis both in terms of quantity and structure. Latent sources were found and bank deposits mobilised for early repayments. It led to a stock decline but the crisis also drew the attention to the role and importance of reserves. Parallel with this, the lending activity has also significantly declined. The common consequence of these impacts was that the savings stock of Hungarian households improved after the crisis.

As regards its structure, however, the role of government securities should be highlighted as well as the shares which re-emerged on the demand side. The implementation of a conservative strategy, preference of safer financial tools can be stressed in the investment policy in respect to these products.

The financial service providers should fight strongly to obtain and keep the clients but it is even more important to regain and retain the confidence of customers.

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Author addresses:

BARANYI, Aranka PhD, associate professor
Karoly Robert College, Institute of Business Sciences
Email: abaranyi@karolyrobert.hu

SZÉLES, Zsuzsanna PhD (corresponding author), head of department, associate professor
Szent István University
Institute of Business Science, Department of Financal Management and Controll
Email: szeles.zsuzsanna@gmail.com

SIDLOVICSNÉ TÓTH, Ildikó, territory direstor
Boldva és Vidéke Takarékszövetkezet
Email: tothid@freemail.hu

Lector: Dr. SZŰCS, István, Szent István University, Gödöllő, Hungary

THE ROLE OF SUBSIDIES IN THE PROFIT OF AGRICULTURAL BUSINESSES

BELOVECZ, Mária

Abstract

On accession to the EU, Hungary also joined the Common Agricultural Policy (CAP) and became a beneficiary of its subsidy schemes. There are two main types of subsidies, namely, investment subsidies and income support. The present paper is going to discuss the role of income support subsidies in the profit of agricultural businesses. My research questions are as follows: Do subsidies create extra income for businesses, or is their role restricted to covering expenses? Would businesses be generating any profit at all without these subsidies? In order to answer these questions, I analysed how subsidies were spent on covering expenses and on generating profit. My paper reflects on the viability and profitability of agricultural businesses without EU subsidies and support.

Keywords: Agriculture, Profitability, Subsidies

JEL classification: Q14

Introduction

Hungary's accession to the EU changed the economic structure significantly, including agriculture. Agricultural businesses had to learn to operate and run a successful business within the limits of a new market, and comply with new laws and regulations. Disorganised and underfunded Hungarian farms were forced to take up the challenge of competitive and developed businesses running in the former member countries. Prior to accession, Hungarian businesses did have access to significant EU funds aimed at getting them more prepared; subsequently, once within the EU, they are entitled to a wide range of supports and subsidies in line with the Common Agricultural Policy (CAP) and its initiatives and directives.

Agenda 2000 split up subsidies into two categories: agricultural production and rural development. The new member states were entitled to a simplified area-based subsidy starting from 2005, which only caught up with the amount and level of subsidies accessible in former member states by 2013 (Burgerné, 2010.) However, subsidies up to 30% from the national budget were allowed since the beginning to supplement the available EU funds.

The CAP is always drawn up and budgeted for seven-year periods, with the option of making the necessary corrections and changes along the way. In 2003, there was a major mid-term overhaul overseen by EU commissioner for agriculture Franz Fischler. He aimed at creating a positive image and increased acceptance of the CAP both within and outside the EU. The

most important changes included the separation of direct subsidies and production, the introduction of single farm payments (or single area payment schemes, SAPS), cross compliance and modulation. In addition, first pillar expenses related to the regulation of agricultural markets were capped at 2003 amounts, i.e., members were not allowed to exceed the nominal value of subsidies from this year onwards. Moreover, milk, cereal and sugar regimes were also significantly modified (Jámbor, 2014). Popp et al. (2004) summarise in detail the changes in CAP introduced in 2003; whereas Kovács (2006) discusses the effect of the new policies on the production, income and land use of agricultural businesses.

"Following accession to the EU, the agricultural subsidy system in Hungary comprises the following elements:

- area-based subsidy (single area payment scheme),
- export subsidy and intervention,
- rural development subsidies,
  - National Rural Development Plan,
  - Agriculture and Rural Development Program,
  - "New Hungary" Rural Development Program,
- supplementary subsidies (from national budget),
- national subsidies (independent from EU funds)" (Mikó et al., 2010)

The aims of the various national rural development plans and programs were to contribute to a strong, competitive and sustainable agricultural sector, and to increase profitability and employment in rural areas with the help of integrated rural development programs (Kovács, 2004).

The main aims of the Agriculture and Rural Development program were as follows:

- increasing the profitability and competitiveness of agricultural production and food processing;
- developing environmentally friendly practices in agriculture, the rationalisation of land use;
- rural development (Weisz & Kovács, 2007).

Table 1: Agricultural and rural development subsidies (million HUF)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
National subsidies	159 169.5	149 738.7	151 697.7	112 777.2	120 280.4	61 113.1	64 548.6	71 074.9	55 478.4
EU subsidies supplemented by national schemes	97 773.4	126 927.1	116 014.9	109 688.1	191 017.8	175 202.9	209 990.1	n.a.	220 494.4
National budget	18 331.9	27 839.1	37 248.2	41 093.5	53 820.1	46 587.6	57 715.5	n.a.	56 393.9
EU funds	79 441.5	99 088.0	78 766.7	68 585.6	137 197.7	128 615.3	167 777.4	n.a.	164 100.5
Direct EU subsidies	154 616.2	153 217.4	167 966.4	203 796.7	320 133.1	297 199.7	197 852.9	n.a.	393 017.5
SAPS	148 001.9	93 472.8	119 992.1	164 210	228 712.1	247 412.0	176 078.5	321 261.0	360 318.4
Total	411 562.1	429 559.0	435 679.0	426 261.9	631 431.1	533 515.7	472 391.6	648 866.6	668 990.3

Source: Report on the situation of agriculture, Ministry of Agriculture, year 2013 (data from 2012-2013) 2011 (2011), 2010 (2010), 2009 (2008-2009), 2008 (2007), 2006 (2005-2006)
n.a.: not available

In summary, total agricultural subsidies have a significant increasing trend, and the ratio of funds provided by the EU is also on the rise. In 2013, more than half of the total subsidies

comprised single-area payment schemes (SAPS). Most subsidies are aimed at income supplements, and less significant amounts are directed towards investment subsidies.

In the period 2007-2013, the total CAP expenditures were capped; and despite the enlargement of the EU and new aims and directives, total subsidies had dropped 7.8% since 2006. On one hand, there is a tendency to reduce the amount and significance of EU subsidies and CAP funds in the long run; on the other hand, export subsidies are gradually phased out and replaced by more complex rural development programs (Vásáry, 2011). CAP reforms for the years 2007-2013 aim at decoupling, i.e., making subsidies independent from production; in addition, increased productivity and environmental awareness are also top priorities. The financial background for these initiatives is not under the umbrella of the structural funds any longer, and subsidy resources under the two pillars of the CAP have been regrouped and reshuffled. Funds are being provided and distributed by the European Agricultural Guarantee Fund and the European Agricultural Rural Development Fund, as well as supplementary sources from national budgets (Mikó et al., 2010). Direct subsidies, export subsidies and market interventions (first pillar) are covered by the European Agriculture Guarantee Fund, whereas rural development programs are financed by the European Agricultural Rural Development Fund (Halmai, 2010).

When the budget for the period 2007-2013 was drawn up, it was also decided that a "health check" would be necessary in 2008 in order to evaluate experiences from previous years and fine-tune details. The following modifications were made in 2008:

- Modifying the system of modulation;
- Increase decoupling;
- Introduction of Article 68 measures (regarding subsidies for special sectors);
- Additional conditions for entitlement to direct subsidies;
- Preparing for the abolition of milk quotas;
- Prolonging SAPS subsidies;
- Abolishing land set-asides;
- Simplifying cross compliance;
- Additional funding for young farmers;
- Modifying intervention mechanisms (Jámbor, 2014).

Following the 2008 reforms, CAP had to face increased criticism, especially regarding the system of direct subsidies. According to Swinnen (2009), direct subsidies have limited long-term effectiveness, since agricultural employment has been on the decline despite increasing subsidies. Moreover, the geographical distribution as well as the share of subsidies according to business size and land area is also disproportional. Most subsidies are provided for land owners and primary producers, and this contributes to increasing land prices. Currently, the income of rural and agricultural households is mostly provided by sources outside the agricultural sector itself.

In 2013, EU commissioner for agriculture Dacian Ciolos introduced another round of reforms, following an extensive process of negotiations, which did not result in any significant

breakthrough, but is credited for fairer distribution of funds, increased focus on food safety and market-oriented approaches, and stricter emphasis on meeting environmental guidelines. In the current system, member states have increased freedom in making decisions regarding the details of implementation (Jámbor, 2014). The CAP also mandated the further decrease of subsidies starting in 2013 (Burgerné, 2010), and demanded an increased level of uniform practices among member states (Ficsor, 2011).

The new CAP for the period 2014-2020 aims at a more complex system of subsidies, and grants increasing freedom to member states to make their programs specific to their own needs. A total of 278 billion euros are allocated to the first pillar, and an additional 85 billion euros to the second pillar. Hungary is entitled to 10.97 billion euros (7.9 and 3.07 for the two pillars respectively). These figures mean a decrease of 13% (first pillar) and 18% (second pillar) compared to the funds available in 2013 (Potori et al., 2013).

From 2014 onwards, CAP is EU funded but not necessarily uniform across all member states. Single area payment schemes form the backbone of the system, which is independent from production. Adhering to cross compliance regulations is mandatory. Starting from 2015, Hungary is allowed to provide supplementary subsidies to applicants who are not subject to simplified subsidies of small farms. In order to encourage environmentally and regionally appropriate practices, "green subsidies" may also be provided additionally. The requirements are: diversification of crop production, preservation of permanent pastures and grasslands, or creation and maintenance of ecological areas of farms (Potori et al., 2013).

As for the total amount of subsidies per hectare of agricultural land, there is a significant relationship between farm size and funds available, i.e., individually managed and small-size farms receive significantly less subsidies than corporate farms or large holdings. The following reasons are at play:

- Changes in the structure of management and ownership are extremely slow and modernisation is lagging behind;
- Smallholders take fewer risks, are reluctant to take out loans, and are hindered by the fact that in many cases, there are multiple owners such as family members on paper (for tax purposes);
- Small farms have a lower ratio of animal husbandry, which is relatively better subsidised under the current schemes;
- Corporate farms had better access to subsidised loans prior to accession;
- Corporate farms have a higher chance of complying with the requirements of subsidies related to environmentally friendly practices (Alvincz, 2008).

In Hungary, farm sizes are usually, but not always, related to ownership structure. However, there are also multiple examples of larger sized farms run by individuals, or small-size farms owned by corporations or communities (Kapronczai & Udovecz, 2009; Kapronczai, 2014).

Material and methods

My research is based on data from the Farm Accountancy Data Network (FADN) run by the Research Institute of Agricultural Economics in Hungary, ranging from 2004 to 2013. This database is designed to represent the whole of the national agricultural sector, including individual and corporate farms. The aim of the analysis is to establish whether farms and holdings would be able to make a profit even without subsidies, i.e., are they able to make progress if they are left to their own devices.

First of all, the analysis focuses on the amount of direct income support subsidies over the years. Funds directly from EU sources only started matching levels available in the former member states in the year 2013; however, from 2010 onwards, the national budget did provide supplementary subsidies to all eligible farms to equal the amount of funds available in former member states. The data also show the share of subsidies in total income, and the total gross profit that would have been without subsidies. For the latter sums, gross amounts (before taxes and dividends) were entered into the database. Subsequently, the difference between total gross profit and subsidies yields a figure called corrected profit, which reflects the income that would have been possible without subsidies. This figure is supposed to throw light on whether the subsidies are merely sufficient to make up for expenses, or did they also provide additional income for the holding. In the case of positive gross profit and negative corrected profit, it is considered to be a case of covering expenses; the ratio of corrected profit and subsidies reflects the percentage of subsidies spent on covering expenses. On the other hand, in the case of positive gross profit and positive corrected profit, when the holding would have been profitable even without subsidies, it can be argued that the subsidies contributed to generating extra income for the farm.

Results and discussion

Subsidies have always played a significant part in the profitability of agricultural businesses, both before and after EU accession. Subsidies exceed total gross profit in each and every year from 2004 to 2010, though their difference varies (Table 2). The ratio of corrected profit and agricultural subsidies clearly demonstrates that a significant proportion of subsidies was used to cover expenses. However, after 2005, there is a slight decrease in this ratio, i.e., subsidies were still necessary to cover expenses, but there was also some extra income and profit generated. This development was temporarily stalled by the economic crisis in 2009; businesses were unable to reduce their expenses and improve their cost-effectiveness. Since 2011, a new trend has started: certain sectors are now able to generate a profit even without subsidies. It can be safely concluded that up until 2010, profits in the agricultural sector were exclusively due to extensive subsidies provided for farms; without them, profits would not have been possible.

Table 2. Incomes and subsidies, and their role in profits (1000 HUF/hectares)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total net income	348.35	345.93	370.14	382.57	449.66	408.22	444.09	521.36	552.98	569.4
Subsidies	45.76	53.58	58.31	59.22	68.80	72.80	79.20	92.14	95.08	105.6
Subsidies/income*100 (%)	13.14	15.49	15.75	15.48	15.30	17.83	17.83	17.67	17.19	18.55
Gross profit (before taxes)	23.26	29.10	44.55	50.16	60.70	31.16	58.51	112.44	118.4	111.04
Corrected profit (difference between gross profit and subsidies)	-22.50	-24.48	-13.76	-9.06	-8.10	-41.64	-20.69	20.3	23.32	5.44
Ratio of corrected profit and subsidies(%)	49.17	45.69	23.60	15.30	11.77	57.20	26.12	---	---	---

Source: calculations based on FADN data

The role of subsidies in gross profit in the case of corporate farms

From the data in Table 3, it is clearly visible that corporate farms have higher levels of income and subsidies than the national average in each year; moreover, both sets of figures show a steady increase as well over the observed time period. Despite these positive achievements, net profits continued to fall below the national average. It can also be concluded from the negative figures in the corrected profit line that without subsidies, they would not have generated profits in any of the years assessed. The economic crisis in 2009-2010 hit the sector hard: over 50% of subsidies were used to cover expenses. The ratio of corrected profit and subsidies keeps on being 15-36% higher than the national average.

Table 3: Income and subsidies and their role in profit, corporate farms (1000 HUF/hectare)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total net income	445.42	442.29	457.76	462.79	578.43	523.12	567.57	678.72	708.01	741.5
Subsidies	53.71	62.75	67.47	67.49	79.89	82.87	91.96	105.1	109.49	121.84
Subsidies/income*100 (%)	12.06	14.19	14.74	14.58	13.81	15.84	16.20	15.49	15.46	16.43
Gross profit (before taxes)	16.62	21.26	33.02	34.36	54.24	18.57	38.23	86.59	92.63	77.81
Corrected profit (difference between gross profit and subsidies)	-37.09	-41.49	-34.45	-33.13	-25.65	-64.30	-53.73	-18.51	-16.86	-44.03
Ratio of corrected profit and subsidies(%)	69.06	66.12	51.06	49.09	32.11	77.59	58.42	17.61	15.40	36.14

Source: calculations based on FADN data

The role of subsidies in gross profit in the case of individual farms

In the case of individual farms, the amount of profits and agricultural subsidies per hectare are below the national average as well as below the level of corporate farms (Table 4). Although total income decreased slightly in certain years, there is an overall tendency of increase. Subsidies were rising steadily in the given time period. The rate of increase in subsidies is higher than the rate of rise in profits; subsidies continue to play an ever more significant role in generating profit and exceed the national average.

However, it is apparent from the set of data that as opposed to the national average and the results of corporate farms, individual farms do manage to generate positive gross profit, and with the exception of three years (2004, 2005, 2009), they were also profitable even without subsidies. In the above mentioned years that were exceptions, they used one half to one third of the subsidies provided for covering expenses, this ratio being significantly more favourable than the national average or the figures of corporate farms in the corresponding years. This

positive achievement is probably due to the tendency that individual farms operate at much lower costs and expenses than corporate farms; for example, lower levels of mechanisation incur lower depreciation figures, and labour by owners or family members does not necessarily overburden the expenses side of the balance sheet.

Table 4: Income and subsidies and their role in profit, individual farms (1000 HUF/hectare)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total net income	253.64	246.13	284.08	301.93	322.05	298.26	332.00	403.24	426.34	429.61
Subsidies	38.00	44.08	49.31	50.9	57.81	63.17	67.61	82.41	83.32	92.41
Subsidies/income*100 (%)	14.98	17.91	17.36	16.86	17.95	21.18	20.37	20.44	19.54	21.51
Gross profit (before taxes)	29.74	37.22	55.87	66.03	67.10	43.21	76.92	131.85	139.46	138.04
Corrected profit (difference between gross profit and subsidies)	-8.26	-6.86	6.56	15.13	9.29	-19.96	9.31	49.44	56.14	45.63
Ratio of corrected profit and subsidies(%)	21.74	15.56	---	---	---	31.60	---	---	---	---

Source: calculations based on FADN data

Conclusions

It can be concluded that the role of subsidies varies across the agricultural sector, but it continues to have a significant impact on the farms' ability to generate profit. Across the entire sector, between the years of 2004 and 2010, farms would have operated at a loss had it not been for the subsidies received from national and EU funds. However, since 2011, profitability has also been boosted by increased efficiency and effectiveness. As for farms with different ownership structures, in the case of corporate farms, subsidies are mainly used to cover expenses (15-78%), but they are also increasingly contributing to generating profits as well. On the other hand, individual farms needed subsidies for covering expenses only in 3 years out of the surveyed time period; otherwise, subsidies contributed to increased income and profit at a higher degree.

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Author addresses:

BELOVECZ, Mária, Institute of Business Studies,
Szent István University, Gödöllő, Hungary

E-mail: belovecz.maria@gtk.szie.hu

Lector: Ing. Norbert GYURIÁN, PhD, J. Selye University, Komarno, Slovak Republic

ANALYSIS OF POSSIBILITY OF WIDESPREAD RENEWABLE ENERGY PRODUCTION WITH HOME SOLAR SYSTEMS IN HUNGARY IN THE LIGHT OF REAL DAILY NEED, PLANNED NUCLEAR CAPACITY EXTENSION AND POSSIBILITIES OF PERFORMANCE EQUALIZATION

BUNKÓCZI, László PhD - SZALAY, Zsigmond Gábor PhD

Abstract

With this study the writers wishes to express that not only green energy (as good one) and/or nuclear energy (as bad one – from good till bad) may exist excluding the other, but with the rational behavior of the national energy government, energy suppliers/distributors and the households, these could complete each other and with pumped water reservoir performance balancing - with an adequate energy mix - the aimed electrical energy independency could be approached or better reached.

Key words: solar energy, national daily production and use, energy mix, performance equalization

JEL Classification: Q210, Q410, Q250

Introduction

The situation between Russia and Ukraine, and the Russian threat because it had been reiterated again reinforced the opinion of the EU to decouple Europe from foreign energy imports. Most strongly supported by the Germans and Poles stance in late February went beyond the political resolutions, and the EU Commission has committed itself to creating a unified energy union within the EU: the EU's strategy for the adoption of a unified energy market, interconnected networks and flexible systems, with smart-grid development (Manitu Solar, 2015).

By 2025, solar power in sunny regions of the world will be cheaper than power from coal or gas, according to a new Fraunhofer report for German think tank Agora Energiewende, which stresses that success depends on stable regulatory conditions (Meza, 2015).

As a contract between Russia and Hungary was signed (it was classified, but the available sources corresponds with law suggestion T140 in 2014 (Varga, 2014)) for lifetime extension of existing 2.000 MW nuclear energy performance and 1.200 MW capacity increase in Paks with starting date 2023, the question is raised in that way, how renewable solar energy could be joined to the existing and planned capacities as completing them.

Comparing to nowadays situation, when the 30%-40% of electric energy is imported, than taking into account the planned new 1.200MW nuclear reactor block, there is still a huge energy lack between daily electricity production and use.

With this paper the joining possibilities of solar energy sources are examined, with examining from households view is it economically affordable and from national viewpoint is it feasible as from 2023 only 50% of electrical production will be available comparing to today needs!

Material and Methods

In the whole 2nd chapter a deduction can be followed from the households view (till economical conclusion) across national interest (daily equalized production and use) – preferable with no import use) till joined energy production with pumped water reservoir performance equalization where the energy independence theoretical can be reached or periodically exceeded.

What a home solar system is?

A home solar system is constituted by:

- solar panels (nowadays with average 240-250W peak power output/each), the number depends on the need of yearly consumption, they produce DC electricity,
- an inverter (converts DC electricity to 50 Hz AC, so it can be fed back to the local network), the performance depends on the number of solar panels, in case of less than the optimal, the efficiency of the inverter is worse, more can't be,
- an electrical meters which reports/calculates both the in- and out fed electricity, yearly the balance is important,
- two surge protectors/interrupters, one is in the DC circuit, the other in the AC,
- holders, cables.

The solar panels usually fitted on the roof (see Figure 1!), which in ideal case faces to South, but in less ideal cases may faces to East till West, and in worse cases to North-East, North West, but it may depend on the aim.

In national size (like later: 2,5 million home solar panels) it would be desirable to have a normal distribution of mounting directions from East till West (depends on any future potential consensus between government, system operator, local service providers, users, potential electric energy suppliers etc.).

This normal distribution would be good, as not only houses with South facing roofs are given, with this normal distribution the summertime peak overproduction could be a little decreased and the real daily need could be better approximated. About the less yearly production of systems facing to East and West (not to South) could be dealt with some equalization standard where the aim would be nearly same turnover of the investment. This could be a common aim.

Mainly the solar panels and the inverter costs the most, and after the cost of planning, granting and mounting the panels on the roof, connect it to the local electrical network, which (planning, granting, mounting, connecting) can be assumed about 200.000 HUF, about 651.45 EUR.

For better understanding/view see Figure 1, of the scheme of the above described elements!

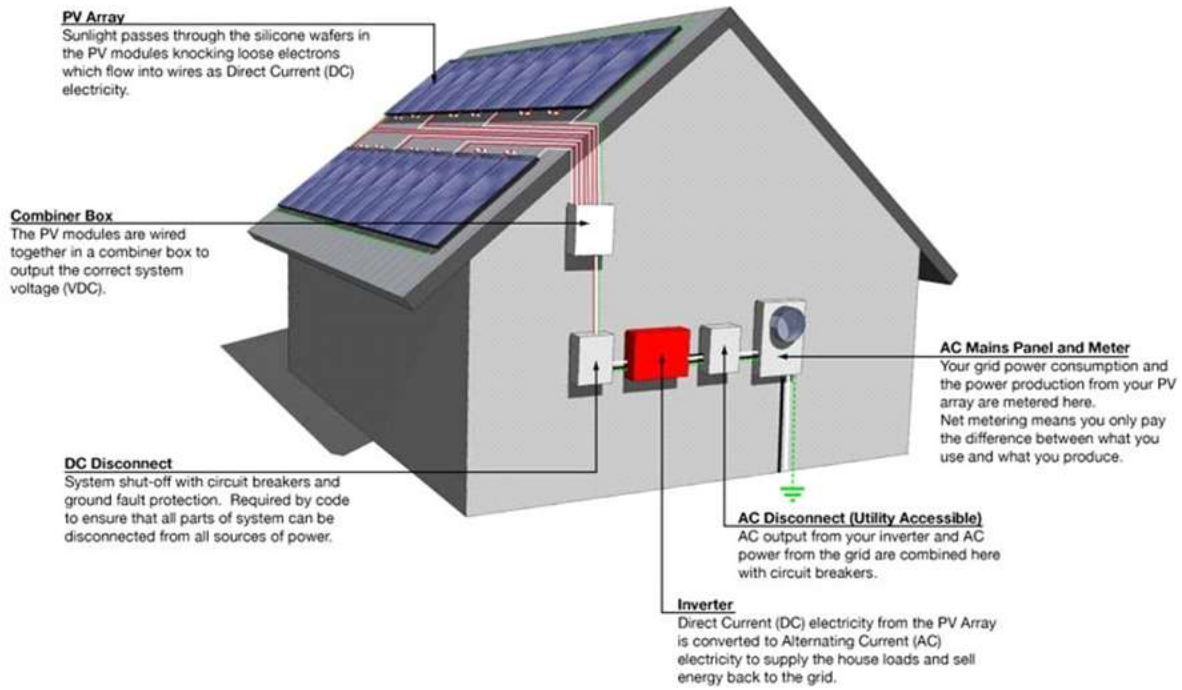

Figure 1 the scheme of a solar system on a house
(Source: on the base of
http://www.lighthousesolar.com/content/img/album/grid-tied-solar-electric-system-design-detail.jpg)

In most ideal case they can be fitted on special surfaces which can be turned around the vertical axis (from sunrise position till sunset position), and the angle of the surface can be changed by the horizontal axis, that the surface of the solar panels can be always perpendicular to the sun. This solution is so called 2 axis tracking, and usually costs nearly as much as a not tracked system. In south Germany a lot of from these can be seen near villages lying in ½ till 1 hectare, they may cover the consumption of the whole village.

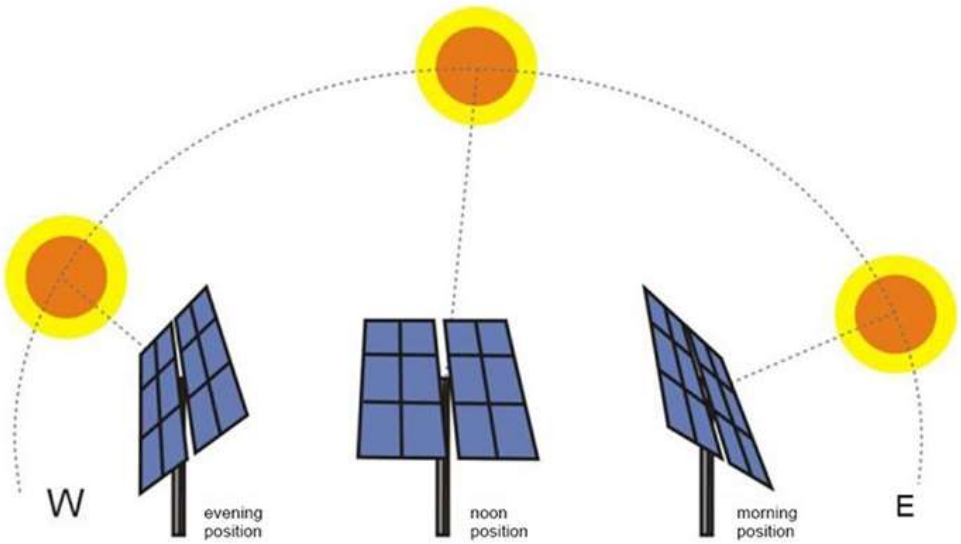

Figure 2 Scheme of a 2 axis track able solar panels
(Source: http://www.qldwindmillandsolar.com.au/Images/solar-tracking-diagram/solar-tracking-diagram.jpg)

How much electricity is used in an average household?

According to E.ON (one of great energy supplier also in Hungary) statistics, the average is calculated as 1.579 kWh (www.eon.hu/Aram_informaciok_atlagos_eves_fogyasztas, 15.5.28).

Other sources indicates averages, which range from 100-200 kWh monthly, as this results as 1.200-2.400 kWh yearly consumption, thus the yearly average is 1.800 KWh. Last year and before by own experiences it was also 1.800 kWh, but with wide-spreading (relative cheap – and payable) LED technology in lightning and also in LED televisions, the real yearly electricity usage is decreasing exactly to the above shown value – and may be risked, that the value can be a little bit more decreased perhaps under or exactly to 1.500 kWh.

As in Hungary about 10 million people/inhabitant live, there are about 4.39 million flats, but half million is empty (Ditróy, 2012) and mostly the 3 million aged and pensioner can be removed with about 1.5 million flats as usually they don't plan for 20 years or more, so about 2.5 million flats/households can be calculated with.

How much electrical energy a home solar system produces in Hungary

The question is raised in that way better, that how big system is needed to cover the yearly consumption. Covering more is only worth if someone is planning to use more electrical consumer (deep freezer, water boiler – water boiling or keeping it hot/warm electrically is not worth economically) as above the yearly consumption the difference is taxed by personal income tax (16%), so that will worsen the return in the return period and the benefit later.

For an average household a solar system with 1,5kW performance is enough, which means 6 solar panels (240-250W/each), one inverter with 1,5 kw constant performance (1,7 kW peak power).

This can be calculated with the “Photovoltaic Geographical Information System - Interactive Maps” (CM SAF, 2009) which is maintained by the European Commission.

In this instance an average is calculated to an average house located in Dunaújváros, which is nearly in the middle in Hungary also in terms of latitude and longitude. 1.5 kW peak power, 10% system loss, 45° degree of roof’s slope, facing to South. See the Figure 3!

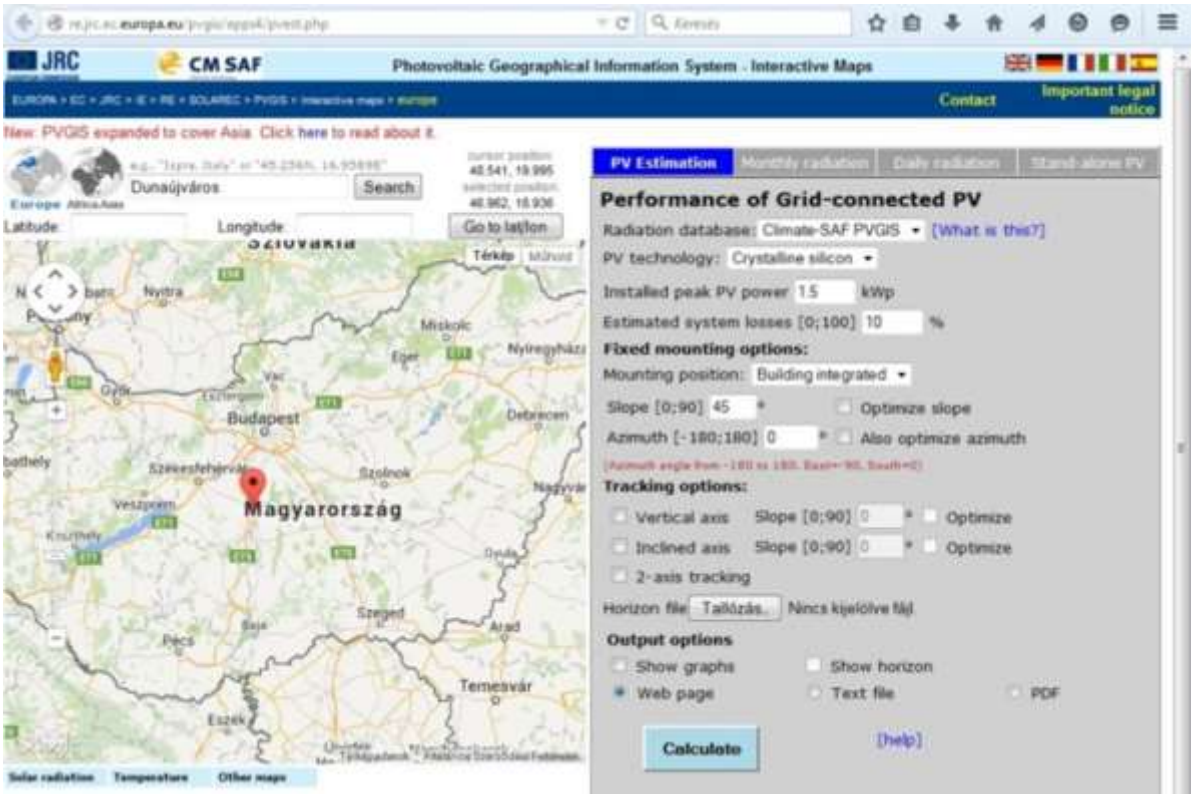

Figure 3 Calculation of yearly electricity production for an average household in Hungary with 1.5kW peak power output
(Source: http://re.jrc.ec.europa.eu/pvgis/apps4/pvest.php)

The result is 1.640 kWh, which is above the 1.579 kWh. Checking with +45°/-45° deviation from South (here: Azimuth) 1.540 kWh is the result which can be assumed enough as (1.540+1.640) /2 = 1.590.

Of course, there may be houses, places where +1 solar panel is needed, but concerning the whole cost of the system, the price of one panel can be the 7% of that 1.5kW systems price. If more than one is needed, the cost will jump, as an inverter with higher constant/peak power capacity will be needed.

Statistically it can be assumed, that this 1.579 kWh can be produced in Hungary with a 1.5 kWh peak power system.

See the Table 1 for monthly production data and Diagram 1 also!

Table 1 Monthly electricity production for a year for an average household in Hungary with 1.5kW peak power output (source: http://re.jrc.ec.europa.eu/pvgis/apps4/PVcalc.php)

Fixed system: inclination=45°, orientation=0°				
Month	**E_d**	**E_m**	**H_d**	**H_m**
Jan	2.04	63.3	1.62	50.1
Feb	3.13	87.6	2.52	70.7
Mar	4.91	152	4.17	129
Apr	5.99	180	5.29	159
May	5.94	184	5.41	168
Jun	5.93	178	5.46	164
Jul	6.17	191	5.74	178
Aug	6.16	191	5.69	176
Sep	5.12	153	4.55	136
Oct	4.29	133	3.67	114
Nov	2.54	76.2	2.09	62.7
Dec	1.54	47.7	1.21	37.7
Yearly average	**4.49**	**136**	**3.96**	**120**
Total for year		**1640**		**1440**

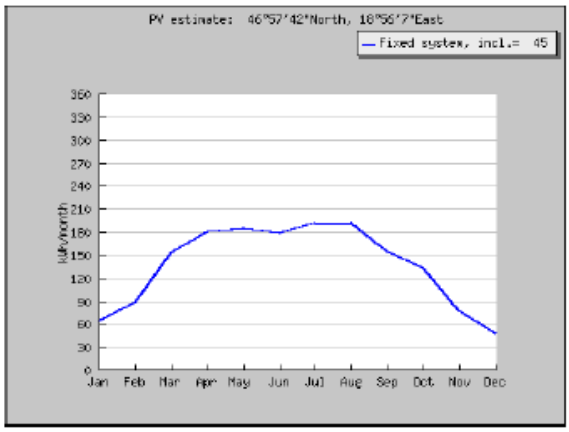

Diagram 1 Monthly distribution of the production of a 1.5kW solar system in Hungary (source: http://re.jrc.ec.europa.eu/tmp/jpgcache/PVdataimage46_57_42_N_18_56_07_E_2kW_45deg_0deg_10.00I1V1.png

E_d: Average daily electricity production from the given system (kWh)
E_m: Average monthly electricity production from the given system (kWh)
H_d: Average daily sum of global irradiation per square meter received by the modules of the given system (kWh/m^2)
H_m: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m^2)

The most important is that the distribution of the production is not flat, neither monthly nor daily (here is not shown). In summertime overproduction will be brought up at daylight, while winter, spring and autumn that 2.5 million 1.5 kW peak power system can't produce enough energy to cover the needs.

This must be joined to the national electrical system, and in this size it's not an easy task. About this see/read later in "National and the National Electrical System Operator's (MAVIR) viewpoint" chapter!

Turnover planning

With a typical easy dividing (yearly turnover/sum of investment) the rate of return can be calculated. Note that in this case neither inflation, nor the lost profit of the invested sum is taken into account, but comparing it with bank deposits, the effect of inflation/deflation is contained also.

The price of the electricity is maximized and given by the government since "Overhaul reduction I and II" is launched, but as it can be seen here, depends on the time intervals, see Table 2!

Table 2 Fee of electricity within ELMÜ area

	Fee of energy	Fee of network use	VAT (27%)	Brut fee of electricity
A1 preferential pricing	15,06	13,475	7,70	36,24
A1 normal pricing	16,10	13,475	7,98	37,56
A2 pricing in peak period	19,98	13,475	9,03	42,49
A2 pricing is valley period	11,88	13,475	6,84	32,20
B pricing	11,25	7,005	4,92	23,18
B GEO pricing*	12,16	7,005	5,17	24,34
H pricing	11,25	7,005	4,92	23,18

(Source: http://www.elmu.hu/#!/lakossagi-ugyfelek/tarifak-dijak/lakossagi-tarifatabla)

Calculating with 5.400 HUF (own instance) monthly for 146 kWh, 36.96 HUF/kWh or not as precisely 37 HUF/kWh is the result. In case of a home solar system the fee of network usage is cleared, it cost yearly 500 HUF.

With that typical average household example, yearly sum of electricity 1.579*37 HUF = 58.423 HUF. Containing also the yearly use of the network fee then it is: 57.923 HUF.

The investment cost depends on the place and on the implementer firm. As the households are assumed to be rational, naturally not the most expensive one will be selected, the others are normally in one price-interval.

One potential (relative cheap) offer for a 1,5kW system for ready state, see Figure 4!

Figure 4 Potential offer for a ready home solar system
(Source: http://extremesolar.hu/webshop/details.php?kat=2&sess=21dfb156e4390a8944b46de60d3ffd80&ts=1432813586&next=0&page=1&back=content&artikel=33)

As this is without delivering, an extra 30.000 HUF cost is assumed for delivery. Then 57.923/779.300 = 0.074326, which is a 7.4326% rate of turnover, which lasts 13.45 years.

Comparing it to the available interest for bank deposits, nowadays (usually the bank deposits are assumed not to have any risk) is maximum with 3% interest (*without any other condition, see Figure 5!), but that will be also taxed with 16% tax, so that is in real only 2.52%. In this case the solar system has a turnover about 3 times higher.

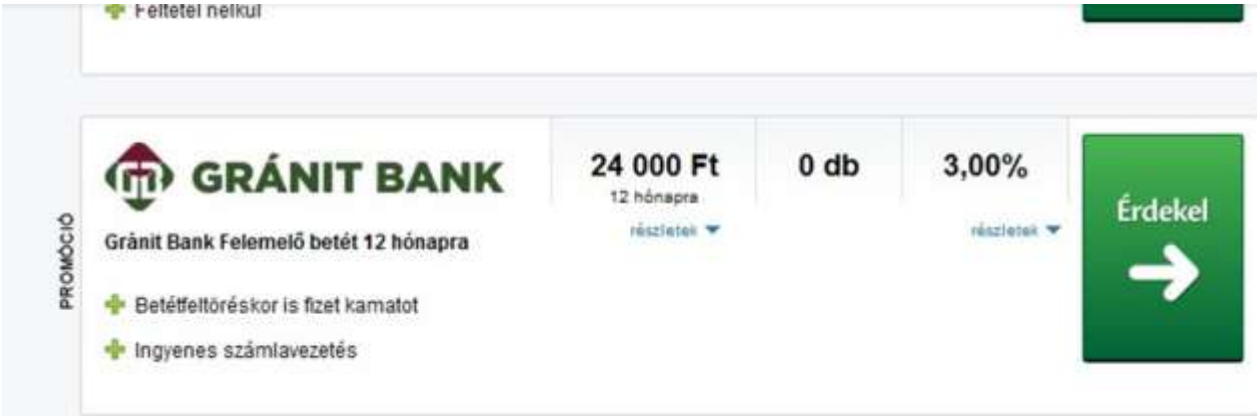

Figure 5 Offer for bank deposit with 3% interest
(Source: https://www.bankracio.hu/betetkalkulator/lekotott-betet/feltetelek-nelkul)

The most wide-spread other investment form between the people in Hungary is a flat. As that can be rented, the turnover can be calculated as follows, but the risk (e.g.: roomer doesn't pays, doesn't want to move out etc.) is not contained in it.

Here in Budapest, in the 10th district, with some sights for these cases, about knowing the situation the turnover is about 6.6%, which equals 15.15 years for turnover period.

So in this case the solar system has again some slight advantage. That which is not mentioned, is that the solar panel with inverter and with any accessory (without the meters) can be taken with, in case of migration. Sometimes, especially in crisis a flat is not easy to sell, or can be, but not at the wished price and that will cause losses.

Net present value and internal rate of return

To be more financial precise the net present value and internal rate of return was also calculated with the following known data for 25 years planned lifetime:

- Rate of inflation: - 0,03% (source: www.vasarlocsapat.hu/_hirek/_inflacio/inflacio.shtml)
- Obtainable rate of interest: 3% (see Figure 5!)
- Tax of interest: 16%

Table 3 Calculation of NPV and IRR

		rate of inflation:	-0,03%									
		obtainable interest rate of deposit:	3,00%									
		tax of interest:	16%									
			YEARS									
		All the values in **HUF**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	B0	Home solar cell investment	-779 300									
		[+] saved cost of electrisity		57 923	57 923	57 923	57 923	57 923	57 923	57 923	57 923	57 923
		[-] lost interest										
		yearly resultant:	-779 300	57 923	57 923	57 923	57 923	57 923	57 923	57 923	57 923	57 923
$PV=FV/(1+q)^n$		discounted values to the zero_th year:	-779 300	57 940	57 958	57 975	57 993	58 010	58 027	58 045	58 062	58 080
		cumulative discounted values:	-779 300	-721 360	-663 402	-605 427	-547 434	-489 424	-431 397	-373 352	-315 290	-257 210
		NPV:	674 640 Ft									
		IRR:	5,47%									

(Source: own calculation)

As earlier the comparison was made with bank deposit, now the lost interest is not calculated. The NPV is 674.640 HUF, while the IRR is 5,47%. The year of when turnover is finished is the 14th, as it was calculated earlier 13,45 year.

What if someone hasn't enough source capital for it?

If someone plans a greener and more economic life for the next 20-30 years (usually the planned life cycle of the solar systems), than it's worth to check some mortgage loan, which can be required also for home improvement in which usually the renewable technology is included. See Figure 6 for entire offers!

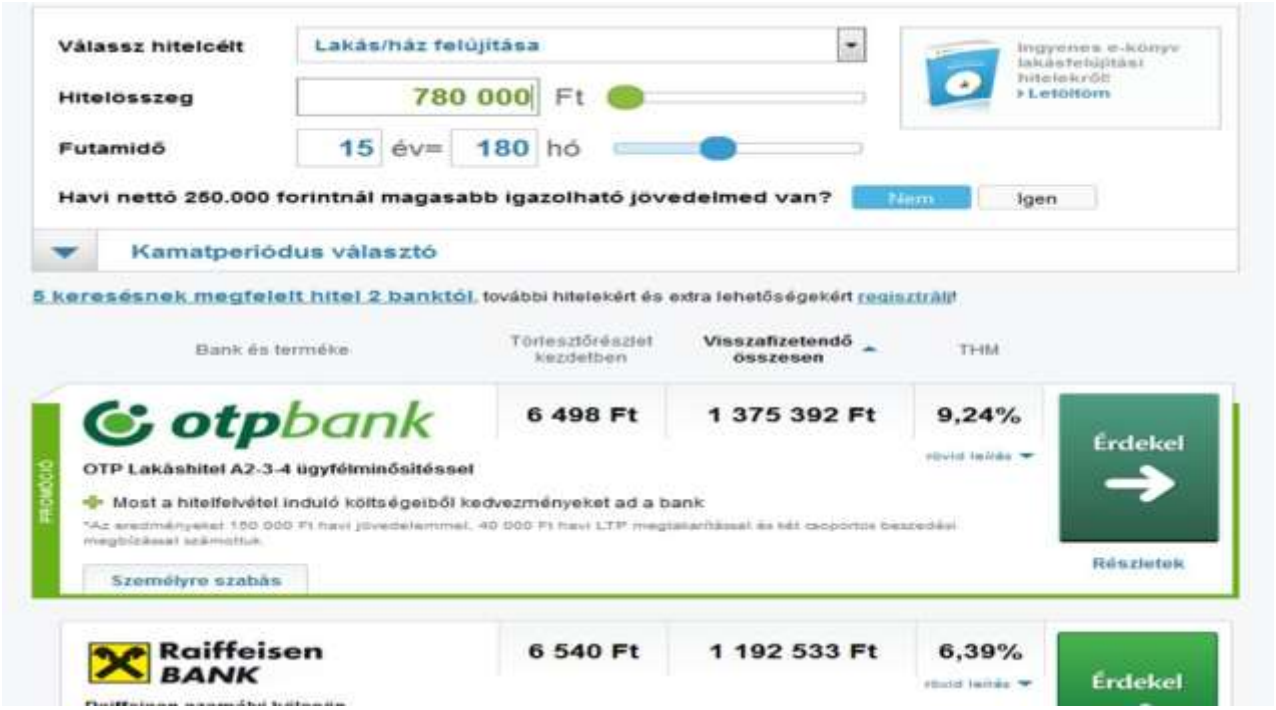

Figure 6 Mortgage loan offers for 780 kHUF for 15 years repayment period, sum of monthly repayments are shown
(Source: www.bankracio.hu/hitelkalkulator/ lakashitel/14-lakasfelujitasi-hitel)

The monthly repayment is about 6.500 HUF, which is only 1.650 HUF (about 5,5 EUR) more than the normal monthly electricity cost is. Nowadays, this 5,5 EUR can't be a barrier for a household.

How long it works

Usually these systems are planned for 20-25 years of work. By German experiences, the solar panels after 20-23 years produces the 90-95% of the nominal value, the half of the original inverters are also in use today. Those which are in use are comparable with those one which are produced nowadays. (Solar, Manitu, 2013).

So theoretically within the planned life cycle there will be no more significant cost, so after 13 years they only benefits, saves costs. Foreseeable as now about 25 years has passed since the installation of that 1.000 system, probably 30 years of operation is

Households view

Basing on the earlier, it can be stated that from the viewpoint of rational, self- and environment-conscious households, a solar system is an affordable and (at least twice) recoverable investment for the next 25-30 years. Recommended if the household is able to plan for 25-30!

National and the National Electrical System Operator's (MAVIR) viewpoint

The national electrical system (network's) operator (MAVIR) manages the coordination of production and use within the country and the export and import to/from abroad. As electricity can't be stored like water, it must have enough promptly at all time to serve the needs.

From there viewpoint, the most important is, to be able to have enough electricity performance (MW) at all moments, but too much isn't needed also.

For the 25th May 2015, the next diagram can be created for showing the load of the whole network and the production of power plants within Hungary. See Diagram 2!

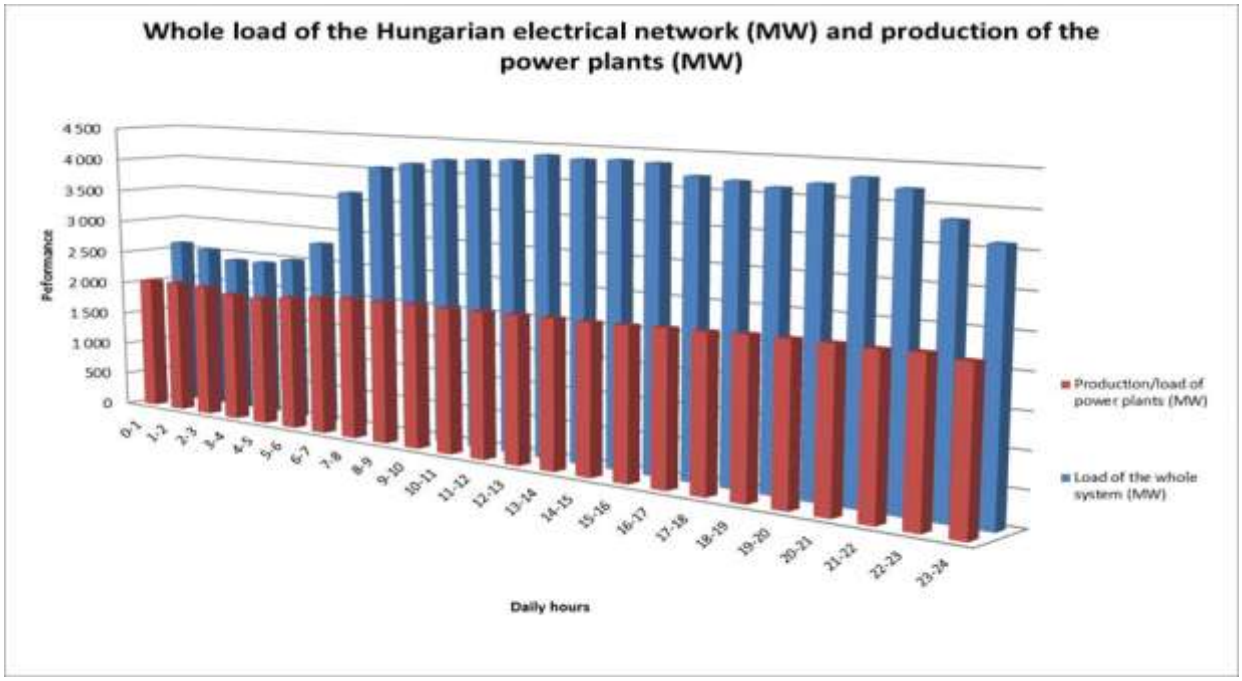

Diagram 2 Whole load of the Hungarian electrical network (MW) and production of the power plants (MW) on the 25th May 2015
(Data source: http://www.mavir.hu/web/mavir/ver-forgalmi-adatok, own representation)

It's quite conspicuous, that the production is about the half of the system load for about ¾ part of the day. In performance it is about averagely 1.874 MW, but the peak lack is 2.449 MW.

The next table shows all the data which is important (listed) for MAVIR for the above mentioned day of 25th May 2015. See Table 4!

Table 4 Production, use, export, import and etc. values hourly for Hungarian electrical network

Period (hours)	Load of the whole system (MW)	Production load of power plants (MW)	Market Consumers (MW)	Plan		Fact		Net production of power plants (>50MW)	Net production of power plants (<50MW)	Auxiliary consumption of power plants (MW)	Loss of network (MW)	Balance of the rest of the distribution network	% of net import of total market consumption
				Export (MW)	Import (MW)	Export (MW)	Import (MW)						
0-1	2 604	2 042	3 219	2 490	3 411	891	1 453	1 732	310	47	45	61	17,5%
1-2	2 538	2 054	3 028	2 667	3 442	735	1 219	1 726	328	47	45	112	16,0%
2-3	2 410	2 040	2 822	2 665	3 294	703	1 073	1 730	310	45	47	181	13,1%
3-4	2 416	1 972	2 734	2 611	3 287	607	1 051	1 699	273	47	47	238	16,2%
4-5	2 502	1 965	2 847	2 565	3 356	576	1 113	1 699	266	45	45	228	18,9%
5-6	2 806	2 023	3 113	2 349	3 414	610	1 393	1 724	298	46	47	237	25,2%
6-7	3 632	2 079	3 895	1 939	3 776	370	1 924	1 748	331	47	49	309	39,9%
7-8	4 049	2 122	4 266	1 814	4 008	184	2 111	1 752	370	51	48	369	45,2%
8-9	4 132	2 127	4 394	1 691	3 972	177	2 182	1 761	366	50	45	333	45,6%
9-10	4 217	2 145	4 476	1 615	3 981	207	2 279	1 763	382	54	45	349	46,3%
10-11	4 245	2 142	4 557	1 487	3 920	196	2 299	1 746	396	53	47	329	46,1%
11-12	4 271	2 148	4 597	1 410	3 871	159	2 282	1 746	402	52	47	337	46,2%
12-13	4 368	2 161	4 596	1 460	3 932	116	2 323	1 720	441	51	48	359	48,0%
13-14	4 337	2 177	4 564	1 472	3 888	119	2 280	1 724	452	48	49	351	47,3%
14-15	4 356	2 178	4 559	1 393	3 828	107	2 284	1 718	460	48	49	370	47,8%
15-16	4 343	2 194	4 531	1 395	3 838	197	2 346	1 716	478	45	47	401	47,4%
16-17	4 196	2 217	4 403	1 491	3 866	323	2 301	1 716	501	49	46	430	44,9%
17-18	4 165	2 231	4 342	1 559	3 834	299	2 233	1 712	519	54	43	418	44,5%
18-19	4 110	2 257	4 294	1 636	3 824	345	2 197	1 713	544	52	42	399	43,1%
19-20	4 193	2 261	4 317	1 647	3 850	284	2 217	1 716	544	54	41	416	44,8%
20-21	4 304	2 264	4 391	1 654	3 959	302	2 342	1 726	538	53	45	437	46,5%
21-22	4 195	2 254	4 391	1 616	3 838	369	2 310	1 730	524	48	46	344	44,2%
22-23	3 846	2 274	4 199	1 818	3 732	688	2 260	1 734	540	50	47	217	37,4%
23-24	3 594	2 232	3 996	1 925	3 681	721	2 083	1 728	505	53	48	221	34,1%
												Daily average:	39,6%

As in the last column, and under the table, it is seeable the daily average of net import relative to market consumption is 39.6%. Regarding other days 17th July 2014, 16th January 2015 and 17th January 2015) this values are follows as: 33,5%, 32,2% and 33,8%. These are not less values in terms of lack of energy, so perhaps, it would be good/useful to counterweight it. For this one let's try the 2.5 million 1.5 kW peak power home solar system.

Joining the solar system - theoretically

Using an early autumn daily (14th September 2014) production run of an existing solar system (source:), calculating the performance %-es for hours, than multiplying it to that 2.5 million 1.5 kW peak power home solar systems and joining to net import need of Hungarian electrical network this diagram was created (see Diagram 3).

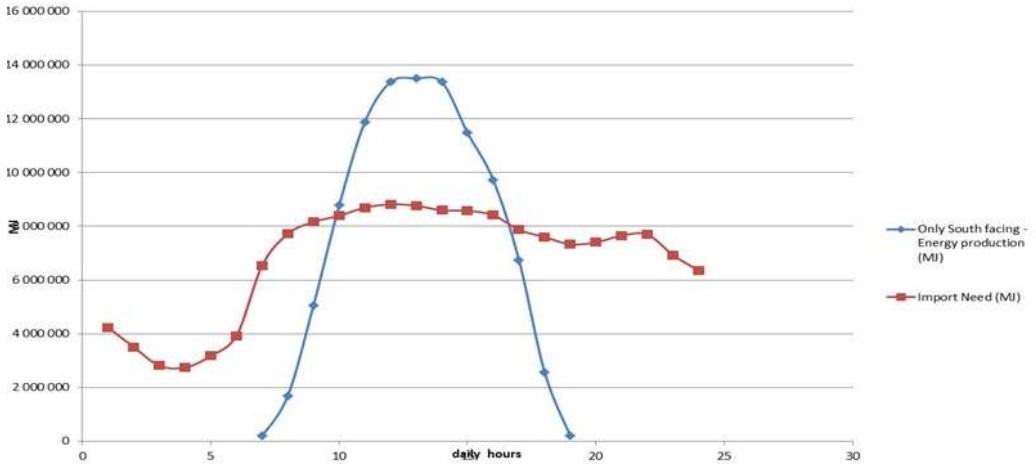

Diagram 3 Potential electrical production of 2,5 million 1,5 kW home solar cells and the daily net import run on the basis of 25th May 2015.
(Source: net import values by MAVIR, potential production: own calculation and own representation)

In summed energy values [W], the potential production in 12-13 hours period is 98.550.000 MJ, while the net import need is 161.899.200 MJ in a certain day. This is only 60.871%, or about 61% of the lacking need.

In case of cloud covered days, in winter, when no sunshine for 2 weeks (e.g.: anticyclone situation within the Carpathian basin – grey sky for weeks), the production could be zero or max.10-20% of the above. Now as the 8th of June (name day of Medárd) is approaching, which may mean (said to be folklore, but on real experiences is not only folklore) if during that day it rains, after it for 40 days it will rain, anyone can calculate how much those solar systems would produce: maximum 20%-30% during – 30-40 days.

As it was described earlier, the periodic overproduction could be a "problem". If there is need for electricity within the Union or anywhere it can be exported. Otherwise it would be better to reserve the electrical energy, which in more developed country is a greater problem, as production by them is given already. Hungary has no such problems – not now, but better to prepare for that, and some studies were already made before 2010 also, so the problem is not an unknown threaten for the sector.

Possible way of storing electricity

As in international and other sources written two ways of electricity storing can be seen as alternative: compressed gas storing and pumped water reservoirs in mountains.

Storing batteries (chemical energy) as containing lot of heavy metals, they can't be seen as quite clean technology, along the service period of a solar systems (25-30 years) 5-8 times change is needed (the batteries) so that is not economical (makes twice triple the cost of the investment), and according to experiments (Physics Institute, SZIE), they work like bottomless wells, the half of the in fed energy is lost.

Out of the previous listed two possibilities, more working examples can be found for pumped reservoirs.

In Mayer's study (Mayer, 2009) Mayer wrote (on the 6-7 pages) that the possible areas for pumped water reservoirs are/can be in Hungary on the base of consensus among more prescriptions in Dunakanyar and in South Zemplén. Along the nuclear power plant expansion in Paks, those areas can be perspective, where the establishment has potential expandable capacities and those where it's possible to realize them without major economic aid, like: Keserűs hegy, Sima, Hideg völgy and Urakasztala.

On the basis of economic studies for pumped storages, selecting performance shows limits in two directions. In case of low performance, the specific investment costs are high, and that will limit the built in capacity from below to approx. 300-400 MW. The upper limit is determined by the market tradability, which is up to 600-700MW. In the first phase 600 MW can be envisaged with the possibility of future expansion (Mayer, 2009).

Question of nuclear power plant - Paks

As the proposed 2.5 million 1.5 kW peak power home solar system is able only to produce electricity when the sun shines, no whole coverage by clouds, and their performance and time interval of production is quite dependent on the season, daily weather and time (angle of irradiation and length of the day), with responsibility no one will plan a production system (any kind) that is able to produce "sometimes-something".

As we are the members of the EU and connected to the European electrical system in many ways, nowadays the import ratio ranges between 30% and 40%, and as we don't have problems in energy supply, hopefully we won't have till 2023 when the planned new nuclear block will start.

Having a nuclear power plant at Paks (4 blocks with 500MW each), which service life will be lengthened (till 2023) and the capacity will be grown (with 80% Russian funding), not that's the question that it is needed or not. The question should be, that beside the planned 1.200 MW capacity growth, how big capacity of renewable/alternative ways of energy production and energy reserve and performance equalization capacities are needed, not to have later unused capacities or perhaps deficit in case of big growth of energy needs.

That is the real problem, that the future is not fore seeable. Planning can be made, but 5-10 years later anything will look like quite different, and sometimes strange if someone checks later why this decision was made earlier.

As on the 25th May 2015 averagely 1.874MW was missing, the peak deficit was 2.449MW, with the newly planned 1.200MW block there is also an averagely 674MW lack (not knowing the real need in 2023 when it is planned to start – will it start?), and in peak period it is 1.249 MW, so this 2.5 million 1.5 KW peak power solar systems are able only to produce the 61% of the whole energy lack (MJ) daily (in a sunny day – with an early autumn recorded daily production run), with uneven distribution, which means that for 24 hours, it can supply about 61% in the middle 12 hours. In terms of energy [W]: 98.550.000 MJ calculated production in the middle 12 hours against the 161.899.200 MJ (recorded net import) need in 24 hours.

For this one the pumped reservoir (water) based energy storages could be used, as it was written by Mayer (Mayer, 2009). As in that study the possible places were named, hopefully it won't stay only a plan. In the study about 600MW performance was valued, which is quite close (within 11%-12%) to the average 674MW hourly performance lack.

Results and Discussion

On the base of the above described record, it can be stated, that from the households view, having an own solar system is an unequivocal competitive and legal investment comparing to bank deposits and e.g. flats. Taking into account that "overhead reduction" can't last till forever, the price of the electrical energy may/will unavoidable grow, and in that case the return will be sooner, after it the return the yearly savings will be more.

As in this deduction 2.5 million 1.5kW peak power home solar systems were mentioned/calculated with, it doesn't mean that (at) once (at all) it will be realized, but on the base of this deduction till that value the problem of overproduction is not a threaten.

On the other hand, from the electrical system's operator and from national preference is to be able to serve the needs. As today Hungary is a net importer of electricity it's obvious that the ratio of net import should be decreased preferably to zero (in favor of national electrical energy independency) and preferably have a neutral or slight exporter position. For this purpose the planned performance growth in nuclear power plant Paks (1.200 MW) + any part of the above described "own/self-creatable" home solar systems (till 2.5 million) with pumped water reservoir performance equalization, (on the base of the 25th May 2015 production, use, net import values) doesn't looks too excessive.

Conclusion

In Hungary, the political strategy for this time still (merely voiced) focuses on nuclear energy for the next decades, but being examined the nowadays production with expectable performance growth (and from 2023 decrease back to 50%) the real daily (nowadays) needs, there is a huge energy/performance lack which is shown.

That could be counterweighted with home solar energy production which would benefit in long run for the households, but may raise some periodic overproduction problems, which could be balanced with pumped reservoir performance equalization.

Considering the expected development ("Hungary performs better") or only a sustainable one (yearly 1-2% growth) than perhaps in 2023 the planned capacity growth (in net it will stay about at 50% as the old nuclear capacities will stop) plus the above described wide spread solar energy production and energy equalization won't be enough, if Hungary wishes to keep the energy independence.

If the government responsible for electrical energy, perceives the above described situation, now there is about 8 years to have a national development consensus/plan (and to realize it), where the renewable solar energy plus performance equalization with pumped water reservoirs could have a larger role.

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Author addresses

BUNKÓCZI, László (PhD), professor assistant
Department of Applied Informatics, Szent István University Gödöllő, Hungary
E-mail: Bunkoczi.Laszlo@gtk.szie.hu

SZALAY, Zsigmond Gábor (PhD), associate professor
Department of Applied Informatics, Szent István University Gödöllő, Hungary
E-mail: Szalay.Zsigmond.Gabor@gtk.szie.hu

Lector: Dr. KOVÁCS Árpád Endre, Szent István University Gödöllő, Hungary

THE ANALYSIS OF THE FOOD CONSUMER BEHAVIOUR IN THE ONLINE ENVIRONMENT

FEHÉR, András – SOÓS, Mihály – SZAKÁLY, Zoltán

University of Debrecen, Faculty of Economics

Abstract

In recent years, the consumer, who is one of the main participants of the market, has changed radically. Nowadays, they are called as “digitally enlightened” citizens.

In current work, our main aim is to define the local tendencies of online consuming behaviour, especially in the field of food related information and shopping possibilities. We try to determine whether there are online consumers in Hungary or not.

During our examinations, we relied on the process of the shopping behaviour of the digital consumer. We mapped the particular steps with relevant and actual literature analyses. With the help of our national, representative poll (N=1000), we could examine the food regarding online information gathering in details.

To sum up, we can say that the majority of the researches and literature about food-consuming behaviour does not separate properly the roles of the online (digital) consumers, and rely on the final shoppings. Based on our professional researches, we tried to differentiate the digital food consumers on the basis of their online behaviour, and we separated 5 hypothetical categories, which provide a good baseline for our future examinations.

Key words: Food consumer behaviour, Digital consumer, Food

Introduction

In recent years, the consumer – who is one of the major participants of the market – has changed radically. IBM, in its 2014 research, subjected consumers as “digitally enlightened” citizens. It is based on the fact that nowadays, not only the description of consumer has changed, but the steps they need to take for getting information and doing the shopping. It is inevitable to cooperate with them, which means a partial break of controlling companies (BREUER, 2014).

Several researchers previously examined the main featuresof the “traditional” consumer behaviour (HOFMEISTER-TÓTH, 2003; PORTER – DONTHU, 2006; TÖRŐCSIK, 2011), however the works regarding digital consumers are in a very early stage, especially here in Hungary.

Currently, our main aim is to define the main national trends of the online consuming behaviour, especially in the field of the information and shopping possibilities connected to food products. We try to find whether we can talk about digital food consumers in Hungary at all– we mean the examination of the online background under "digital". It is absolutely true that mobile communication is at a developed stage like never before however, our current paper does not talk about this type of communication.

The theoretical background of the research

The Internet became available for everybody since the beginning of the 90s (SZŰTS, 2012; SZŰTS, 2013). At that time the main features of the consuming behaviour within the online environment were the willingness of innovation and the open minded way of thinking. Theusage of the Internet spreaded quickly, so a wider audience started to grow up from this online environment (SZŰCS, 2011). We have to admit that Hungary was always on the second place behind those countries that have more developed internet economy (eg.: USA). Nowadays, the rate of the actively engaged internet users is 72,6% of the overall population. This number is much higher than the average tendency of the world (39%). Of course, this number is distorted by the less than 30% provided by the African and Asian continents, whereas the 84% of the Northern-American region is a highly emerged one. The Hungarian tendency can be at the same page with 76,5% of EU28 (IWS, 2014). It is important to mention the main tendencies of the electronic marketing (e-marketing), which are highly influencing on the online consuming behaviour. The overall volume of the local retail trade was 7000 billion Ft in 2013, whereas the online one was 200-220 billion, which means a 3% share.This number may seems low, but it is not as bad as it seems, becausethe online retail trading shows a 23% growth since last year. Good examples are Austria and Great-Britain as well, where this rate is 9-10% (VILÁGGAZDASÁG, 2014). We can claim that e-marketing can be seen as a market with very high potential: 69% of the 5400 webshops in Hungary were able to grow their traffic in 2013 (eNET-TELEKOM, 2014), and third of them were able to gain more than 50% development. Only 7% were those, who closed with deficit.

The characteristics of the online consumer

Before we provide a detailed introduction of the online consuming (buying) behaviour, it is essential to map the online consumer (e-consumer, digital consumer), who is main participant of these processes. According to several researches, we cannot find more attentive audience than the online consumers, since they are always in search for new information, can be persuaded by facts and arguments, but they show no interest for the classical methods of commercials. We need to take into consideration that their needs and behaviour are varied by situations, so e-consumers are handled as "hybrid consumers" by literature (ESZES, 2011; JANAL, 1998; WALLACE, 2002; WIEDMANN ET AL., 2004; ZAVODNYIK, 2005).

The process of the online consuming behaviour model

The online consuming and buying behaviour in the web environment is mostly related to each other. Of course, there are different consumer roles, but they are rarely different from the

traditional model. The experts of the topic created several models for representing the coherence of the consumer and buyer behaviour (CHAFFEY ET AL., 2009; ESZES, 2011; O'KEEFE – McEACHERN; 1998; SZŰCS, 2011; TURBAN ET AL., 2008; WEINBERG, 2001). But we can claim that the majority of these models are based on the widely accepted process of the consuming and buying decisions (TÖRŐCSIK, 2009). The 5 different steps of the process can be maintained in the online environment as well. We represent the online features of these steps:

The detection and/or browsing of the problem

The first step of the process is the detection and/or browsing of the problem. Problem can emerge when the consumer realizes difference between the actual and ideal state. In the field of consumer's goods – including food as well – we try to reach an ideal status with buying or consuming products or services (NIKOLAOU – BETTANY – LARSEN, 2010; SZŰCS, 2011). The companies of the FMGC sector (daily products), which covers different types of food, are not sure whether a consumer would search an everyday product within an online platform. Their doubt is valid in a sense, as this type of getting information possibly lacks immediate shopping. But there are some information about these products, which are hard or time wasting to find through other channels. It is possible to search for the quality features, and judge them on the basis of the opinion of others. People can visit recipe pages, where they can find well-selected and purchased food. The so-called QR-code is widely spread nowadays: it is a developed barcode, which is suitable for storing lots of digital information, and is able to particularly identify a product. We only need a smartphone and a QR-code reader for using it. After reading the code in, we can get information about the main features of the product immediately. It is also important to emphasize the information regarding healthy lifestyle, which can be found on the Internet in a huge amount. The FMCG sector admits as well, that the age of one-sided communication is over now, so it would be wise to make the participants think of interactions, instead of actions (SZŰCS, 2011).

Gathering Information

The second important step is to gather information, which can work extremely well within the Internet, due to the developed searching modules. Bettman defines two separate search types, inner and outer (BETTMAN, 1979). In this work we examine the online features of the outer search for information. In average, we can define the consumer related search as the followings: "searching for information is a consumer activity that is for gathering relevant information about a product and its usage, in order to satisfy the need (or realised problem) as sufficient as possible." (DÖRNYEI – CSORDÁS – GÁTI, 2013). The Internet is the first platform, which is able to provide immediate, searchable and huge amount of information for users, and it can help to rationalize the decision making process of consuming (GUO, 2001). This amount of information is often resulted in a database, which is impossible to handle, and it is very hard to find the most accurate information (DÖRNYEI – CSORDÁS – GÁTI, 2013). Gathering information in the Internet can be characterised in different types. In order to be able to understand our further examinations, it is worth introducing the research of Moe, who separated these types on the basis of the planned length of shopping. During the

purposed, direct shopping, the majority of the information is available this is why the length is short. The confident one requires a longer preparation, where the main aim is to establish the final decision. In the pure impulsive shopping, there is a short and less confident browsing, which ends in an immediate shopping, and marketing stimuli have significant role here (eg.: banners, videos, sites, others' opinions, etc.). Last, but not least, we can talk about informational shopping, whose aim is to get all the relevant information available for realizing the future shopping (MOE, 2003; SZŰCS, 2011).We can highlight two from the types above, where the shopping itself follows the information gathering, if there is any at all. It probably happens during confident one, whereas it is not so possible during informational one. This is the type where we can mention "online shopping" as a phenomenon, during which the process of shopping/information gathering means the real experience, and not having the product or service itself (BURNS, 2006).

The processing of Information

The third step is to process the information. According to McLuhan, a noted psychologist, the processing of the information is strongly connected to the technology around people. The main reason is that creating and processing a message is highly impacted by its transmitting sphere, namely the development of the media (DÖRNYEI – CSORDÁS – GÁTI, 2013; McLUHAN, 1964). The collaborative filtering is a new, digital way of personalised offers. It is an offering system, which is based on the gathered information about consumers and their shopping (ESZES, 2011). With the help of this system, it is possible to convey direct and personalized offerings to the consumers. In the online platform, the information and price comparisons have a highly important role. There are several webpages that can satisfy this need.

The execution of the decision

When we buy food online, the fast and proper home delivery is extremely important, since it can influence the quality of the goods. Judging the freshness and the quality in certain food categories (eg.: vegetables and fruit, bakery products or fresh meat) shows a very subjective picture not only in the supermarkets, but in the field of online shopping as well. So vendors need to be very careful with delivering these types of products (except for personal takeover).

The behaviour after decision making or the shopping

The last step of the online consumer behaviour process is the action after decision making or the shopping, which can be modified by several factors that cannot easily shaped by companies. We can split online consumers into active (loud) and passive (silent) groups. The existence of the active consumers is very important for the companies of course. But we cannot ignore the passive ones either, as their rate is 80% compared with the active shoppers (NYÍRŐ – CSORDÁS, 2013; VAN DIJCK – NIEBORG, 2009).The positive or negative consumer opinions have a very important role in post-decision behaviour as well. They are announced by the current, potential or previous consumers, and are about the particular product, service or company

(HENNING-THURAU, ET AL., 2004; NYÍRŐ – CSORDÁS, 2013). The companies need to be aware of the consumer scepticism when positive opinions occur. In this case, the company can create posts or buy consumer opinions, due to anonymity. The negative online commercial can be highly influencing on the willingness of buying, together with the brand evaluation as well. So it is very important for the companies to start communicate the negative voices as well (KIRKPATRICK, 2014; NYÍRŐ – CSORDÁS, 2013).

Materials and Methods

During our examinations, we applied two basic methods of marketing research, and with the second research, we collect and systematized the current database. The theoretical background was built in relevant literature overviews. We also used the results of Hungarian and international models and researches. In the second research, we mapped the process of the online consumer and shopper behaviours, and emphasized the knowledge of the online consumer attitudes.

During the quantitative research of our prime examination, we made a poll using questionnaires. It was handled by Szocio-Gráf Research Institution Company in 2014. They managed to involve 1000 people. The questionnaire included 6 closed questions related to the attitude and shopping habits of the online consumers in average. In current announcement we examine the online attitudes of information gathering, in connection with types of food (discussing 4 closed questions).

During the sampling, we basically provided the representatives in the particular regions and settlements, so their structure was sufficient for the KSH quotes (quote sampling). In the related settlements, we used the so-called 'random walking' method, which provides absolute unintentional way to choose the respondents (it means that we gave equal chance to everyone to get into the poll). In the selected household, we chose the proper person, using the 'birthday key' method. The main point of this method is that the household members were asked about the number of those who are 18 year-old or elder. The second step was to choose the one, whose birthday is the closest to the date of the questionnaire filling (more simply: who celebrated their birthday last?). With this method, we could provide the absolute unintentional way for the second time. The accidental mistake of the pattern is± 1,9%-3,2%. Last, but not least, in order to provide representativeness, we corrected the pattern with a so-called multi-dimensional (based on sex and age) loading. Thus the pattern shows the consistency of the basic abundance on the basis of 4 factors (region, settlement type, sex and age).

The processing of the questionnaires was made by the SPSS 12.0 mathematical-statistical program. First, we made the coding, and during the evaluation, we counted averages, spreading, relative spreading and obliquity in scale typed questions, and processed the data with percentage and cross tables in the other question types. When examining the data, we present the whole patterned spreadings in the relevant tables. Current work does not contain the significant relationships of the particular questions, based on the background-variants.

Results

During the presentation of the results, we concentrate on the consumers' gathering information methods, related to food. We take into consideration the online environment as well.

The information gathering is one of the main steps of the consuming and buying behaving process. Its result can determine the future decision. In our research, we examined first (table 1) the rate of food related online searching compared with the offline one (traditional forms of media, eg.: TV, radio, commercials, etc.). It could be evaluated in a 5 rated scale, where we provided two borderlines (very little time and a lot of time spending on searching information).

Table 1: Comparison of the online and offline search for food related information) (N=1000)

Possible Answers	Capita	%
Very little time	571	57,1
Relatively little time	146	14,6
Similar time	185	18,5
Relatively much time	41	4,1
A lot of time	12	1,2
N/A	45	4,5

Source: own editing

The majority of the respondents (71,7%) spend a very little or relatively little time with searching for food information in the online environment. But we need to pay attention for the remaining 23,8%, which means that one of every 4 people spend more time with that.

It is worth comparing our results with other examinations. First of all, it is important to highlight that the percentage rate mentioned above includes both the search lacking of buying, and the one, which ends in successful shopping, as we have not separated these categories. Szakály and his team made it similarly in a 2013 research, which was based on a 1000 person representative questionnaire poll. Certain sources of food regarding information gathering was a part of their work, including the Internet as well. The results showed that 42,4% of the respondents often get the information from the online platforms. There are only 4 other sources showed higher percentage: friends (78,4%), family members (76,2%), commercials (56%), national TV channels (43,7%). The results are shaded by the fact that in case of commercials, we cannot exclude online appearance (SZAKÁLY, 2013). Comparing the two examinations, we can claim that the online information gathering shows much higher percentage if the sources are exactly defined. Based on this, the online and offline categorization used by us is not precise enough, and can confuse the respondents.

During the analysis of the question, it is worth presenting the results of two other national examinations as well. They take into consideration the future willingness of shopping as well (besides of information gathering). Nielsen, which is a well-known international poll company, examines the consumer information and knowledge. With an actual research in 2014, they measured the consumer openness for the e-marketing in connection with 22

product types. During food shopping, the 1/3 of the Hungarian consumers is willing to use online tools in the next 6 months, in order to get a line on, or get something (NIELSEN, 2014). The Shopping Monitor research of Gfk in 2014 (which follows the buying habits and its changes) has defined that approximately 10% of the Hungarian consumers use the Internet for gathering information before shopping. The main reason for this less high percentage is the fact that in this research they consider the action before the exactly realized shopping (GFK, 2014).

Comparing the results of our research and the ones above, it is well differentiated, that the online information gathering can happen regardless the future shopping. In this case, examinations show higher percentages, which strengthens our concept that the usage of the Internet as a source of information is very colourful (eg.: the good health influence of food, average information about food (QR-code)), and cannot be simplified for future shopping only.

Our next question was the rate of the online tools as a food related informational source (table 2). Respondents were required to judge the listed online tools, whether they have ever used them for getting food related information.

Table 2: Distribution of information relating to online tool during searching for food (N=1000)

Possible Answers	Capita	%
Browsers	303	30,3
Community Pages	178	17,8
Specific sites on particular products	168	16,8
News sites	156	15,6
The manufacturer's website	143	14,3
Trader website	141	14,1
User blogs, forums	115	11,5
Corporate blogs, forums	35	3,5

Source: own editing

The highest rate was represented by browsers (eg.: Google), since the 1/3 of the respondents get food related information from these platforms. The other separated informational resources – except for the extremely low rate of company blogs – showed half rate than browsers. It is worth highlighting that community pages (eg.: Facebook, Twitter) preceded the unique webpages of the manufacturers (14,3%), traders (14,1%) and produces (16,8%). The various types of blogs (user related – 11,5%, company related – 3,5%) and forums received the lowest rate during the examination. So we can claim that besides of browsers, the community pages can mean the main online tools for getting food related information.

Conclusions and Proposals

During our examinations, we took the process of the shopping behaviour of the online/digital consumer as a basis. We mapped the particular steps with using and analysing relevant and actual literature. With our own questionnaire poll, the food related information gathering was examined.

The online information search shows a much higher rate, if the sources are exactly named, sothe online and offline categorization in our own poll is not precise enough, and can easily confuse the respondents.

Comparing the different national researches and our examinations, we can claim that the online search can happen regardless with future buying (it is shown by the rates of the percentages of the discussed researches compared to each other). It strengthens our theory that the usage of the Internet as a source of information is very colourful (eg.: the good health influence of food, average information about food (QR-code)), and cannot be simplified for future shopping only.

Taking a look at the main online tools for getting information, we can see that the browsers and community pages mean the most preferable sources for consumers in the near future.

To sum up, we can say that the majority of the researches and literature about food-consuming behaviour does not separate properly the roles of the online (digital) consumers, and rely on the final shoppings. During our analysis we tried to differentiate the digital food-consumers, based on their online behaviour. We could define the following groups:

1. **Information consuming**: the main aim is not the shopping itself, but getting information about the related types of food. We need to highlight the search for those features, which are beneficial and/or influential for health.
2. **Online search for information and shopping**: this is the typical case of online consumer and customer behaviour. In this case, the information gathering (regardless its duration) is inevitably followed by online shopping. The impulsive shopping is required to be highlighted here (eg.: immediate online food ordering (PERGER, 2006; ZSOLNAINÉ HARCZI, 2006). Here, the customer is eager to buy something immediately (HOFMEISTER-TÓTH, 2003; ZSOLNAINÉ HARCZI, 2006). This shopping type is helped by the "like" and "buy it now" button in the different community pages.
3. **Online information searching and offline shopping**: here the information gathering is followed by a traditional shopping. The aim of the previous search is to get information about the exact place and content of the products (eg.: the browsing of the online catalogues of shops), and to observe the different online opinions about them (eg.: checking the Facebook opinions of the related pages).
4. **Offline information searching and online shopping**: the information gathering happens with the help of the traditional ways of marketing-communication (eg.: an online link from street – or TV commercial, where we can do the future shopping).
5. **Online shopping**: it means a browsing on the Internet without an initial intention for buying anything. This category can be paralleled with all the above groups, except for the offline browsing segment. But the exact shopping cannot be excluded here.

Our short-term aim is to examine these hypothetical groups in details, and to confirm our ideas with prime and second researches. We would like to rank the Hungarian food-consumers into the above groups. The tool for this analysis will be a questionnaire poll. With

the help of the categorization, we would receive recent results of the Hungarian online consumer behaviour.

Summary

In recent years, the consumer, who is one of the main participants of the market, has changed radically. Nowadays, they are called as “digitally enlightened” citizens.

In current work, our main aim is to define the local tendencies of online consuming behaviour, especially in the field of food related information and shopping possibilities. We try to determine whether there are online consumers in Hungary or not.

During our examinations, we relied on the process of the shopping behaviour of the digital consumer. We mapped the particular steps with relevant and actual literature analyses. With the help of our national, representative poll (N=1000), we could examine the food regarding online information gathering in details.

To sum up, we can say that the majority of the researches and literature about food-consuming behaviour does not separate properly the roles of the online (digital) consumers, and rely on the final shoppings. Based on our professional researches, we tried to differentiate the digital food consumers on the basis of their online behaviour, and we separated 5 hypothetical categories, which provide a good baseline for our future examinations.

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Author addresses:

FEHÉR András (corresponding author)
University of Debrecen, Faculty of Economics
H-4032 Debrecen, Böszörményi út 138.
E-mail: feher.andras@econ.unideb.hu

SOÓS Mihály
University of Debrecen, Faculty of Economics
H-4032 Debrecen, Böszörményi út 138.

SZAKÁLY Zoltán
University of Debrecen, Faculty of Economics
H-4032 Debrecen, Böszörményi út 138.

Lector: Dr. SZABÓ Zoltán, Szent István University Gödöllő, Hungary

MOVIE CONSUMPTION OF UNIVERSITY STUDENTS

HORVÁTH Ádám – Dr. GYENGE Balázs PhD – Dr. RÁCZ Georgina PhD

Abstract

While in the past several years movie theatres managed to gain larger audiences with exciting releases and new technologies, there are still a lot of questions to be asked about how the consumers garner information and make their decisions (regarding either choice of certain movies or the method of watching them). When it comes to home entertainment, piracy still proves to be a great challenge. From a different point of view however, piracy could be looked at as a kind of service problem, that could be solved by shifting the focus to accommodate more to the ever-changing demands and to try and offer competitive alternatives instead. This paper analyzes a pilot study that was conducted with university students regarding their movie viewing habits, focusing on the various influences and sources of information that have an effect on their decisions concerning both the methods of viewing movies and the selection of certain movies as well.

Keywords: consumer behavior, culture, movie consumption, download

JEL Classification: M310

Introduction

Movie theatres and home cinema in general play a large part in the life of modern societies, especially among the younger generations, as previous studies that aimed to divide the use of free time showed (Ságvári, 2009). Which among the thousands of new releases every year, can be traced on the various businesses that were based on or attached to them (starting from the shops that primarily deal with movies through the general electronic stores and gas stations that run them as side gigs to television stations with the numerous reruns and variety shows dedicated to movie stars). We could say that we live in the new age of digital multimedia where movie distribution is facing major changes as well, especially when it comes to the internet (Deák, 2008).

The movie watching preferences of university students overcame large changes in the past 30 years. As it was sort of unimaginable in 1980 that a university student would watch mainstream movies, as times have changed – and shopping malls, with movie theatre complexes became more common – the movie watching trends shifted as well. This tendency was empowered by the slow shift of scenery, as more and more people started to watch movies from the comfort of their homes. As a result we could witness the slow regression

of art cinemas and even multiplexes had a temporary crisis of their own (the yearly grosses of Hungarian movie theatres eventually recovered, though it is kind of hard to keep track as three years of data is missing from the statistical records (NMHH, 2015)).

For home cinema, the greatest change came in the form of the digital revolution, beginning with the lightning-fast spread of the DVD (Lobenwein and Pápai, 2000), then later on with the widespread of – the practically limitless – broadband internet connection. Data from 2014 show 74% of the population of Hungary as internet users, while the whole of Europe has an internet penetration of 70,5% (Internet World Stats, 2014).

Generally consumer behavior is greatly affected by their immediate environment, especially those groups that one is, or would like to be a member of (Hofmeister-Tóth, 2006). The need to identify with a group may have an influence similar to the classical choices of products or brands in the case of choosing a certain movie to watch as well. This is an especially interesting point, considering that sorting by the extent of influence coming from the group (Bearden and Etzel, 1982), movie watching can be placed in both the visible and the invisible (or hidden) consumption groups. Depending on whether they watch a movie alone or with acquaintances, entirely different factors may predominate in the choices of the consumers: while they might prefer a certain genre and type of movie with a given group, they might prefer something completely different at home, alone.

When it comes to attitudes, it can be said that they have a direct influence on our behavior, while the ability to react on any attitude should be highlighted as well. It may occur that even though one has a positive attitude towards a movie, the individual's financial status does not allow it to make the purchase of it. The same way it might happen that a certain – possibly long awaited – movie somehow gets overlooked by the local distributors (or is unavailable for some other reason) and the only option left for the consumer is to download it from the internet (which might appear in a specifically high number of suppletory downloads (Bodó and Lakatos, 2009)).

Material and Methods

The quantitative research of the pilot study was conducted with the aid of questionnaires. The target group was made of movie consuming university students, the questionnaires were filled out by 112 respondents, which after the data cleansing resulted in a sample of 108. To analyze the data I used IBM SPSS and Microsoft Excel software.

Results and Discussion

When it comes to watching movies in movie theatres, most respondents answered that they go with their friends and significant others (73% and 56%, respectively chose these options, in a question where they were allowed to choose multiple answers). The exact results are showed in Table 1.

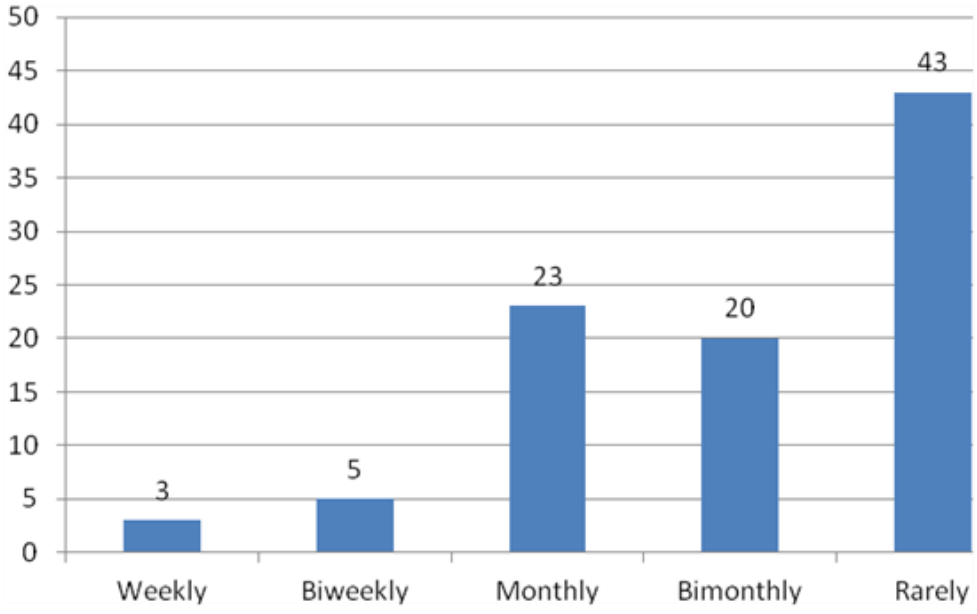
Table 1: Companionship in movie theatres

	N	Sum	Mean	Std. Deviation
Alone	108	10	,09	,291
With friends	**108**	**79**	**,73**	**,445**
With SO	108	61	,56	,498
With family	108	31	,29	,454
Valid N (listwise)	108			

Source: Own elaboration based on the responses of the participants

These support the notion that this particular method represents some kind of community experience, or an "event", where having one's friends for the ride adds another element to the already unique feel of the movie theatre. This phenomenon is also backed by the negligible ratio of people who go to movie theatres alone (only 10%).

To take a more interesting angle on the frequency of movie theatre visits, using SPSS to narrow the whole sample down to only the people who also stated that they watch movies at their homes on at least once-a-week basis (resulting in a smaller sample of N=78, which also meant that 87% of all respondents watch movies at home quite often), we got the following distribution, shown in Picture 1.



Picture 1: Frequency of movie theatre visits
Source: Own elaboration based on the responses of the participants

These results highlight that home cinema should be considered somewhat more defining by the frequency of it alone, while visits to movie theatres appear as a more rarer, but also more special occasions (further confirming the event status).

On the subject of movie theatres another aspect was how satisfied the respondents were with the pricing of movie tickets, especially those who visit them at least on a monthly basis. After narrowing the full sample to those people (N=33, which means that about 31% of all

participants visit movie theatres that often), the answers on the statement "I am fully satisfied with the movie ticket pricing" (on a 1 to 5 scaling, where 5 meant that they completely agree with said statement), the mean value was 3,15 with a std. deviation of 1,15. This result does not completely support that they are satisfied with it (but of course, neither can be said about the opposite), it rather shows that they are just accepting the current pricing, they "settle" for it.

Recent trends of movie theatres saw the rise of 3D movies, as almost all high grossing movies of the past years used the format (with a usually higher price tag). Related to this trend the two main statements presented were of the general likeness of 3D movies (where if they had the chance to watch a certain movie in regular or 3D editions for the very same price, they would choose the latter), which got a mean value of 3,39 (with a std. deviation of 1,58), and the will to pay more for this extra feature, which got a mean value of 2,75 (with a std. deviation of 1,28). Examining the Pearson Correlation between the results of these two, showed the existence of a strong connection with a value of 0,661, which can be seen in Table 2.

Table 2: Correlations of 3D movie likeness and willing to pay more

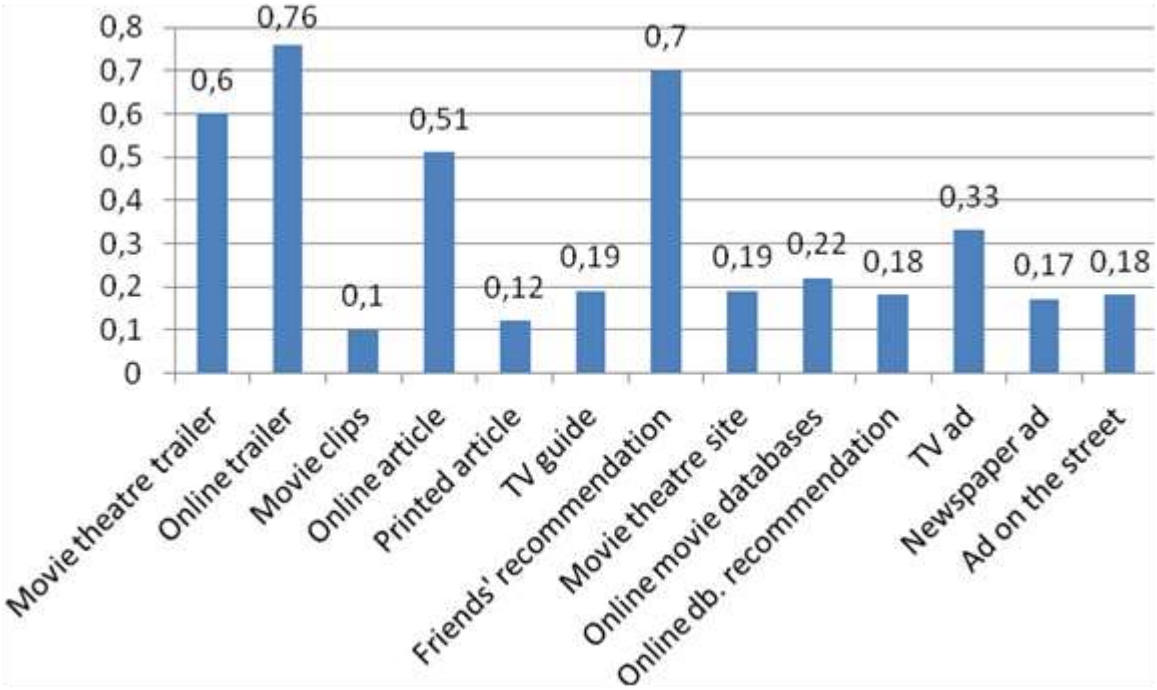
		3D movie	Costly 3d movie
3D movie	Pearson Correlation	1	,661**
	Sig. (2-tailed)		,000
	N	108	108
Costly 3D movie	Pearson Correlation	,661**	1
	Sig. (2-tailed)	,000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Own elaboration based on the responses of the participants

This means that people who are more interested in the 3D technology itself (as they have already agreed with the first statement) are willing to pay an even higher price for it (and current pricing trends in movie theatres actually demand this of them, though some movie theatres are more cost efficient than others by allowing attendees to keep their purchased 3D glasses to reuse them later, saving some money in the process).

Moving on to information gathering, the participants were asked straightforwardly what the most common sources of information they use to search for or get to know movies (they were allowed to mark multiple answers). The results can be seen in Picture 2.



Picture 2: Sources of information
Source: Own elaboration based on the responses of the participants

Most people chose online movie trailers as primary source of information, which could mainly be explained by the general spread of the internet, which made it possible for everyone to be only a few clicks away from the full description and trailer of any movie. Anytime someone sees news about an upcoming movie or when a friend recommends a title, the first step is often to type the name of the movie into the default search engine and usually trailer videos can be found among the results it spews out. Furthermore the other high values mostly tie in with the aforementioned recommendation of friends or online articles that may be accompanied by movie trailers, with trailers shown in movie theatres acting as a form of self-impulsive process as they show spectacular tidbits on the big screen.

To expand on the recommendation, the respondents were asked the question that if they like a certain movie, just how likely is it that they recommend it to their friends. They had to choose on a scale of 1 to 5 (where 5 meant that they fully agree to do so), where the mean value was 4,56 with a std. deviation of 0,66. This result highlights the importance of word-of-mouth marketing, where the recommendations of satisfied spectators may have a huge impact (just reflect on the main sources of information gathering). Altogether it should be noted that when it comes to sharing negative experiences ("If I didn't like a certain movie, then I warn my friends about it.") the mean values are somewhat lower (3,82 with a 1,15 std. deviation), which shows that people are more reluctant (even if not by much) to share these ill experiences with their friends.

As a semi-related subject, the respondents were asked about how they feel about movie awards, as that is generally highly regarded measures of quality that generate quite the buzz in

the media as well. The results came in somewhat shocking, as the participants showed quite low interest in them, as they graded the statements on a scale of 1 to 5. The one about checking the list of awarded movies after the ceremony got a mean value of 2,29 (with a std. deviation of 1,37), while the one about looking up if a certain movie got any awards before watching them got a mean value of 1,88 (with a std. deviation of 1,08), which all in all implies that movie awards in general are not a defining factors in the evaluation of movies. However, examining the Pearson Correlation between the two actions showed the existence of a connection with the value of 0,47, which can be seen in Table 3.

Table 3: Correlations of movie awards

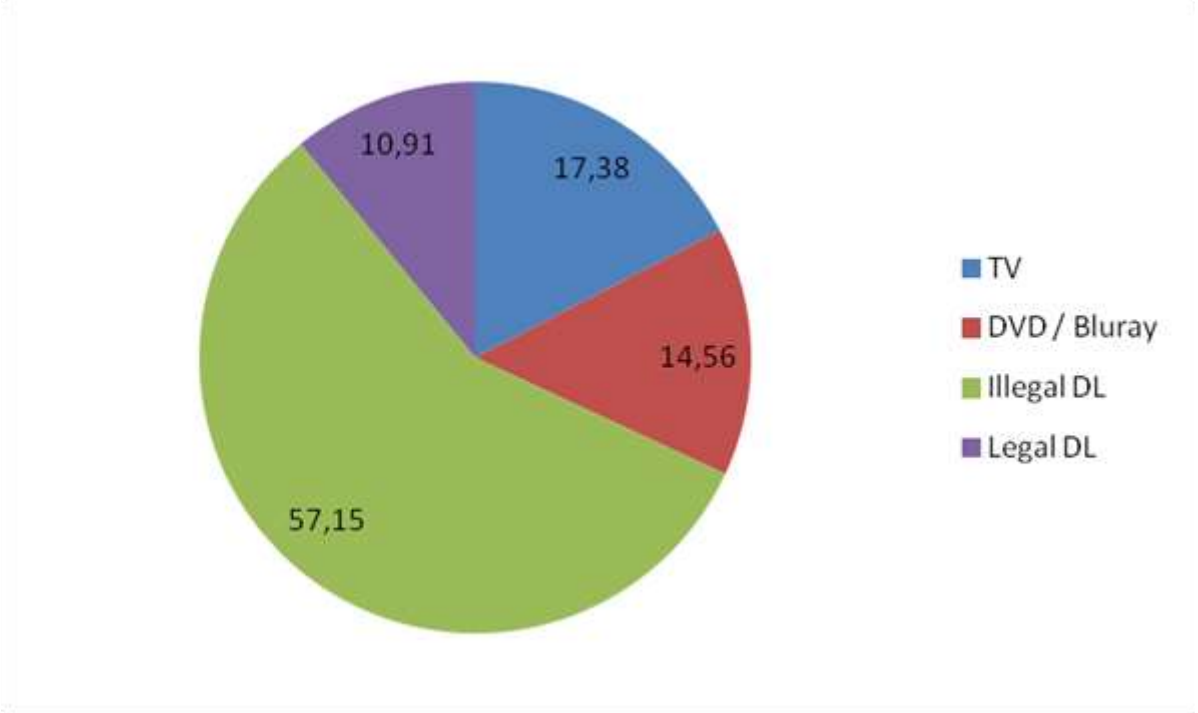
		Awards results	Movie awards
Awards results	Pearson Correlation	1	,469**
	Sig. (2-tailed)		,000
	N	108	108
Movie awards	Pearson Correlation	,469**	1
	Sig. (2-tailed)	,000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Own elaboration based on the responses of the participants

Generally speaking, the people who are interested in movie awards and their results also regard these honors highly when it comes to a per movie basis, be it the number of nominations or the number of actually won awards. As it was mentioned at the mean values though, for the general masses neither has a significant importance.

When it comes to the act of watching movies at home, the main arising question is the amount of piracy that supposedly heavily influences home cinema and how commonly used the legal possibilities are. The exact results are shown in Picture 3.

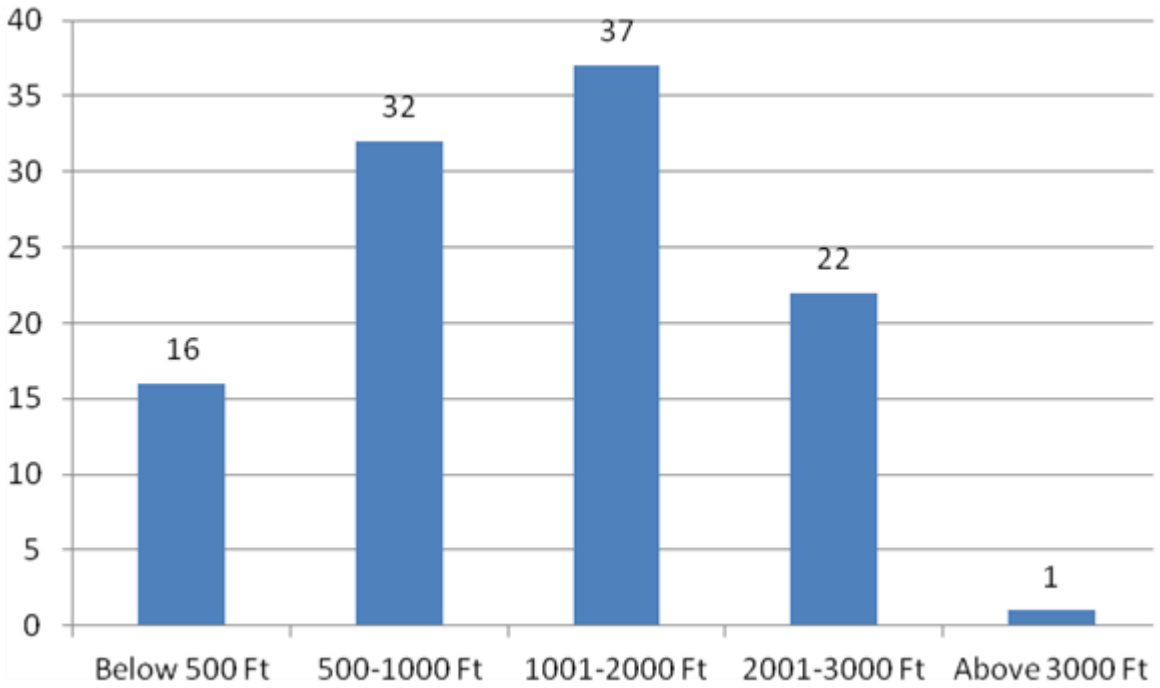


Picture 3: Repartition of home cinema
Source: Own elaboration based on the responses of the participants

In the accompanying question the respondents had to treat all of their movie watching (conducted in their homes) as 100%, then divide that among the various methods of doing so. The values on Picture 3 are the mean values of their answers, from which it can clearly be seen that home cinema is mostly (57,2%) done by pirated versions of movies. This result based on previous experiences and general attitude did not come as a surprise. Seemingly the ever-accessible free content is far ahead of both the "free" television-aired movies (that are continuously interrupted with ad breaks and are not necessarily aired in the right time slot for everyone) and the purchased (be it online or in a brick and mortar store) ones.

An interesting related question was whether the participants preferred Hungarian or foreign download sites (if any). The Hungarians came out ahead with a mean value of 3,21 (with an std. deviation of 1,3), while foreign sites lagged behind with a mean value of 2,81 (with a std. deviation of 1,28). This result is even more noteworthy if we take into account that Hungarian download sites are closed to the general public and only work in a manner of invitation system (meaning that it is greatly more complicated to access them, than most foreign sites that are all open to all visitors). An explanation to this could be that on foreign sites the movies are usually only available in their native language (for which, if needed, a separate subtitle file should be searched), while on Hungarian sites the dubbed versions are commonly available as well, which could be more favorable to many.

As piracy seems to be so overwhelming, what would be the ideal price tag for new movie releases that university students would find acceptable? Picture 4 has the exact results to that question.



Picture 4: New release price ranges for purchase
Source: Own elaboration based on the responses of the participants

These results show how most respondents are sort of attached to the "magical" 1000 Ft. price tag, which being a close value to the movie theatre ticket prices (at least it is in the case of university students and the discount that the student card provides), seems to serve as a general point of reference on values of movies, though a lot of respondents were willing to go up as high as twice of that amount in the 1001-2000 Ft category. The clearest result however is that the current pricing of new DVD releases that are released with a price tag between 3000 Ft and 4000 Ft are quite higher than the accepted price ranges (let alone Blu-ray releases that can go as high as 4000 Ft to even 10 000 Ft).

Conclusion

When it comes to the selection of movies, the main information source is the internet, primarily in the form of online movie trailers. The search for these is practically the first step that follows hearing about a new title, be it a news article from some movie related website or a recommendation that comes from a friend. The latter information source is also decisive in nature, as university students are still greatly influenced by groups and opinion leaders. This is reflected in both the continuous information exchange between friends (mostly in the form of suggesting positively viewed movies to each other) and the film critiques and other movie related articles that can be found in various kind of (mostly online) mediums.

The influence of groups appear in the way that most university students do not visit movie theatres alone (rather they go with friends and their significant others), which even if it is a relatively rarer occasion than watching movie in their home (which however is something they mostly do alone), it can be described a lot more as a special, event-like activity. Beside the group aspect of visiting movie theatres another appealing feature is the large screen and

the use of various kinds of spectacle enhancing technological methods. Among these, 3D technology should be highlighted as the main trend of the past years, which for people who are interested in it is a desired feature even if it comes with a higher price tag, than that of the regular movie screenings.

All the while it seems clear that university students are generally not satisfied with the current pricing of movies. This is mostly a key aspect in the case of home cinema, as while the ticket prices of movie theatres appear as an acceptable (or rather one that they are more likely to settle for) point of reference, DVD/Blu-ray releases and the currently available legal download / streaming methods are overpriced (with a special mention to the seemingly free television as another movie viewing platform, which is plagued by the constant disruptions of ad breaks and the strict schedule of TV stations, that may differ from the viewers personal preferences, all in all pointing out that time allocation is a very highly regarded resource as well). In the case of legal downloads it seems natural to lower the prices of individual movies, as they are missing many costly elements that come from the physical nature of the traditional distribution of movies, like manufacturing, transporting, storing etc. -costs (as after purchasing the right for online download, to give access to the content the providers' only concern is the cost of the bandwidth (which gradually rises as they reach for higher revenue)).

As the popular slogan, "Vote with your wallet!" slowly becomes the core mentality to many, we can see the slow shifts in the movie distribution industry as well (though sometimes in the form of complete retreat, like the way Disney dropping their Blu-ray distribution in Hungary), with premium content provider giants like HBO changing up their model (making their online on demand HBO GO a standalone system without the need to subscribe for the TV channel itself) and streaming companies, like Netflix, slowly setting their foot across Europe.

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Author addresses

HORVÁTH Ádám
Dr. GYENGE Balázs PhD
Dr. RÁCZ Georgina PhD

2100 Gödöllő, Páter Károly u. 1.

Lector: Dr. SZABÓ Zoltán, Szent István University Gödöllő, Hungary

EVALUATION OF INVESTMENT FUNDS THOUGH THE EYES OF INVESTORS

JÁVORNÉ VÉGH, Klaudia PhD – TÓTH, Márk PhD –BÁRCZI, Judit PhD

Abstract

The present study examines the question whether the investors' affinity can be encouraged by greater transparency ensured by investment funds. The basic problem is that access to financial sciences is provided only to a narrow layer of society. The transfer of wider knowledge to investors is inevitable. It is a constant problem that, in theory, the trade-specific analysers perform the analysing work in possession of a professional expertise. The crisis situation that has evolved by the early 2015 in regard to investment funds is typically resulted by the deliberately modified and intentionally affected numerical outcomes presented for the public in the recent years. In our opinion, 5-8 information models should be introduced to the investors in order to help to measure the operation of different investment funds. It would be essential to distribute an objective, transparent financial education material and to develop the financial culture in general. Hereinafter the appropriate operation, the ethical and transparent processes generated by trust requires the following slogan: Transparency above all.

Key words: investment funds, transparency, financial culture, information model, risk

Introduction

The panic following the broker scandals in the early 2015 has urged the people to be much more careful regarding their financial issues when they want to invest. The elaboration of financial strategies would be inevitable for the households in order to avoid similar crisis situations. The most important element in this is information. Without appropriate information it is no wonder that a household decides about the savings of several years in about thirty minutes because they have nothing to consider.

The savings of Hungarian households

According to the data of GfK Market Research Institute, two-third of Hungarian people over the age of 18 have financial savings but only a small portion of savings is invested. The low level of domestic financial savings as well as investment information contribute to the fact that the investment attitude in Hungary is considerably different from that in Western Europe or the United States. Not only the structure of domestic savings but the amount is also significantly behind the average of the more developed markets. As regards the Hungarian investment decisions in general, it can be concluded that safety is much more important than return.

The net financial assets of Hungarian households had doubled between 2005 and 2014 so there is some money to invest. At present the net financial assets of people amount to more than 28.000 billion HUF.

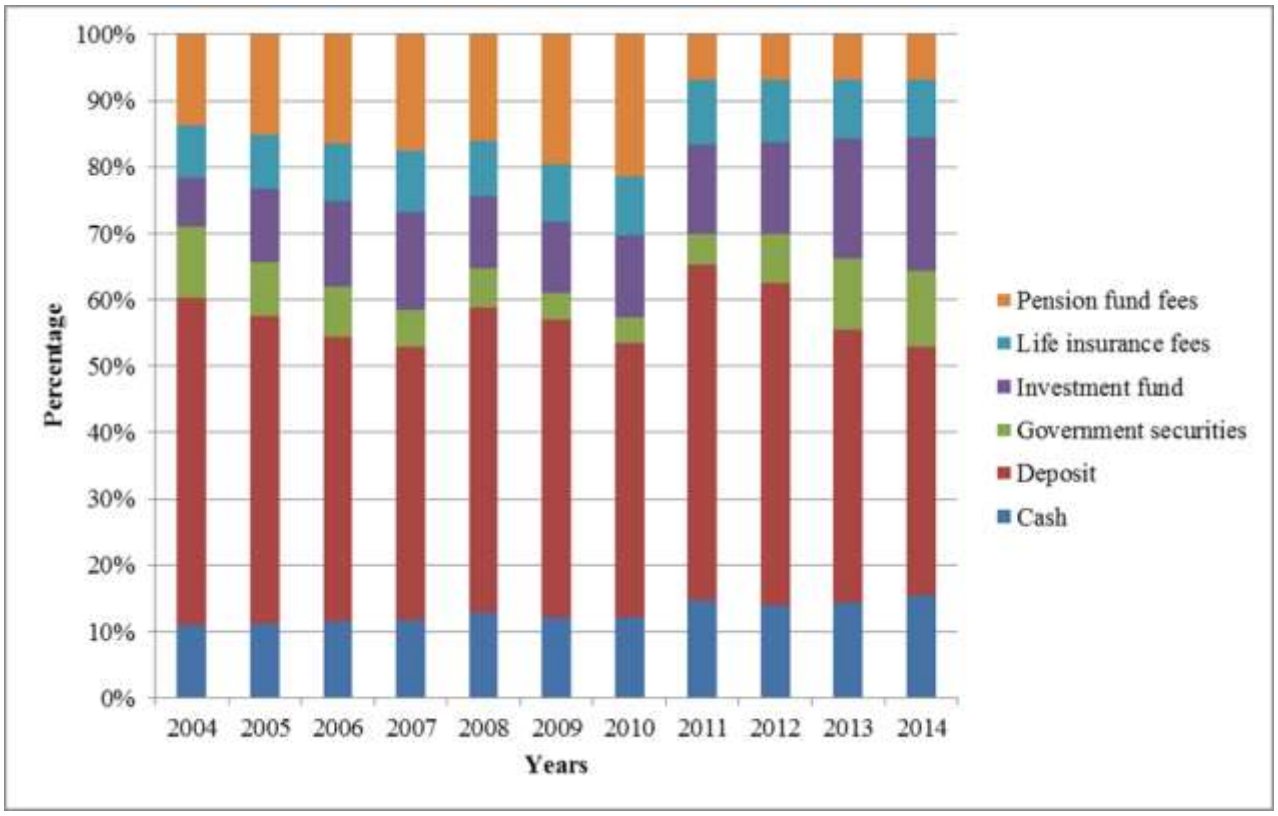

Figure 1: The financial accounts of Hungarian households, 2004-2014
Source: MNB (Hungarian National Bank)

Figure 1 demonstrates that Hungarian people simply cannot break away from the feeling of safety offered by bank deposits. The total deposit portfolio in 2005 was more than 5866 billion HUF. By 2014 this figure raised above 7589 billion HUF. The deposits amounted to 44% of total financial assets in 2005, while this figure was only 33% in 2014. The volume of safety reserves increased the most between 2005 and 2010, because their ratio was above 30% within the total financial assets. This really large proportion had drastically declined by 2011 owing to the restructuring of the pension scheme that is the liquidation of private pension funds. From 2011 the role of these had been taken partly by other claims which amounted to 19% of total financial assets in 2014. This latter figure was due to the claims caused by pension fund crossing. Assets kept in shares are also substantial among people but the ratio of funds kept in cash or government bonds is also very high. These two latter ones cannot be regarded as money gains or only to a minimum extent.

It is obvious from the figures that risk-avoiding behaviour is the most typical among Hungarian households. Besides deposits and retirement accounts, the investment funds can offer very good alternatives for households with smaller savings. The degree of product development in this market has been extraordinary in the last 20 years.

Market research data about the investments

The GfK Market Research Institute made a survey in February 2014 in order to analyse the borrowing and saving habits of 16 European countries. In case of Hungary, only 11 percent of people used bank savings offers but one in four Hungarians has bank loans according to the survey. The number of those having some savings has been declined in the recent years but the remaining part of savers could increase the saved amounts. The possible danger coming from the low proportion of investments made by people has already been recognised by the state and – according to the experiences of the recent period – the government has been taking measures to encourage the changes in the financial attitude of people. The aim is to enhance the reserve and savings cumulation instead of increasing loans like in the last 10-15 years.

Investment typically means some more complex, longer-term forms of savings which can be regarded riskier, like e.g. the fixed deposits. The risk of investment products usually lies in the fact that the repayment of invested funds and the returns on the funds are affected by many external, unpredictable factors and, in case of some assets, the issuing institutions do not assume warranty on them. The worst scenario is that substantial part of the invested money is getting lost. Prior to choosing a form of investment, something should be made clear: There are not any universal, „good-for-everything" investments! The most important is to be aware of the objective of investment and make decision after assessing the risk-tolerance and expectations concerning the return.

The first and most important question is to determine the amount of money which is to be invested. The second is for how long we can get on without that amount of money. Moreover, we should be aware of liquidity, because it matters when we will need the money and how quickly we can access to the required amount.

For example, in case of savings deposit for housing purposes the main aspect is safety and return, complemented with some subsidy elements. In case of investment with uncertain duration, both the safety and liquidity can be important. The investment funds are the best alternative for this. Considering especially long periods, the pension savings can be choosen. When, however, the risk tolerance is higher, one can choose riskier investment funds or stock market investments.

It is expected from the investments to keep their value that is positive real returns are planned to be achieved regarding all types of investment. We should also be aware of risk issues, that is higher yields can only be realised by undertaking higher risks. In case of low risk, we should be content with lower return. Diversification of investments is the method of reducing risk, which means that all the amount of savings should not necessarily be allocated into one investment product.

The concept of investment for people who are less conscious of financial issues typically extends only to bank deposits and term deposits. By contrast, the investments offer a lot of possibilities: real estate, share, government securities, currency, stock exchange, bank deposit, precious metals, artworks, investment funds, etc.

If the aim is, for example, to lower the risk of our investment, we should invest in government securities, bonds or treasury bills. Or, when especially long time is available, either deposit or artworks can be chosen. Some people are willing to opt for riskier solutions because they want to obtain larger profit, so they can choose shares, tools of commodity exchange or currency market. Those who are satisfied with moderate yield with the highest diversification, can invest their money in real estate, life insurance or investment funds. The market of this latter is the subject of our examinations in the present paper.

Upon choosing the appropriate investment fund the decision criteria are as follows:

When the decision is made that the money would be invested not in bank deposit but in an instrument which is riskier yet offering higher yield, the most appropriate one should be taken from a lot of possibilities. The investment fund can be a suitable alternative.

The investment fund is the total assets co-owned by investors, established and managed by the fund manager. The share of each investor from the common total assets is embodied by investment units which are sold by the fund manager to the purchasers of the units. The share from the common total assets per one investment unit on a given day is shown by the net asset value per unit, that is the exchange rate of the investment unit. The main advantage of investment funds is that the savings of households and enterprises – even if these are small amounts separately – can be invested on securities and real estate markets in a simpler way, at lower costs and by distributing the investment risks and thus the individually small amounts and dispersed savings can be involved in the blood circulation of the economy.

The expected yield and risk of investment funds is basically determined by the investment policy of the investment fund. It is important to note that the returns typically go hand in hand with risk which is obvious from the fluctuation of investment value, the exchange rate of investment units. Higher risks are usually coupled with higher attainable yields therefore both factors should be considered together when making investment decisions. The yields of investment funds are public similarly to the interest rates of banks on deposits and can be found in business news and on Internet pages as well.

The social sciences should deal with selection criteria of investors: which one they choose from the different types of investment funds and what is the decision mechanism they rely on. Factors affecting their decision are, for example, the marketing impacts, suggestions from acquintances, persuasion by broker companies, direct fund manager or expert assessment (broker) or individual, personal experiences.

The main criteria of selecting investment funds:

1. Information should be collected about the instruments the fund invests its assets in and the factors the value of these instruments depends on because the exchange rate of investment units will be indirectly formed by these.

2. Although the past performance of the fund will not guarantee anything for the future, it is worth collecting information about this and compare it with the performance of other funds with similar investment schemes.
3. In case of closed-end fund sold in currency, it should be checked whether the payment can be made in HUF, and if yes, what are the conditions.
4. The brochures and guidelines approved by the Supervising Body should be thoroughly reviewed. These can be collected free of charge at the distributors. The internet pages of fund managers offer other additional information assisting the investment decisions.
5. The higher expected yield is usually coupled with higher risk therefore it should be measured how high is the risk one is willing to undertake. It should also be considered that the required returns can be achieved only in longer term and the exchange rate of investment units can significantly fluctuate in short run.

By reviewing the history of investment funds in Hungary, the activities of the first closed-end securities funds can be dated back to 1992. As regards their investment policy, these were mostly government securities funds. The ratio of share and corporate bond investments was minimal due to the underdeveloped and low liquidity markets. The tax legislation has constantly changed over the years and the demand of investors to increase liquidity levels has grown. In Hungary as well as in other post-socialist Central-Eastern European countries, the securities funds emerged first, and within that, the government securities funds. As the economy and the stock exchange improved, the first mixed funds were introduced and later the equity funds investing in the shares of domestic and foreign issuers. These were followed by the money market funds which invested only in instruments with maturity within a year. For a long time, this category was a market leader in Hungary. In 2005, the leading role was taken by short bond funds besides money market funds. The rapid expansion of liquidity funds started in 2007, the peak of which - concerning market share - was in 2012.

The assets of investment funds have been increasing since the summer of 2012 due primarily not to the income from returns but to the net sales.

The market share of investment funds in the last 10 years is demonstrated on Figure 2.

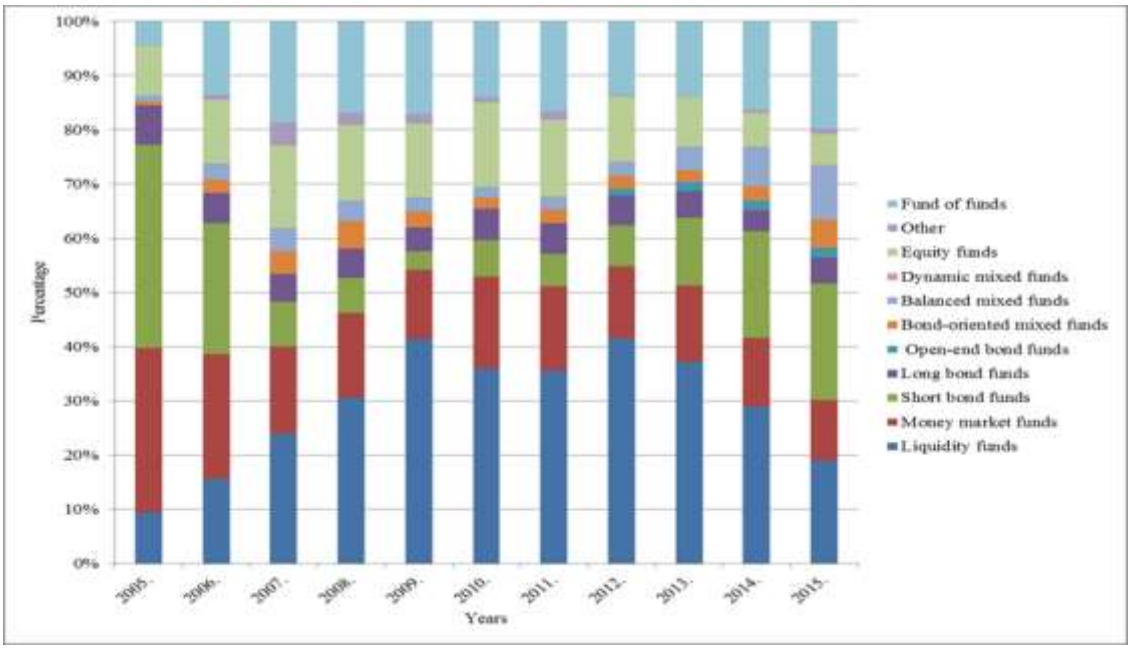

Figure 2: Types of investment units of Hungarian households, 2005-2015
Source:BAMOSZ (Association of Hungarian Investment Fund and Asset Management Companies)

The market had been changing dynamically, which was the best proven by the fact that the funds had to be re-categorised by July 1, 2011 and December 31, 2013.

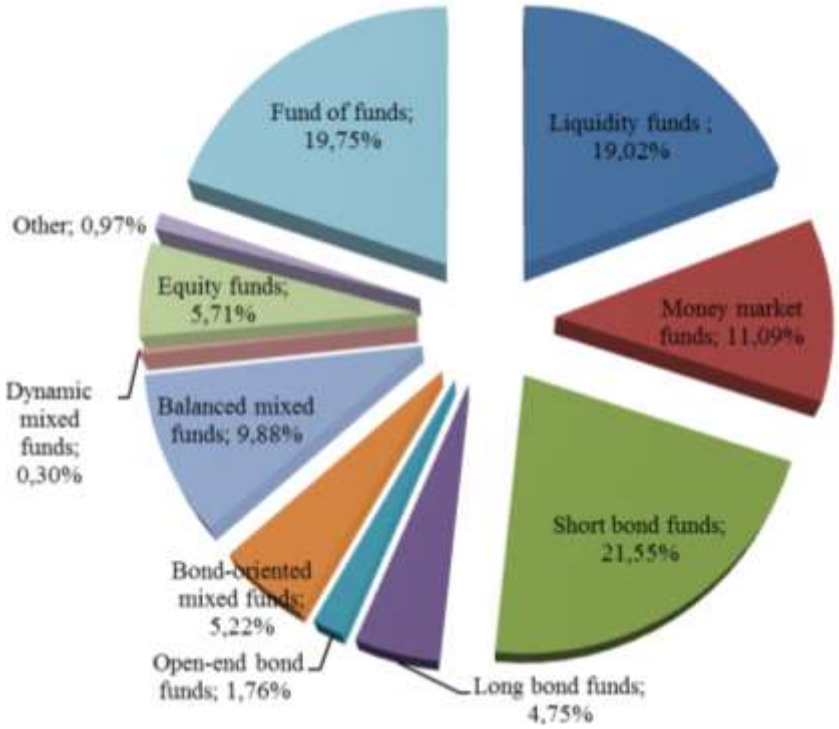

Figure 3: The market of open-ended, public investment funds in 2015
Source:BAMOSZ

By 2015, the short bond funds, the funds of funds and the liquidity funds have been regarded the best selling products on investment market within the non-special funds category. It is clearly obvious from Figure 3.

The product development was extensive and new categories have been introduced. As regards the market of special funds and the re-categorisation of investment funds in 2011, the real estate funds were the market leaders from 2005 to 2011. Their explosive growth was due to the crisis of 2008 because the risk-avoiding behaviour could be detected on the market of special investment funds from that year, too. The net asset value grew sixfold from 2005 till 2008. The other main category of special funds was the capital-protected funds. Their success was also due to the crisis and the move of investors towards safe investment possibilities.

In 2012 new categories emerged on the market of investment funds. Those funds, where the degree of capital leverage did not exceed 30%, were ranked among traditional funds but the existence of leverage had to be marked in case of other exposure. Those funds are put among special funds where the capital leverage is above 30%. Out of special funds, the most outstanding performance was achieved by absolute-yield funds as regards the growth of market share. Their expansion is the most intensive on the market even at the moment. This category include those funds which aim to achieve positive return independently from the capital market environment and regard exceeding risk-free yield as a starting point. The net total assets of these funds had tripled from 2013 to 2014 which is an exceptional performance even on this dynamically changing and developing market.

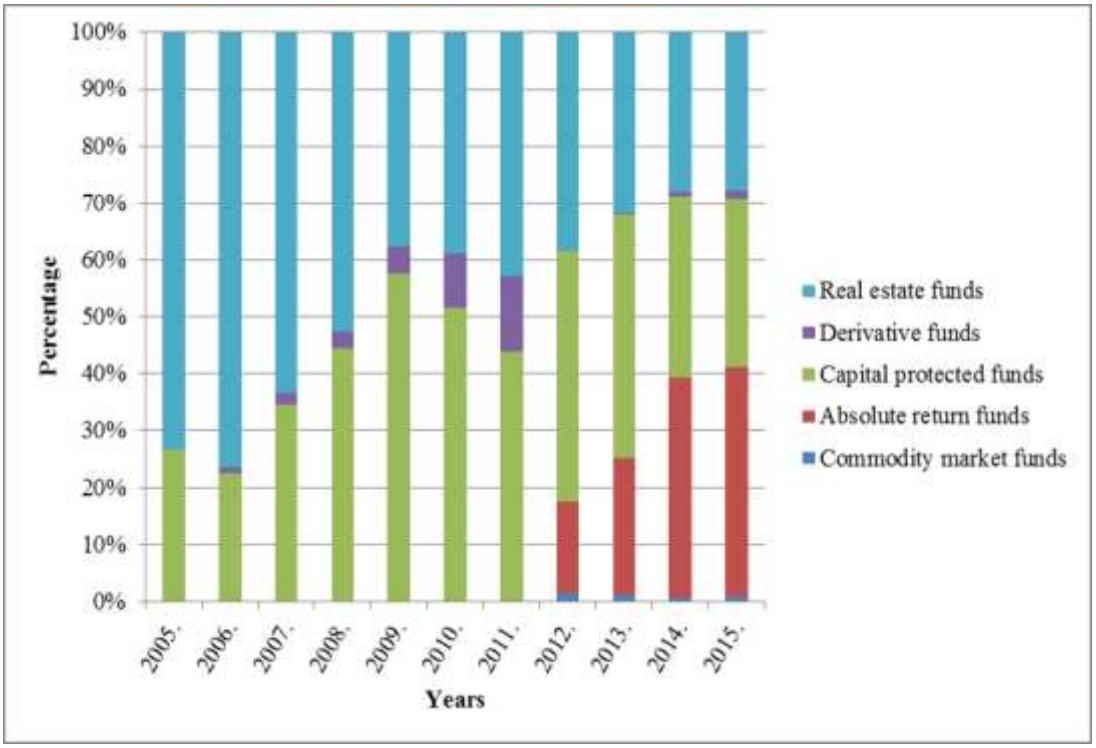

Figure 4: Distribution of special investment funds in Hungary between 2005 and 2015
Source:BAMOSZ

Conclusion

In general it can be concluded on the basis of BAMOSZ data that the units of bond funds, mixed funds and absolute funds have experienced a substantial growth of net asset value, while the money market funds have suffered excessive decline on the market of investment funds.

The market of investment funds is expected to change as follows: The investors will react with increased caution and moderated risk taking (the risk tolerance has already been strongly reduced and it will surely continue to fall). The fundraising of money markets will decline, the money will be concentrated at stable and transparent institutions with high safety reserves and typically with globalised background.

The public settlement regarding the movement of assets and liabilities will increase in the transparency of management of investment funds. Setting up an objective control system is still a future task. Apparently, the professional ethics cannot prevent the excessive distortion regarding business information.

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Author addresses

JÁVORNÉ VÉGH, Klaudia PhD, first assistant
Szent István University, Institute of Business Sciences
Email: vegh.klaudia@gtk.szie.hu

TÓH, Márk PhD, associate professor
Szent István University, Institute of Business Sciences
Email:toth.mark@t-online.hu

BÁRCZI, Judit PhD, associate professor
Szent István University, Institute of Business Sciences
Email:barczi.judit@gtk.szie.hu

Lector: Dr. SZÉLES Zsuzsanna, Szent István University Gödöllő, Hungary

NATIONAL AND INTERNATIONAL REVIEW OF THE TRENDS RELATED TO THE SUSTAINABLE CONSUMPTION

Virág Ágnes KISS

Abstract

Nowadays, the principle of sustainability has moved into more and more spheres of our life (eg.: food safety, marketing, environment – economy, education). The basis of this sustainability is the fact that we need to create a lifestyle, which does not endanger the life of either ours, or the next generation's with not able to live in a free, welfare society, balanced with Nature. For reaching sustainability, international professionals expect the global reduction of overconsumption and pollution, together with the creation of a healthy nutrition attitude of the European sphere suggested by the international scientists. In this paper a review will be presented about the aspects and ways of sustainable consumption. I also would like to arrange them in a hierarchy, and define the phenomenon of sustainable consumption in general, which is worth examining in the field of food and the environmental influence as well.

Key words: sustainability, sustainable consuming

Introduction – Sustainability

Nowadays, sustainability has become an inevitable sphere, which is confirmed by the more and more number of researches in this topic. This complex field is approached by many people in many ways, since its 3 main baselines – Economical, social and environmental - give several aspects of sustainable development.

When we want to describe the sustainable consumption, we need to know the core of sustainability itself. According to Kerk and Manuel (2008) - which is based on the definition of the Brundtland Report – the possibility of an operable sustainable development is the existence of a manner that provides a long-term safety and freedom in a welfare society, where people can live in balance with their environment. (Kerk and Manuel, 2008) It is true, that sustainability becomes pointless without proper circumstances, but having conditions that are lacking the steps towards sustainability, is totally failed. Changing the consuming behaviour brings the fact that in order to know and modify the social behaviour, we need to understand sociology and other fields of science besides of classical Economy. In order to get a valid view, we need to map the self- made aspects of consuming as well, above the psychological – cultural examination. The main problem is that average people are usually not aware of the ethical or environmental effects of their consumer decisions. (Soron, 2010)

The main aim of this work is to give a short but overall view of those live and approaching trends which are connected to national sustainable consumption, and to walk round the description of this consumption with the help of local and international literature.

The appearance of the sustainability in the consuming space

We all know by now that the majority of our consumption has a connection (directly or indirectly) with human subsistence, and it is the result of biological, social and cultural processes. Moreover, our informational catering of our rational behaviour is highly imperfect (Lehota, 2004), opposed with the understanding of the classical Economy. In recent decades, it is more and more emphasised that consumers need proper informational channels for gaining a more sustainable lifestyle. Media often conveys those basic messages that are related to the core of sustainable development, and we can notice the indications and labels on products, informing us about its connection to sustainability. According to the counting of ecolabelindex.com, there are more than 400 existing labels (fair trade, environmentally friendly, animal welfare, etc.), and there are 147, which imply food or drink standards. A 2012 research of European Committee states that there are 129 communal and sustainable related labels in food industry (on EU or national level), that have an obvious impact on shopping, so we can expect a more sustainable consumer behaviour in long-term way. (Grunert et al., 2014)

More sustainable lifestyle trends

We meet several trends related to sustainable consumption, which try to solve a particular issue of it. These tendencies often cover each other, and have several common points (Figure 1), but we talk about conscious consuming behaviour in each and every case.

We could describe a conscious customer, as someone, whose shopping and consuming decisions we can find proper information behind, so they can manifest the important points of view with it. (Dudás, 2011) In the field of consciousness, we can separate our individual and the community related consumption.

Figure 1: Sustainable consumption and trends

The level of individual interests

In my opinion, the individual consciousness, together with the communal one, is a part of Sustainability, as we find several overlaps during the examination of particular types. Moreover, enforcing individual interests makes consumers satisfied, and this high levelled welfare provides more attention to communal interests (it is extremely true in welfare nations). In individual level, we can find quality-, price-, value-, rights-, financial- and nutrition consciousness. (Dudás, 2011) It is worth dealing with health consciousness in a deeper way, since it impacts our several spheres of life.

Health Conscious consumption

"Health is not just the lack of sickness, but the state of an overall welfare of the body, mind and society." (WHO definition, 1946) According to Emőke Bagdy's health consciousness definition, the health conscious people are those, who take responsibility for their own life and health, and take care of creating balance in each and every dimension of health. (Bagdy, 2010) Health-behaviour itself is a complex system, which contains sports, hygiene, inner health, conscious nutrition and the avoidance of harmful things, together with continuous self – checking and having regular screening examinations. (Harris and Guten, 1979 quoted by Szakály, 2008) Nutrition consciousness, as a dependant of health conscious view of life, motivates consumers to choose and take the proper facts, based on their individual needs and taste. Nowadays, the different food types allow this selection. The greatest group in this topic is functional food .

In recent years, national and international papers show a positive tendency, as the willingness for consuming healthy products which take sustainability into consideration, is much higher than in the past. It is highlighted in a 2014 research as well, which described ten health centric trends in sectional food consumption, based on the modern needs and financial factors. The research itself was made by the Institute of Food Technologists (IFT), and Sloan (2014) found the following trends (in the increased demand for particular food types):

1. Specialty Nutritionals(eg.: probiotics, antioxidants, vitamins)
2. Get real campaign, which excludes the usage of synthetical materials.
3. Hispanic health consciousness, which means that the members of this ethnical group pay more attention to their well-being, and they are more critical with their food selection. Although this group is located in the US, their consuming habits are similar to the developed countries in Europe.
4. The Protein Evolution, which can be found in the popularity of this substance among youngsters in the growing food supply.
5. Kid-Specific, which provide colourful dietary for our kids, adjusted to the particular growing phases.
6. Pharma Food, which we can expect the prevention or alternative treatment of some problems (eg.: diabetes, blood pressure problems, overweight).
7. Alternatives, which means an occasional or permanent meat-, milk, gluten- or lactose free eating, and the substitution of these elements with particular ones.
8. Performance Nutrition, which explains the trend that more and more people do sports in their free time, implementing the products of the sport culture into the life of everyday people and children.
9. Weighing In…, these are the weight loss products.
10. Gen Zen, which is the consuming trend of those born in the millennium. They are critical with all types of food, and they examine them more careful (freshness, calorie, contects, etc.) than the elder generation. (Sloan, 2014) We can see from these patterns that the label information on products can seriously induce the popularity of particular ones.

The trends mentioned above can be found in Hungarian society as well, and can indicate the changes that happen soon in functional dietary. We can see a positive strengthening of healthy lifestyle in Hungary too, which shows good results compared with other countries as well. (Szakály et al., 2014)

It is good to take into account that how much it is worth separating our behaviour and fight for the free environmentfrom our own health. We cannot talk about naturally sustainable health without a healthy environment. It is impossible without a balanced social environment and welfare too.

At this point I would like to involve the socially responsible tendencies into the research.

Socially-responsible consumption

For the execution of sustainable consumption are needed to pay attention to socially-responsible and conscious thought and interest strengthening in average consumer's decision making process. We can find many trends which can foster the idea of sustainability in different ways. This trends are manifesting in our purchaser decision when we take a notice of community and social values and interest withal ours, and when we prefer for example the less environmental-unfriendly or environmental-friendly product than the others, or which can signify our socially sensitivity(Crane & Desmond, 2002, Roberts, 1993 quoted by Kovács, 2013). In the manifestations of sustainable consumption our individual interest attached with our society's and our environment's development. These trends are: environmental-consciousness, ethical consumption, voluntary simplicity, orgin-consciousness, ethnocentrism, fair trade and the LOHAS (Dudás, 2011, Törőcsik, 2007, Kocsis, 2001, Gulyás, 2007, Szabó, 2006, Malota, 2003, Rácz & Horváth, 2011, Kelemen, 2010).

Ethical consumption and related trend

The consumption is not just a market effect, but participation in social issues. (Gulyás, 2007) According to Beck (2006) the most global environmental and social questions and problems are caused by the present state of market movements and actions. That's why we have to find the solutions of our problems in the market institutes, because the formal way of political voting turns into worthless and "imponderable" process for directing our future, but since the company's profit depends on the consumers, the companies have to stand in with their consumers, so the consumer choice is a vote whichcan becomethe form of power or strength (Gulyás, 2007). The ethical consumption has many motives which contain from the movements of animalor environmental to human rights protection. For them the consumers aim to express their view about these cases in purchasing situation like they vote for company's behaviour or policy which is pleased for them. In this way they can express their thoughts in market demand. Because market does not just act the part of economic system, but this is also a place or space for political and moral actions. (Gulyás, 2007)

The ethical consumption contains the Fair Trade movement too, in which we can meet which forint/euro/dollar vote theory. This theory is about every spending euro which we give to a company for a product are votes to its policies of human rights, environmental protection or anything else. So our purchasing decisions can form our society's movement in the same way or more than or political votes on the elections (Dickson and Carsky, 2005 quoted by Gulyás, 2007). This is not a new view about consumption it appeared in Anderson and Cunningham (1972) research about market segmentation in the 70's years.

The ethical consumption movement action forms are:

- No-using, for example we don't use cars because of environmental reasons.
- Value-conscious ordinary purchase, for example buying of fair trade products.
- Boycott, no-buy of some company or country product because of ethical or moral reason.

- Buycott, it's a positive boycott, when we try to support a company or a country with our purchase.
- The good way of using of some product, so we economize with saving energy, water or recycle what we can.
- Take care of waste after product using, for example selective waste collection. (Gulyás, 2007)

As we can see in action forms in this kind of concern for our and next generation future the Buy Local! movement can be a part of ethical consumption. It does not want to stand up against the globalization process, just it would like to support the local activities, production and local sustainable growth (Vasa, 2010). And here is the Fair Trade, which can support a company or organization with social togetherness by purchasing situation.

The ethnocentrism and orgin-consciousness also included by ethical consumption. These trends is about jeopardizing of our economy if we do not prefer the local product with same conditions than foreign products. In Papadopoulos and Butt research (2006) they found that this trends are uncharacteristic in undeveloped or more immature countries (Malota, 2003).

Environmental-conscious consumption

The environmental friendly or conscious consumption is the best known and most mentioned trend in literature and in ordinary life. It is included active environmental friendly, environmental protector movements, policies and organizations (Hofmeister, 2011). Many small trends are based on this ideas, for example Greenpeace. Many researcher made studies about people's attitudes about environment. For example Banerjee and McKeage (1994) defined believes of human and nature relation. One of them is we have to refuse the idea that the humans preside over nature, just we would try to make a balance with it (Schafferné, 2008).

It the other study was written about activities for environmental protection by Meffert and Kirchgeorg (1994):

- Stay clear of traditional production which is harmful for the environment.
- Change demand – Prefer the environmental-friendly product.
- Consumption of environmental-friendly product.
- Take care of recycling and selective waste collection.
- Strike or exclaim against environmental pollution. (Nagy, 2011)

In Tanner and Kast study (2003) they established that environmental conscious attitude is related with local product support and other researches had same result (Hofmeister, 2011, Vetőné, 2012).

The consumers started to take care of society's problem like ours, and see the effects, problems of unsustainable lifestyle, and that's why they feel they have our future on their hands. In Hungarian relation we can find positive attitude of responsibility and consciousness for sustainability, and it is manifested in their consumer behaviour (Kovács, 2013).

Voluntary simplicity

This trend was so popular in the United States some years ago. In a Hungarian study we can find that this movement try to stand up against materialism. It based on simple life and high-toned thoughts (Kocsis, 2001). It is not an ascetic lifestyle just it want to find way of happiness in immaterialist values with mental and spiritual harmony and balance. It does not want to stop growth, but it supports the sustainable development. There is an ecological consciousness idea which on the interactive relationship between humans and nature. (Kocsis, 2001). The principles of voluntary simplicity in Ballentine and Creery (2010) are:

- Environmental consciousness,
- High expectations of quality and durability of products,
- Support ethical consumption with our behaviour,
- Self-sufficiency,
- Used or second-hand product purchase, and
- Share devices with common (Dudás and Szakó, 2014).

One of the newest form of the last principle is Collaborative Economy which is defined as initiatives based on horizontal networks and participation of a community. With sharing devices, offices, homes, etc. with the others we can save money, and take for the sustainable future, for example car-sharing, flat-sharing.

LOHAS

LOHAS (Lifestyle of Health and Sustainability) is a rather new phenomenon in our literature, including an ethical, environmental and health centred trend. This is a so-called sustainable and health safety way of living. It means that it is not only for restoring health, but it tries to reach a social changing by an individual consumer behaviour. It is also true that a kind of hedonism can be seen there (Rácz, 2013), which goes against the principle of voluntary simplicity. Based on the international literature, the LOHAS can be seen as the most engaged group towards sustainable consuming, as they take into consideration all the three main points of sustainable development - economical, social and ecological - when making their shopping decisions. The new type of consumers does necessarily appears in concrete shopping situations, since this is the way to announce their need for change. (Rácz, 2013) Törőcsik, Mária has identified them as a trend-follower group, whose basic character is mainly given by the aim of health- and environmental centric mood. The group itself can be seen as a product related target audience in the early literature, but today, they are realised as ones who are closer and closer to sustainability. Usually, the representatives of this lifestyle are well-to-do people - like in case of other conscious trends -, especially women, parents and the elder generations. This group is constantly growing, as more and more people use the possibilities of the wellness (which means the alternative types of restoring health, except for the latest fashion followers and hedonists), and the products which are made of environmentally friendly/organic materials. (Törőcsik, 2007) In the research of Rácz, Georgina, the main factors about LOHAS were the followings: environmental consciousness, health

consciousness, ethical behaviour, authentic values, and individualism has a strong voice as well. (Rácz, 2013)

This lifestyle, which is often defined as a hybrid one in literature, was described by Schulz (2008) with the following - opposite, but accommodated - values and behaving patterns:

- Maintaining the technological development together with naturalism
- Health and searching for enjoy
- Individual, but not egocentric way of thinking
- Selectiveness but not status based consuming
- Modern and value oriented attitude
- Coherence of communal and self - centred values
- Understanding of the rational and spiritual factors, and the realization of the possibility to modify them. (Schulz, 2008 quoted by Lehota et al., 2014)

For these communities, the medical system and sustainability can be cooperated and developed together, since the natural way of preserving the environmental quality is inevitable in restoring our health.

Sustainable consuming

As we can see from the above tendencies derived from the national and international literature, there are different approaches towards those types of consuming, which contain more sustainable features or their particular parts. We also need to emphasize here that these patterns often correspond to each other.

Several political declarations, regulations and strategies try to frame the sustainable consuming itself. When we examine the more concrete definitions of this topic, we can find that each and every researcher claims one particular sphere as a main aim towards sustainability - eg.: 'green' way of thinking and the related energy consuming, or the reduction of CO2 utterance and other types of harmful effects (with buying local products instead of imported ones, organic harvesting instead of traditional ways, etc.). (Alfredsson, 2002 és Pack et al., 2005 quoted by Vetőné, 2011) Some theories see the possibility of a more sustainable environmental loading in the healthy nutrition. Such definitions were created by the works of Leiztmann (2003), Duchin (2004) and Hayn, Empacher and Halbes (2005). They built the basis on products for everyday life that are suitable for the sustainable nutrition, mainly vegetal, healthy, come from organic farming, local and seasonal, low-rate processed, 'eco-packed', delicious and derived from a fair trade. They have a lower environmental effect and take into consideration the interests of the sustainable economy as well. (Vetőné, 2011)

Summary and conclusions

We need to define the sustainable consuming, as something that needs to satisfy and cover the main fact of sustainability. It means that it is essential to satisfy our personal needs in a way which does not endanger the needs for the next generations and ours in the future. We have to

make our decisions along this factor, and change those behaving patterns that cannot be assigned to this aim. It is a kind of behaviour that includes all the main factors of the trends above, and uses them during everyday decision making processes. This is the task and challenge of our current generation. (Szlávik, 2002) The appearance and growing popularity of these trends and patterns predict a positive future view, as together they can help to reach the desired sustainable development. It is important to highlight that the healthy lifestyle and the environmental consciousness in themselves, and especially together can serve the sustainable economy. It is true, as the lower rate of environmental loads and medical costs together with a higher social satisfaction have several positive effects, which encourages us to have a deeper attention for our world. The strengthening of them can be the basis of our more sustainable consuming, which was stated in the title of the article.

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Author addresses

Virág Ágnes KISS
University of Debrecen

Lector: Dr. SZABÓ Zoltán, Szent István University Gödöllő, Hungary

SUPPLY CHAIN MANAGEMENT CONTROLLING – A MODERN CONCEPT IN LOGISTICS AND STRATEGY

Dr. KOZMA Tímea Ph.D – Dr. GYENGE Balázs Ph.D – TÓTH Róbert

Abstract

In today's globalised world building strategic partnerships is a must for all businesses to survive the intensive competition in the world market. However, it is not solely individual businesses but whole enterprise groups are competing. The recent financial and economic recession has had a deep impact and influence on value creating processes. Thus, under such external circumstances, entrepreneurs must develop skills in decision making. Supply Chain Management Controlling (SCMC), which is viewed as an independent field nowadays, aims at serving and supporting the corresponding complex task needs.

SCMC is an effective toolbox both for leadership activities in logistics management and for planning, organising, managing and controlling transfer processes within and beyond the scope of the enterprise, with a special emphasis on minimising expenses resulting in increasing competitiveness and market share. SCMC enables the effective synchronisation of logistic processes as well as the exploration, processing and provision of facts. This study intends to show the development of this up-to-date field and management tool, its basic concepts, and to explore the conditions for its practical application.

Keywords: supply chain, supply chain management, new leadership concepts, increasing competition and co-operation, supply chain controlling, cost efficiency

JEL classification: M10, M40

Introduction, the timeliness and complexity of the topic

In today's fast-paced world, time plays a primary role not only in our private lives but also within the framework of market conditions. It is essential to identify and seize opportunities as fast and precisely as possible. In the private sector time has gained more and more importance over the past 20 years and it can be interpreted as a success factor. Any actor that takes new opportunities faster than its competitors, not merely identifying them but satisfying the high standard demand of the external economic environment as well, can have an advantage, which is in the focus of attention for all businesses. Globalisation is observable even after the recession in 2008; with international businesses making further headway and the turbulent competition in the market, production and manufacturing companies have to rethink their strategies (Karmazin, 2014). Logistics aims to serve this face-paced world by minimising service time and incurring costs, and at the same time maximising customer satisfaction and service quality. Logistics has been gradually growing its significance since

the 1950s and it has become a field of strategic importance and an interdisciplinary science as of today. Throughout its development it has drawn on theories from several branches of science to specify its objectives (Figure 1.).

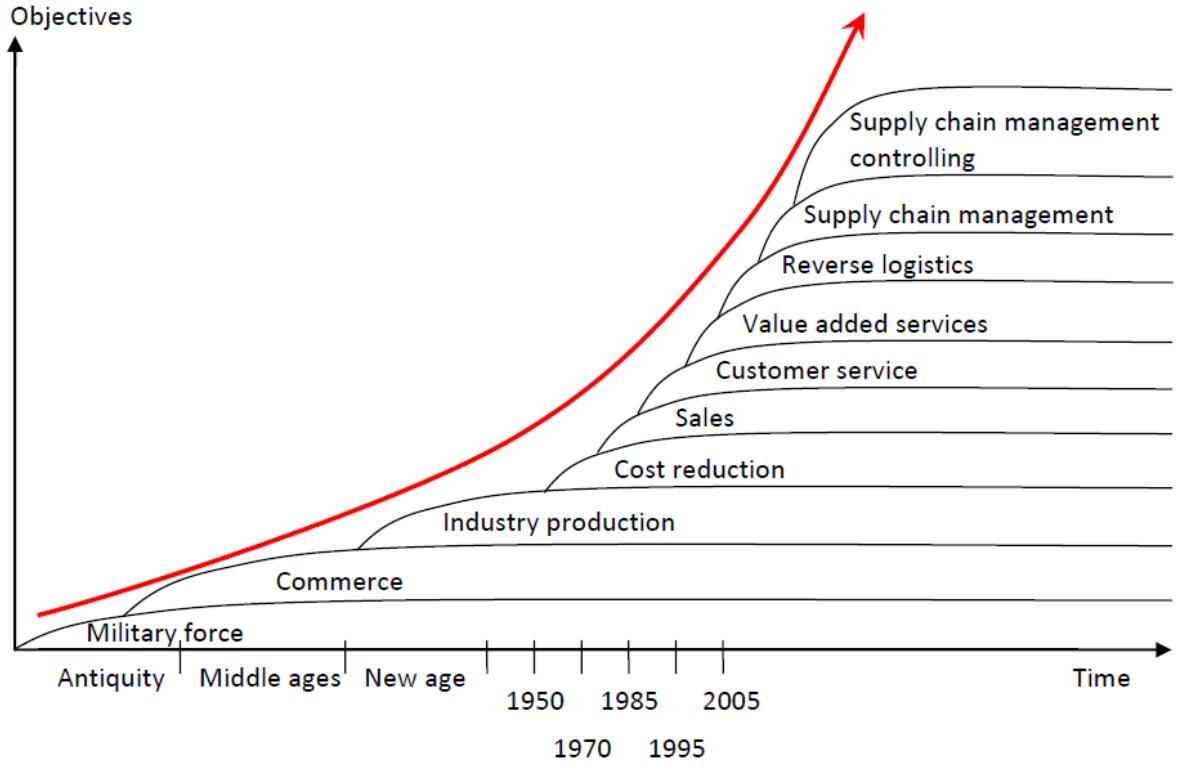

Figure 1. The change in the objectives of logistics
Source: own construction, completed based on Szegedi-Prezenszki, 2003

Naturally, the continual growth of objectives has brought about the expansion of logistics including basic areas such as transport, freight forwarding, stock management, procurement, distribution, warehousing, and also order processing and information technology. Supply Chain Management (SCM) has appeared in all of these areas. Experts, both Hungarian and international, have tried to define Supply Chain Management. Definitions of SCM all have in common that the chain comprises more than two actors and their common objective is to improve the quality of added value provided to customers (Nagy, 2010). It is worth mentioning Pfohl's definition (2010), although it refers to logistics, already contains the 'network' approach of supply chains. "Logistics includes all the activities by which movements and storages are carried out, controlled and regulated in a network. Co-operation in a network sets off the flow of goods and information where time and space are bridged in the most efficient way possible." As a modern management concept Supply Chain Management has to complement the classic logistic optimisation of information, goods and value flows in a business, taking direct account of final customers and trading partners, in co-operation with suppliers and development partners (Drawert, 2003).

The SCM concept makes possible the increase of efficiency on planning and management levels, the enhancement of co-operation with suppliers and customers as well as the response capacity, moreover, the reduction of incurring (marketing, logistic and manufacturing) costs along the whole supply chain. The focus of the complex logistics approach is generally on cost reduction which is a sensible economic pursuit indeed. However, these objectives have to be analysed from the strategic point of view of economic actors (Gelei, 2010). Strategic policy making is the senior managers' competence, yet the existence of a supporting system is required to enable their decision making. In academic literature this system is called controlling. Thus, controlling supports the leaders, and the management of functional units in the organisational structure of businesses. These groups of activities have, and are advisable, to be developed within the framework of all organisations, and they form a part of the management. The classic management functions are planning, organisation and monitoring (Gyenge, 2007). Controlling primarily concerns the co-ordinated system of financial planning, operational management, monitoring and information provision procedures appropriate to the strategic objectives and organisation of businesses. Therefore, controlling applies to the senior management level which focuses on assets, liquidity and performance planning. From the financial point of view a criteria system can be set up which has three major elements. The primary activity is liquidity management which involves the harmonisation of business revenues and expenditures. The second financial activity is maintaining solvency. Solvency means the balance of assets and liabilities and the underlying analysing task. The third activity is maintaining profitability. These three (Liquidity, Solvency, Profitability) make up the acronym LSP. Implementing LSP is a strategic task but at the same time it requires an operational, immediate action. Therefore, financial management has to assume both strategic and operational roles (Illés et al., 2013).

The analysis of logistics and controlling features and interrelationship (Table 1.) shows that the two systems are linked by motivation and requirements of the competition in the market. There is no disagreement in terms of orientation or management subject either, since task and process based methods are becoming ever more important in decision support controlling. It is obvious that time as information is playing a more and more significant role (Majoros, 2011).

Table 1. Comparing controlling and logistics functions

Comparative criterion	Controlling	Logistics
Organisational function	Co-ordinating	Integrating
Management subject	Information	Time / place
Central market actor	Owner	Customer
Motivation	Profit, free cash flow	Profit, Customer Service
Performance	Optimal decision, performance indicators of value adding activities (e.g. Logistics)	LPI (Logistics Performance Index)
Optimisation	Input-output ratio	Material and information flow
Usefulness	Decision support	Place and time, customer loyalty
Development motivated by	Market competition and lack of decision making ability	Market competition
Orientation	Decision	Process

Source: Majoros, 2011

Material and Methods

The aim of this study is to explore, based on secondary sources, the theoretical bases of the interdisciplinary Supply Chain Management Controlling. Due to the novelty of the topic there are few Hungarian (written) sources, therefore, foreign, primarily German sources are used to draw up the definition, the tasks and objectives of Supply Chain Controlling.

This study is the first step in an ongoing research project, serving as a basis for a primary research whose goal is to explore the practical role as well as the conditions for the practical application and applicability of Supply Chain Management Controlling.

Results and Discussion

Supply Chain Management Controlling (SCMC) – conceptualisation

Acknowledged thinkers believe that the 21st century is the age of supply chains. In today's world there is a special emphasis on excellent leadership, appropriate organisational structure and culture, employing skilled workers, cost-effective management, improving the quality of production, and the quick response capacity mentioned before. These features help enhance the competitiveness of businesses. Companies pursuing industrial and commercial activities are a part of the 21st century's worldwide value-creating network system whose complexity is growing with every day. The developing relations system and co-operation of businesses is due to the dynamic market environment. Tight competition, cost pressures, short product life

cycle and product diversity put a heavy burden on the markets worldwide (Horvath&Partners). Supply Chain Management Controlling (SCMC) offers a long-term solution for the challenges cited above.

Based on Supply Chain Management Controlling literature we can say that there are multiple problems concerning management and leadership of supply chains, even if nowadays there is a growing need for leadership management. However, these hardships could be overcome by the introduction of a controlling system throughout businesses.

In the lack of Hungarian sources, foreign, primarily German and English sources are used for analysis in this study. Just like in the case of controlling, there exist several concepts and trends in supply chain management, therefore, supply chain management controlling can be characterised by heterogeneity as well. As of today there is no uniform definition for this field of logistics, resulting in diverse interpretations.

According to Westhaus (2007) SCMC is an all-over-business management support system whose primary function is to provide all the partners of a supply chain with appropriate information at the appropriate time in order to ensure the smooth functioning of inter-partner logistics processes. Another feature is the provisions for the logical setup and optimisation of supply chains. Westhaus believes that SCMC's function is principally providing information which ensures the operation of inter-partner logistics processes. He does not take into account central aspects of other controlling concepts such as ensuring rationality or the significance of leadership functions.

Stölzle (2002), while mostly remaining with the previous approach, added a few concepts. He emphasised the importance of supply chain integration such as the selection of partners, appropriate process chains and certain management elements. Stölzle separates two important fields within the SCMC framework. The first is a strategic level which is concerned with integration decisions and the development of a conceptual analysis system. This strategic level includes the planning and analysing the logistics objective, organisation and process structures with respect to long-term objectives of businesses. At this level market research, the study and analysis of hidden capacities and a balanced strategic scorecard (BSC) system are of great significance. Besides this, he mentions an operational level which centres around the management of public key infrastructure (Stölzle, 2002). At the operational level there is a major emphasis on exploring opportunities for rationalisation, the study of goods and information flow processes based on the cost-effectiveness criteria and the well-considered cost reduction of activities along the entire supply chain.

Hahn and Hungenberg (2011) also tried to summarise the key elements of SCMC. In their approach SCMC is viewed from a general, classic controlling point of view where it is the union of its objectives and tasks, and the required tools are an integral part of supply chain management controlling (Carsten, 2008). (Figure 2.)

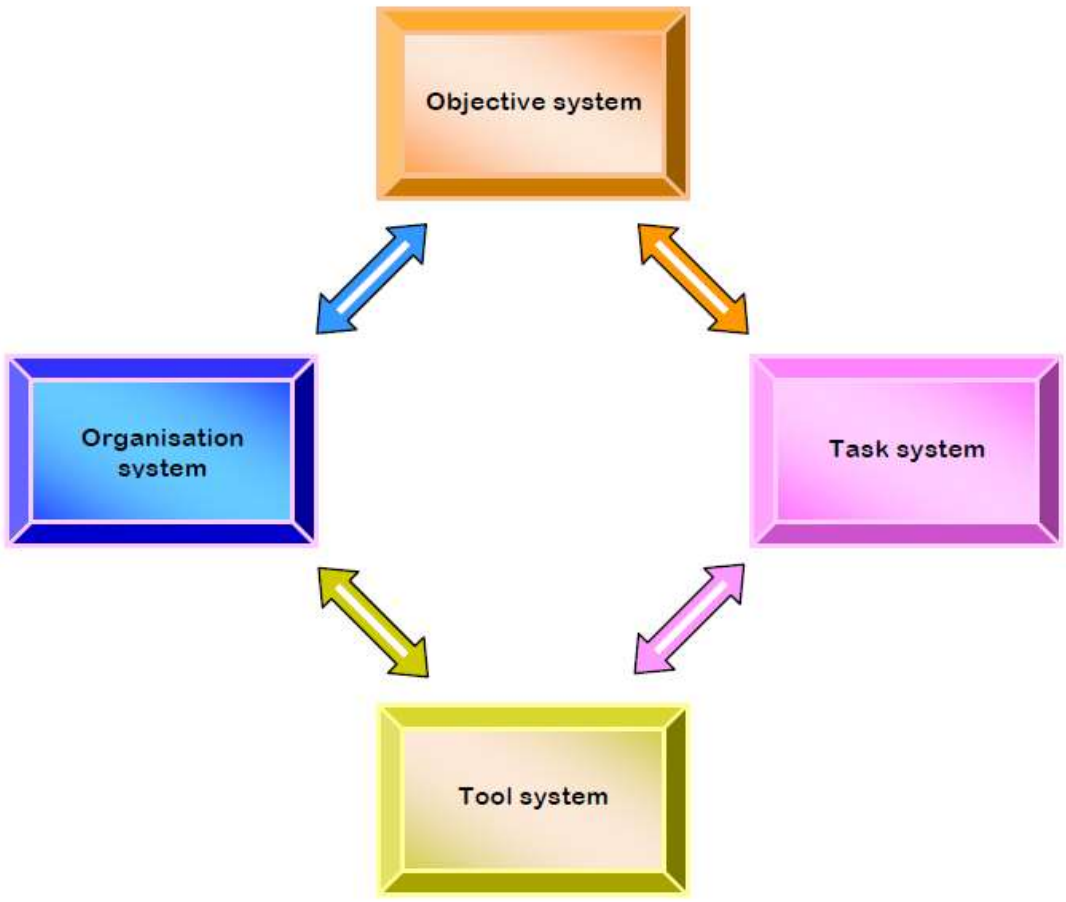

Figure 2. Elements of Supply Chain Management Controlling
Source: Carsten, 2008

Thus, supply chain management controlling can be defined as a part of supply chain management which includes planning, management and monitoring along the entire supply chain as well as providing information of production processes. SCMC is an effective toolbox for both leadership activities in logistics management and for planning, organising, managing and controlling information transfer processes within and beyond the scope of businesses. SCMC means the analysis and controlling of the entire enterprise, and, if possible, the optimisation of its operation (Gericke, 1999). This controlling method serves the monitoring of available information and actual data which in return increases added value efficiency and quality.

The tasks of Supply Chain Management Controlling

The fundamental tasks of traditional controlling are the systematic tracking and regular evaluation of all-over business activities, drawing up financial plans for businesses as well as providing their realisation and actualisation, the evaluation and control of financial performance (Hágen, 2008).

Controlling is supposed to help leadership by planning, analysis and control tasks of direct applicability for the leadership. The tasks and functions of classic controlling are

- recording costs,
- continuous measurement of performance,
- and writing business reports,

which are the same as for the roles of supply chain management controlling but this should be added by an all-over business perspective for the whole company.

Due to value chain complexity controlling has a vital role in managing individual transactional points of the chain. Consequently SCMC has a dual role namely it does not only function along the entire value chain throughout the whole enterprise but also within the framework of different connections. SCMC analysis is mainly concerned with analysing the transaction system of these points to continuously ensure cost-effectiveness, efficiency and synergy between the elements. Alongside these functions, SCMC also provides a continuous tracking and analysis in the areas of goods, information and cash flow (Arnold, 2005).

In his work, Drawert (2003) identified that the following 6 functions that SCMC has:

- supports market adequate and transformation-oriented decision-making,
- continuously synchronises directing and monitoring tasks,
- accounts for and defines critical success factors specific to businesses,
- provides the transparency and reproducibility of data as appropriate,
- integrates relevant market actors in the study of logistics network, and
- permanently improves the efficiency and effectiveness of the supply chain.

In every business, leadership, and therefore its directing, organising and managing functions, play a dominant role in improving efficiency and effectiveness. Taylor (1880), Fayol (1916), and, in a certain sense, even Weber drew attention to the significance of leadership. This is justified by a study carried out in several countries by Bloom, Sadun and Reenen in 2012. Their study wanted to find out whether an excellent management makes businesses more successful than businesses with less skilled leadership. The study showed that most companies are poorly managed. At the same time, businesses owning good management perform better in every respect. Providing a rational leadership is one of the priorities in Supply Chain Management Controlling. To fulfil this task information support of leadership is required. It includes the recognition of problems and weaknesses in a business at an appropriate time as well as the availability of appropriate tools for business leaders. It is also important that leaders should be aware of any differences between planned and actual data, and occurring problems as soon as possible to have a quick response accordingly (Winkler, 2005). Appropriate decision-making has to be based on studies and analysis in which leaders can find several performance indicators. These indicators are extensively studied in the literature of classic and financial controlling. (Figure 3.)

Figure 3. Key elements of Supply Chain Management Controlling
Source: own construction

Information supply is a vital, and at the same time obvious issue in every business' life. Leaders and decision-makers need up-to-date information with appropriate content.

(Figure 4.) To develop and continuously improve directing, organising and managing skills it is essential that there should be detailed knowledge about current events and their possible effects in every single planning process (Schweitzer-Friedl, 1992). Quality and quantity of information also have to be mentioned. The source of new information with appropriate content also makes a difference since this is a basis for necessary calculations and analysis relations.

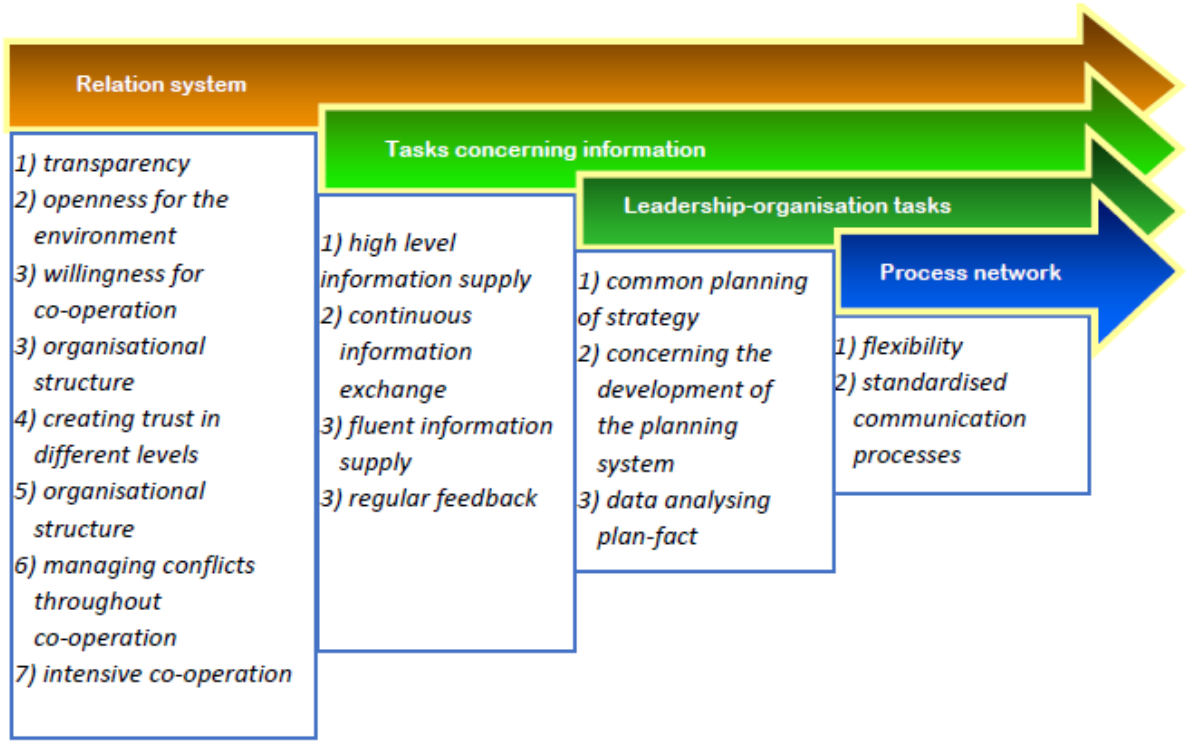

Figure 4. Task categories of Supply Chain Management Controlling
Source: Winkler (2008)

The aims of Supply Chain Management Controlling

The primary role of controlling is to provide leaders with precise and reliable information about the actual situation and continuous operation of a business. Information provision includes actual information for operational management, and comprehensive information for preparing strategic decisions. Controlling is basically linked with the area of finance that is the process of financial planning, when, based on strategic plans, comprehensive plans are made for years meanwhile outlining action plans. Based on plans of several years, detailed operational annual plans are drawn up which are further divided by the financial leadership, corresponding to the smallest reporting time intervals determined in financial reporting standards. The primary role of Supply Chain Management Controlling refers to management support, therefore it is capable of collecting and transferring identical information for top management. The complexity and the high requirements of processes in logistics and supply chain systems call for the co-ordination and integration of individual subdivisions. This activity includes the continuous measurement and evaluation of efficiency, effectiveness, profitability and information supply. However, to enable business leaders with appropriate information, an all-over business indicator system needs to be developed, for which mainly financial knowledge is required.

There should be worked out a standard IT aided indicator system which acts for the whole value chain as one standardized system. We can interpret the results of the indicators relevantly only if we are really aware of the structure of the whole supply chain. It must be kept in mind that the efficiency and the performance of the value creating process in a

complex company depend on several factors, thus only one single indicator or just a few ones cannot characterize it in a proper way. That is why determining 6-10 indicators and analysing them as a whole is necessary. Some indicators are concerning cost management whose main goal is to reduce the costs of the enterprise and to strengthen its market position. Cost management has a plenty of different approaches, but the most common ones are Traditional Cost Analysis (TCA), Process Value Analysis (PVA), quality cost management, analysing the costs of the producer and customer, revealing social costs , life cycle costs , as well as ABC analysis. It is highly worth mentioning Strategic Profit Model (SPM) in which the efficiency of the tools necessary to ensure complex logistic processes can be analysed while analysing the strategic alternatives. This model closely relies on the area of finance and accounting since it integrates ROI into the analysis.

Besides determining indicators another company should be found to compare the results. Benchmarking is a suitable method for that purpose. It is a comparative method close to SWOT analysis which puts the strengths, weaknesses, opportunities and threats of the enterprise into an analysis. It needs a benchmark as the basis for comparison with which the management can have consequent results.

A well-established SCMC supports the enterprise to reduce production costs, to make quality control simpler, consequently decreasing its costs, increasing the capacity utilization and decreasing the volume of rejected products or waste during manufacturing. The major objective of SCMC is to reduce costs throughout the whole value creating process. The starting point to reduce total cost means to minimise production and transaction costs.

The goal of SCMC can be divided in two dimensions. Hahn and Hungenberg (2001) mention the category of “Formalziele” (formal goals) which primarily consists of the goals concerning the enterprise’s efficiency. Here is the place of those goals concerning the enterprise’s profitability, the profit or loss wanted so the capital value, expenses and incomes occurring. Just for short we can say that these goals fit the previously mentioned system of controlling with three parts. Therefore the category of the target goals includes the goals concerning the so-called LBR system. According to the two German researchers the second dimension is that of “Sachziele” (real goals) namely the goals related to performance. These goals are about the specific marketing, managing and organizing goals of the production and service processes. Social and ecological goals can be found among them. (Figure 5.)

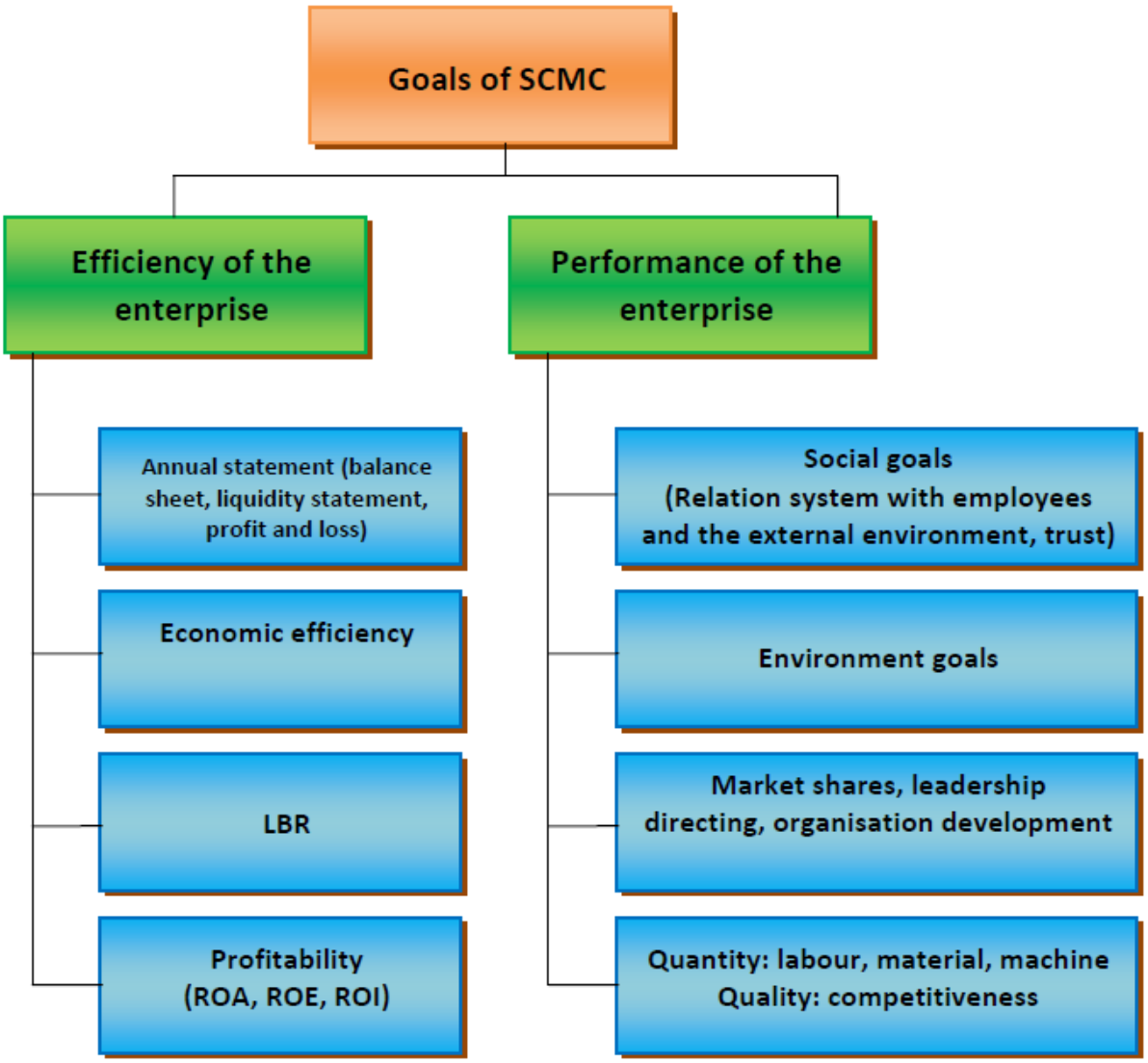

Figure 5. Goals of Supply Chain Management Controlling
Source: own construction based on Hungenberg (2001)

Figure 5. represents the system of the goals mentioned above. We would like to highlight the goals concerning trust taking place in social goals. Without any exceptions scientific studies analysing and evaluating the examination, competition and integration of logistics companies note the importance of social goals and trust in the success of co-operating companies (Karmazin, 2014). However, globalisation and intensifying technological change cause uncertainty in people and business partners. That is why it is important if the appropriate level of trust can be ensured continuously.

Trust as a factor of success is getting more and more importance these days. The existence of trust has several different interpretations in business. In the very basic approach it is earned by long-term relationships and personal experiences. Studies have shown that as the level of trust is getting higher the processes in a supply chain can be shortened while saving time and money. SCMC claims as tasks to constantly measure and increase the level of trust between co-operating partners. The real question is how controlling is capable of measuring and analysing. For this purpose there is no such a complex indicator

system existing, however, there is a line of other ways to mark the level of trust at a certain point of time. Another issue is why it is important that SCMC should deal with the question of trust. We can give the following answer: An effective co-operation cannot be imagined without the existence of mutual trust. In the lack of trust the co-operating partners share only a little information leading up to disfunctions in the processes. When operational disorders occur along a supply chain, they immediately bring about costs as a plus. These disorders influence efficiency and competitiveness in a negative way, moreover it is worth stating that it significantly increases the amount of transactional costs as well.

Remembering an important fact, if we are doing analyses extremely frequently then this suggests for our co-operating partners that we do not trust them well enough, so both their motivation and work performance falls down. The control overdone can lead to the case when the partners cannot really identify themselves with their work and each other.

Key indicators of the Supply Chain

The efficiency of the Supply Chain can be planned, measured and evaluated if performances and costs are defined and utilized in the controlling system. Nowadays supply chains are fairly complex, so several processes can be connected; the higher performance expectations towards them strengthen the need for planning, directing, controlling and coordinating.

Besides planning, analysing plan and fact differences, preparing decisions, information management and provision, supply chain controlling explores the causes and places of costs, searches bottlenecks at the transactional points of the processes and examines the problems of human resources.

The figure (7) shows the key measuring points of the supply chain.

The role of controlling can be considered as a significant success factor which essentially provides support in intensifying long-term value creation. Controlling creates, maintains and accompanies planning, corporate strategy and goal system, furthermore develops and enhances them.

- transport (quantity of order delivered)
- accuracy of sales prediction (plan-fact difference, percentage)
- plans in practice (quantity produced / quantity planned)
- committed capital (absolute value ...)
- logistics costs (in terms of circulation percentage)
- cost of failure (in USD)
- product range (the number of products)
- procurement performance (saving, eliminating costs related to the price planned and finalised).

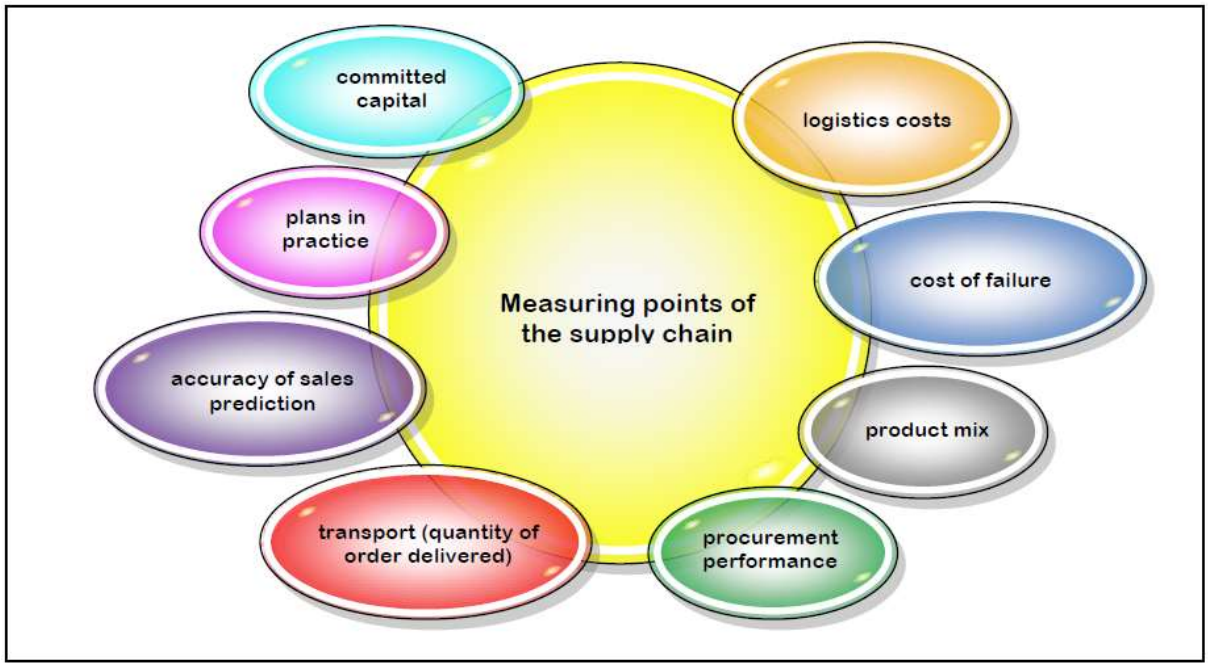

Figure 6. Main measuring points of the supply chain
Source: own construction

According to these we can differentiate four dimensions of supply chain controlling as follows:

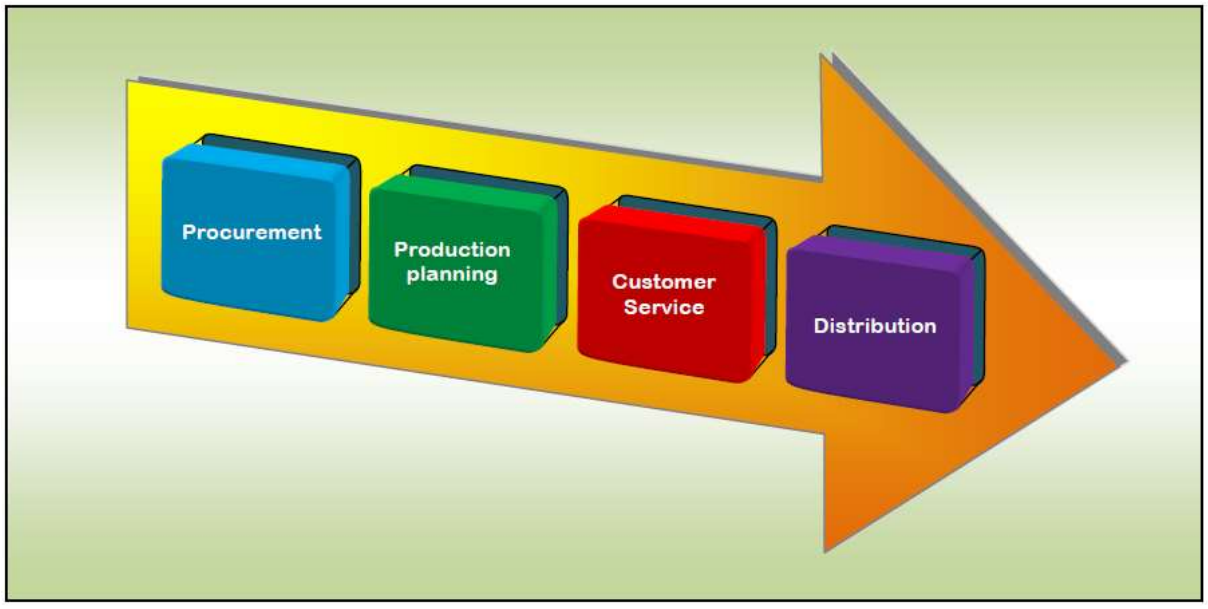

Figure 7. The 4 dimensions of Supply Chain Controlling
Source: own construction

These dimensions (control fields) leads to the value creation points as well as to the customer.

Conclusion

Nowadays we are living in the age of competition between supply chains. It is necessary to use controlling as a tool in order to operate an efficient and effective supply chain. In the suppliers' chain of larger companies the needs of the large companies as customers dominate;

successfully satisfying them is possible only if the production process is under conscious, comprehensive and professional control.

SCMC supports management by collecting and coordinating evaluation information, and with its analyses it gives a basis for fast and flexible strategic decisions.

SCMC is a subsystem in controlling system inside the organisation, at the same time it gives useful information for directing processes and activities between organizations via planning, analysing, and providing information.

As a summary we can say that SCMC is a series of processes which in the area of a complex logistics activity supports the leaders of the organizational units alongside the supply chain with creating several controlling reports, methods helping planning and controlling, collecting and processing information. SCMC intensifies the information flow inside the whole company, guarantees the increase of the level of trust as well as fluent communication.

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Author addresses

Dr. Tímea KOZMA Ph.D, assistant professor,
Szent István University, Faculty of Economics and Social Sciences, Department of Operations Management and Logistics, Gödöllő
kozma.timea@gtk.szie.hu

Dr. Balázs GYENGE Ph.D, associate professor,
Szent István University, Faculty of Economics and Social Sciences, Department of Operations Management and Logistics, Gödöllő
E-mail: bgyenge@interm.gtk.gau.hu

Róbert TÓTH, Student, Szent István University, Faculty of Economics and Social Sciences, Finace and Accounting (MSC)
E-mail: toth.robert.nemet@gmail.com

Lector: Dr. SZEGEDI Zoltán, Széchenyi István Egyetem, Győr, Hungary

THE RETAIL MARKET STUDY CASE: FARMERS' REPUBLIC IN ATHENS, GREECE

LOPEZ, J.L. – CALZADILLA, J.F. – VILLA, A.

Abstract

The present work is more related to a relevant study case than to a usual research presentation. It deals with the case of "Farmers Republic" originated in Athens Greece, in order to assemble in a common trading place farmers and fresh food consumers. The population in the surroundings of this market belongs to an upper middle class with a family income over the average.

The organic products from the farmers have a special attraction for this population. The marketplace is like a big supermarket with individual selling points for every individual farmer. Farmers bring their products and sell at a lower price than the closer supermarkets, and the clients can obtain fresher product with a better price. So, offer and demand meet together.

As a result a good market system has been developed, with three models of purchases: buying directly from one producer; from different producers (basket); and "on-line" by Internet through the website www.farmersrepublic.gr. Finally the buyer can carry his shopping; or have it delivered at home at a reasonable price.

The farmers' organization has eleven partners which are relevant firms. They have built the market with a big parking area; rent the farmer's selling place; provide additional quality services and finally charge a commission (30%, over the total sales volume). The design looks economical and from the marketing point of view, very realistic and the success is increasing day by day.

Keywords: organic fresh food, producers' market, sale on-line, new selling methods, value chain, retailing innovation.

JEL classification: Q1, L1, O4.

The producers' markets

The producers markets are as old as humankind. At the very beginning the producers met together and interchange commodities based on barter terms. Even these days in many countryside places producers don't use money but other products to buy and sell.

The producers' markets have had a parallel evolution with their own societies (Engel, 97). Markets today are going on with much more perfection than before. Related to farmers

markets we have a very big range of different types. From the countryside where the production is made, such as the Dutch “veilings”, Spanish “alhóndigas”, to the small and medium cities, where the “ambulant markets”, “feiras livres” (Brazil) (Brandao,96), and in Asia, many markets joint producers and consumers together. Supply and Demand in a place and at the same time, fulfill a function of interchange money and commodities.

In the “Farmers’ Republic” case, the place it is provided by a firm who rent the stalls or selling points for the producers, give to them a lot of services; (from a QC (López, 99), quality control of their products, assessment, parking for clients’ vehicles, etc, etc.). The rent the organizers receive it is a kind of commission or a determined % over every producer’s sales volume. This is the same system the wholesale markets have in the big cities (MERCASA, 86).

The Farmers’ Republic case

The Farmers Republic was created by a group of young people (Dimiris, Koutsolioutsos, 2014) with a view and a vision to offer a separate food supply environment for both consumers and producers.

Created along the lines of Farmer's Markets, which are gaining ground internationally - like Borough Market in London, which is the international benchmark for demanding buyers.

The Farmers Republic is a new concept in "Organic Producers Market " (Engel, 97) (O’Brian, Harris, 91), which, with the grocery store and the e-shop, provides consumers with the best organic certified and integrated management of products (fresh and standard) and producers better conditions for development.

New conditions for truly fair trade, where everyone wins

Consumers buy unique products of excellent quality and organic certification (López, 99).

The producers sell their products in direct contact with consumers. The producers are located in the green belt of the city, close to the wealthy boroughs.

The market place is flexible during working hours, without restrictions, with convenience and speed. Nobody is wasting time.

Panorama of Greek Food- colors and flavors

The farmers market offers traditional farm Greek products, strictly selected producers delivering what is best, at prices affordable to all (D.G. Comercio Interior, 87).

Vegetables, vegetables, fruit, cheese, meats, sausages, nuts, sweets, bakery products, grocery items and many other unique quality pure and traditional goods, all certified, integrated management or organic (Lopez, 99).

Meeting point producer - consumer

Consumers come directly into contact with people of Greek countryside. This contact creates a framework of sociability, which cultivates one fruitful communication and personal interaction and equal relationships.

Relations of mutual respect and trust

Consumer have the opportunity to ask the producers and learn more about the production process, the nutritional value and even new recipes that can be made with the products. And the producer learns from "first hand", customer needs and trends.

Information on the production process

Actions relating to ways and means of culture, identity and history of products, but also in shaping the nutritional consciousness, will contribute substantially to education, information and opinion-forming both consumers and partners producers.

Kitchen

A modern dining room, on-site where traditional recipies based on the farmers products can be tasted (Fellows, 97).

Do it yourself

Customers and visitor can make their own freshly squeezed juices and fresh salads, from the grocers' materials.

Triple channel sales

The channel structure provides to the Greek farmer direct access to the customers, but also the standardization of the products, which is part of the market model.

Payment shall be made prior to or upon delivery of the product and can be done with one of the following ways:

- With your credit card
- By Cash, upon delivery of products.

Direct Sale Stalls Market

In this space of the market the farmers producing the products sell directly to the customers, from their individual stall, setting competitive prices and closing sales. They are directly responsible for the trade.

Grocery

Standard grocery store, which is housed in the same space, It operates as a retailer, week days and Saturdays. Products are placed in Grocery with the process of deposit, with a small fee and liquidation at the end of each month.

E-shop

Besides the direct sales market there is a channel based in e-commerce operating 24h and 365 days/year. Through which consumers buy selected products from specific producers and suppliers. The Farmers Republic undertakes to carry out these orders with home delivery. A basked fitted model, individual, medium or family size, is implemented, figure 1, for the fresh vegetable and fruit supplies which are seasonally provided.

Fig. 1. Farmers Republic , fruit basket family size

Summary

Producers Markets development is becoming more prevalent as the food distribution model breaks out from a unique centralize wholesale model, where margins are subtracted from the farmers' side.

To build a thriving Farmers Market organization capable of supplying with regularity, security and safety, customers is still a challenging work. Strong partnership between economical forces in the region, farmers and community is needed for success.

As in the case of Farmers Republic that has build a success case, representing an opportunity in sub-urban economies. In the following You-Tube references it can be seen in operation. :

- https://youtu.be/Hb-WYL4Tf2w
- https://youtu.be/6Ddbpo_jDGY
- https://youtu.be/QTNQOPYHbXU

Producers / Farmers Markets are a valid opportunity for agrarian communities closed to urban environments, and a new source of business and growth for them. It is a very good tool to be applied in the rural development projects.

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Author addresses

LOPEZ, Jose Luis Lopez, Agric. Economics Dpt. Univ. Politécnica de Madrid. (UPM). 28040 Madrid Spain
E-mail: Jluis.lopezg@upm.es

CALZADILLA, Francisco Jesus, Univ. Internacional de la Rioja. (UNIR).
26002 Logroño Spain.
E-mail: Jesus.calzadilla@unir.net

VILLA, Aurelio, Agric. Economics Dpt. Univ. Politécnica de Madrid. (UPM).
28040 Madrid Spain
E-mail: aurelio.villa@upm.es

Lector: Dr. SZABÓ Zoltán, Szent István University Gödöllő, Hungary

AN INVESTIGATION INTO THE EFFECTIVENESS OF ONLINE MARKETING TECHNIQUES APPLIED IN THE CATERING INDUSTRY, BASED ON A CASE STUDY

MÁTÉ, Balázs – CSONKA, Nikoletta – GÁBRIS, Judit

Abstract

We're witnessing an unprecedented expansion of online marketing, spawned by the twin forces of near-ubiquitous internet access and continuous technological development. There are certain sectors though – like gastromarketing – where traditional offline technologies still predominate. In the course of our quantitative study, we sought to establish how this sector's target audience, i.e. consumers, may best be reached online, and to what extent their decision-making when picking a place to eat out is informed by online content.

Our survey has conclusively proven that these consumers can indeed be efficiently reached and, with appropriate means of persuasion, induced to spend.

Keywords: gastromarketing, online marketing, restaurant marketing, online tools, social media tools

JEL Classification: M 310

Introduction

We have been successfully deploying online marketing strategies in several different sectors; as an intergral part of this, we think it imperative to begin each marketing project with an accurate appraisal of our target group's spending habits. In this, we follow Kotler's model of consumer behaviour. The term subsumes all forms of behaviour exhibited proir to actual consumption/ purchasing in aid of its design.

Out of Kotler's 7 „O"-s model, we probed into its final component. According to the model, formation of consumer habits fall into seven categories: Occupants, Objects, Objectives, Organisations, Operations, Occasions, and Places (online, offline). (Kotler, 2002)

Our investigation into the world of gastromarketing aimed to establish how our clients' putative customers may best be reached mainly, but not exclusively, via online marketing techniques and strategies; in a few of our questions, we also looked into the effectiveness of offline ATL communication strategies also.

Our study was prompted by the decline in the number of catering establishments. According to statistics, back in 2001 there were as many as 33 666 restaurants and cafeterias in Hungary, which by 2014 dwindled to a mere 25 344. It seems a great many businesses in this sector never get off the ground, which further underscores the importance of every effort on each player's part to beat those odds.

The ubiquity of online marketing techniques, spawned by our present near-universal internet access, seems a veritable goldmine of opportunities – and not merely because more of us are habitually online, but also due to these techniques' comparative advantage over their offline competitors' in their cost-effectiveness and ease of evaluation.

There are, however, still certain industries where offline techniques predominate, even in the face of the rapid spreading of online alternatives. One of these sectors is the world of catering, and that of gastromarketing in particular; here, great results are still attainable through offline techniques. This study aims to illuminate the effectiveness and possible scope of online marketing techniques in the field of gastromarketing, so that they may augment creative offline ventures. Our venture, Marketing Professors, a seasoned player in the world of consultancy, have by now encountered a multitude of sectors with widely differing target demographics, each necessitating a tailor-made approach on our part. We continue to successfully apply online BTL techniques on a daily basis in sectors as varied as fashion, education, and construction. The Below The Line communication is a highly effective way to get in touch with the costumers. Despite that, sometimes we have to combine the ATL and BTL techniques for he success.

Based on our extensive experience, we feel it apt to propose that online presence and the use of appropriate online techniques in the world of gastronomy will yield similarly significant results also. As in every other field, we find continuous monitoring and analysis of our techniques' efficiency paramount – significant data may only be gleaned in this way. Only through an accurate appraisal of the effectiveness of each technique are we able to continuously develop and fine-tune our operations. In order to reach our target group via the appropriate channels though, we need to first conduct one or more research studies into their behaviour.

Methodology

We conducted a quantitative research study in the spring of 2015, sending our questionnaire to gastro-enthusiasts on Facebook, and as part of a newsletter elsewhere. Gastromarketing, to date, has made only moderate use of online marketing resources, as traditional offline strategies have produced fair results still. However, the ubiquity of online strategies in the world today has prompted a step forward in this sector also, in turn raising the question of which techniques and strategies lend themselves best to deployment here.

Gemius' study confirms that one of the most ideal platforms for reaching large swathes of consumers is the internet. Their data shows that September 2014 saw 5 152 896 active Hungarian netizens in the over-15 demographic, which represents a penetration rate of

60.78%. This is why we think it vital to ascertain the most effective method of reachig, and engaging them.

Aims of research study

- Mapping of salient factors when choosing restaurants
- Establishing degree of efficiency of significant opinion-forming online marketing devices when choosing restaurants
- Gathering of catering industry information necessary for devising an effective online marketing strategy

Construction of hypotheses

Our questionnaire aims to prove three main tenets. Our hypotheses are as follows:

1. Amongst the techniques of gastromarketing, those of online marketing are greatly effective.
2. The use of Facebook in the BTL communications of Budapest catering establishments is vital.
3. Opinions voiced online greatly influence the rate of patronage amongst various catering establishments.

Introduction of our research and pattern

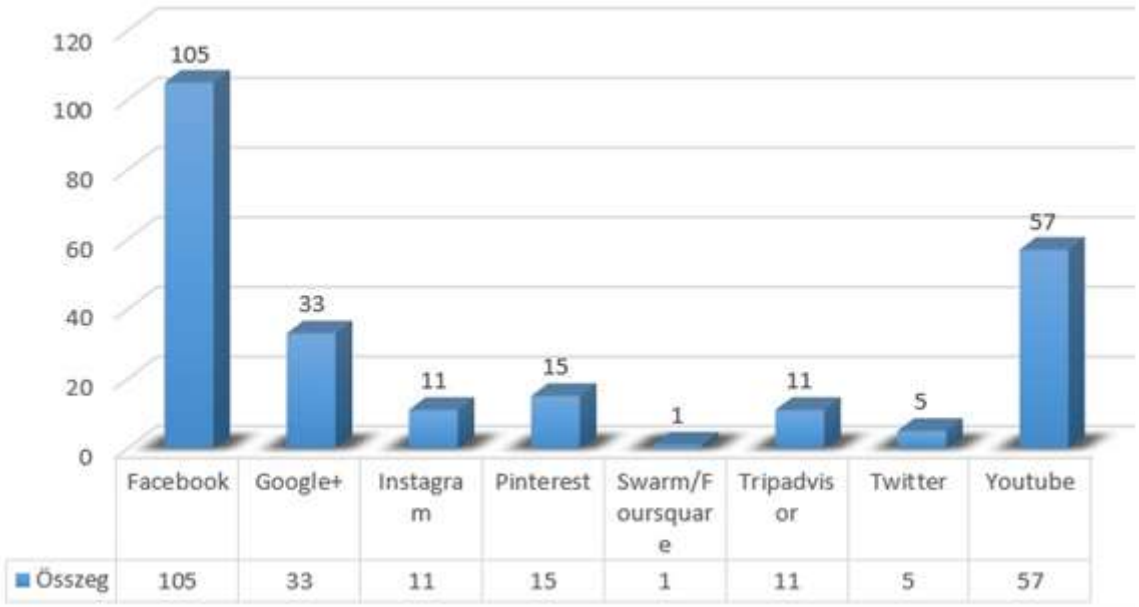
In the interest of measuring the effectiveness of online marketing techniques, we have conducted a quantitative study. The questionnaire reached our respondents, some 1.5 million people, via Marketing professors' variously themed Facebook pages; it was also mailed directly to some 100000 of our followers. Those known to have an interest in the world of gastronomy were specially targeted to increase the number of shares on Facebook. The questionnaire was completed by 106 people; all but one yielded valuable data. The survey focussed on decision making habits in choosing restaurants in general, and the use of online resources in this in particular.

Presentation of survey findings

Which social network(s) do you use?

Our first question sought to elicit which social networks our respondents habitually use – and may thus be effectively reached via.

We were not surprised to see Facebook at the top of the list. (1. graphic) We have noted that many users were "hidden" or passive, who merely followed goings-on. These users are harder, but not impossible, to reach because of Facebook's algorithm.



1. graphic Which social network(s) do you use?
(Own research, 2015)

We were much more intrigued to see the numbers who were present on Google+ also. A rate of 31.4% (1. graphic) is not bad at all in this case, considering the scope of difficulties this competitor of Facebook's, a Google venture, ran into despite its founder's high hopes. It is known that Google+ has great search engine capabilities, so it is necessary to use this platform even if we do not expect much traffic from it.

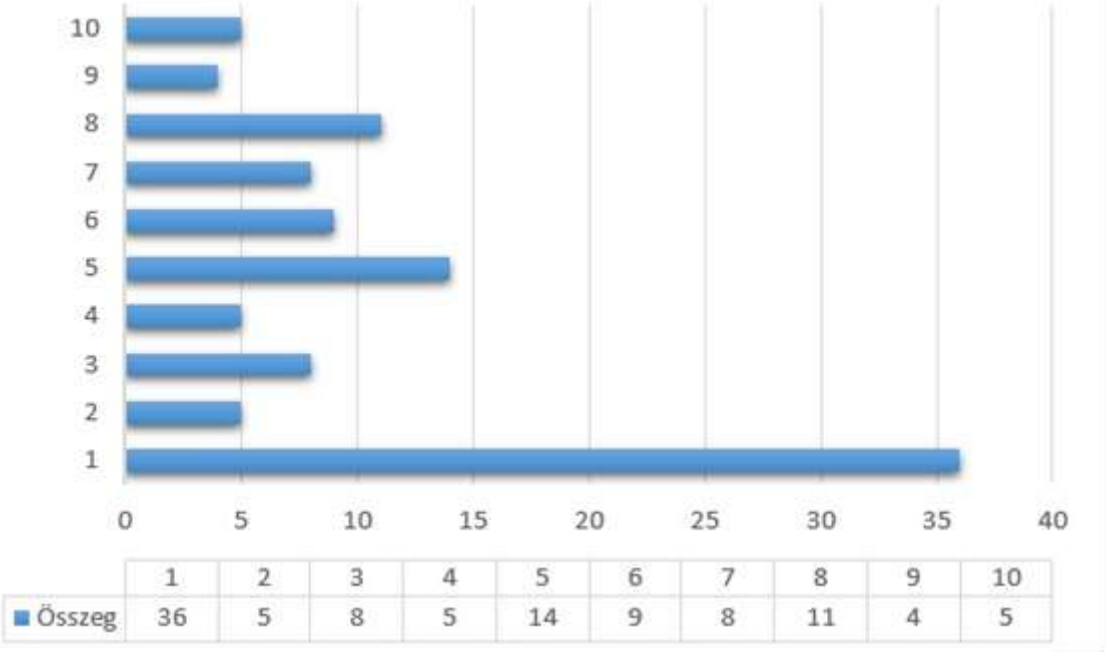
Instagram, Twitter and Pinterest are not nearly as popular in Hungary as they are in western countries – a finding that surprised no one.While the roles of Foursquare and Swarm in gastromarketing are especially noteworthy abroad, this isn't so here yet. Only one respondent named them amongst his networks, which is not nearly enough to prompt the drafting of a separate strategy.YouTube is also widely used in Hungary, and material posted there is as readily deployable on Facebook as it is across other networks, so this could also be valuable in the marketing of restaurants.

A segment of the catering industry actively and continuously uses and monitors TripAdvisor too. Our research showed us, however, that this isn't quite as marked in Hungary, with only 10.5% (1. graphic) of respondents naming it amongst their answers.

How much weight do you give to recommendations in online reviews (such as on TripAdvisor) when picking a restaurant?

Here, those polled marked their stance on a scale of 1 to 10 on the importance they give online recommendations when choosing catering establishments. 1 meant no importance at all given to those forums, while 10 highlighted a keen interest.As we can see from the diagram, Hungarians pay relatively little heed to online recommendations. As many as 34.3% (2.

graphic) of those polled even admitted to completely ignoring such content. So, we know that most people aren't guided by such information when choosing a place to eat out.

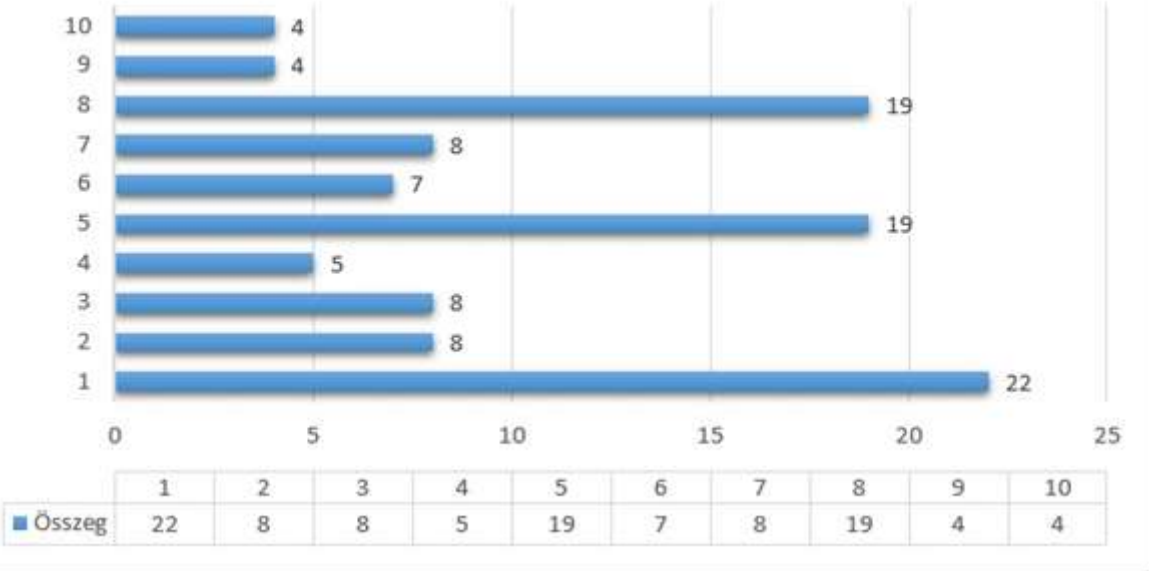


	1	2	3	4	5	6	7	8	9	10
Összeg	36	5	8	5	14	9	8	11	4	5

2. graphic How much weight do you give to recommendations in online reviews (such as on TripAdvisor) when picking a restaurant?(not at all 1-10 extremely important)
(Own research, 2015)

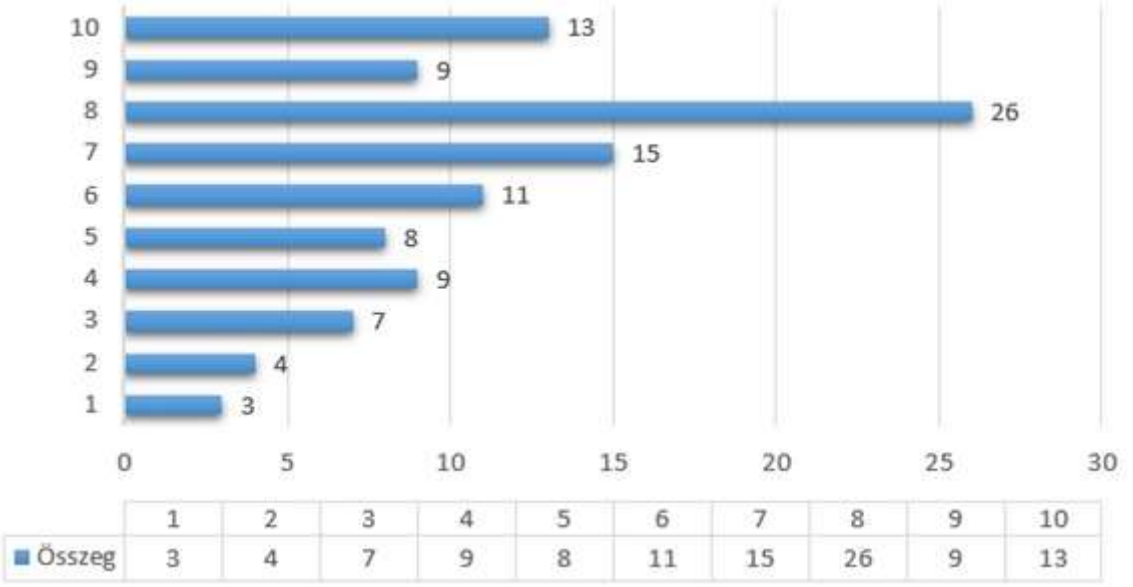
How much weight do you give to opinions posted on Facebook when choosing a restaurant?

Respondents were to mark their answers in the way described above. This question aimed to ascertain the weight given to opinions posted on Facebook when choosing a restaurant. As we can see from the 3. graphic, though opinion was somewhat divided, the general trend showed much more importance being assigned to recommendations on catering establishments' pages here. This clearly identifies Facebook as a top strategy of online gastromarketing



3. graphic How much weight do you give to opinions posted on Facebook when choosing a restaurant?(not at all 1-10 extremely important)
(Own research, 2015)

How swayed are you by acquaintances' recommendations when picking a restaurant?

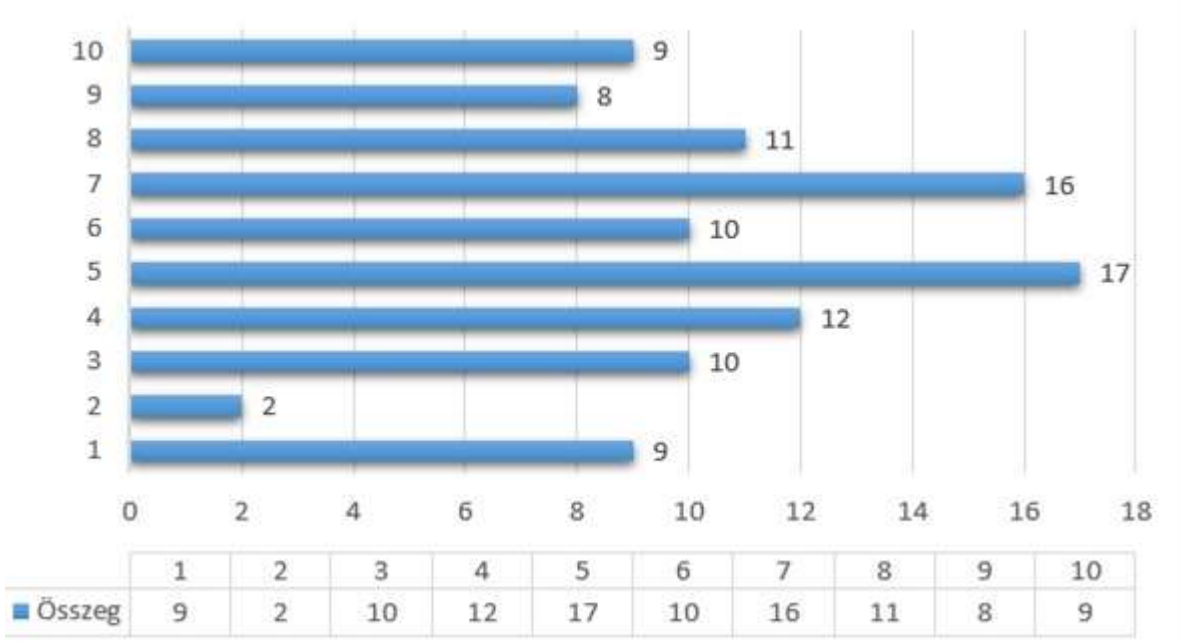


4. graphicHow swayed are you by acquaintances' recommendations when picking arestaurant?(not at all 1-10 extremely important)
(Own research, 2015)

Here, our focus didn't fall on any particular online marketing presence but instead on how heavily would-be punters were influenced by their acquaintances' recommendations. We weren't surprised to find a very high percentage of respondents naming their acquaintances' opinions as highly significant. (4. graphic) We would therefore do well to pay close attention

to this score. This indicator is readily exploitable on numerous social networks, wherever a restaurant may be showcased on a user's own wall. One of these is Facebook's Checking in function.

How significant are reviews and articles posted online when choosing a restaurant?

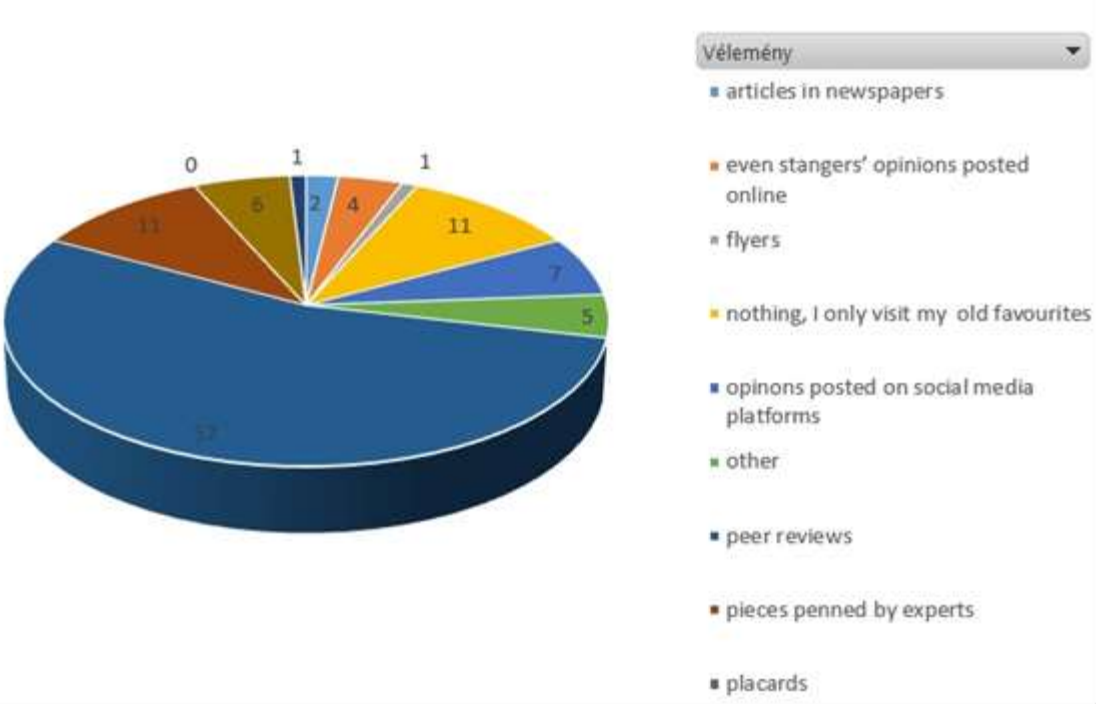


5. graphic How significant are reviews and articles posted online when choosing a restaurant?(not at all 1-10 extremely important)
(Own research, 2015)

Those polled were to mark their answers in the way previously described. As the diagram shows, articles, PR pieces and miscellaneous materials were moderately important. (5. graphic) Though some ignore these altogether (or at least claim to), we nevertheless deem it necessary to incorporate online articles and reviews into a restaurant's marketing strategy.

What is the single most important deciding factor to you when choosing a restaurant?

Here, we deliberately restricted the number of possible replies to one, as we tried to establish the single most important deciding factor in respondents' decision making processes. The most weight by far was given to personal recommendations, which are communicated most effectively online to people! (6. graphic)

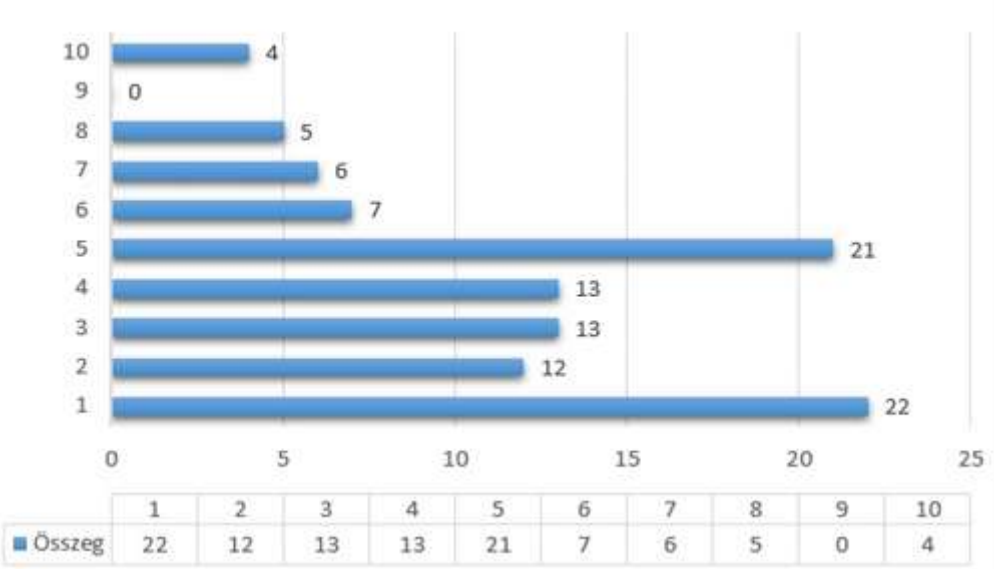


6. graphic What is the single most important deciding factor to you when choosing a restaurant? (Own research, 2015)

Beyond personal recommendations, many also heed advice doled out by industry experts, so restaurants would do well to run PR pieces on independent experts' sites. The next reply tied for second place, stating that many punters prefer a set of familiar restaurants and aren't open to trying anything new. A survey shows that most Hungarians tend to stick to what they know: they aren't inclined to give new places or products a try – 29% (6. graphic) of consumers typically get stuck in a rut when it comes to shopping for goods or services. Our own survey also backed this up, though with more moderate figures. This, of course, is a malleable matter, as getting out of a rut is often only a persuasive PR piece away.

Traditional offline marketing solutions' effectiveness was also examined in the poll. (6. graphic) We weren't surprised to see that neither leaflets, roadside posters, nor TV and radio adverts did much to sway would-be punters. Of course, we know that these can also boost one's reputation when deployed in the appropriate context, but gauging their precise effectiveness is resistant to investigation, and their production is prohibitively expensive, not to mention the fact that they only work when applied consistently and to a high standard. One case in point would be Gordon Ramsay's restaurant, but this wouldn't make it the option of choice across the board.

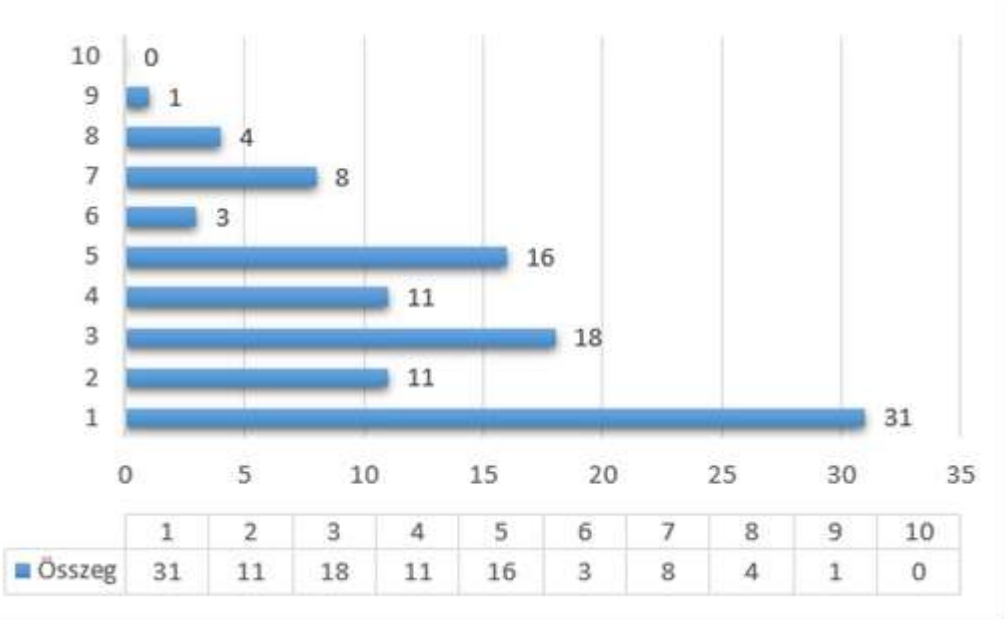
How much would you be tempted to pick a restaurant if you were given a flyer advertising it?



7. graphicHow much would you be tempted to pick a restaurant if you were given a flyer advertising it?(not at all 1-10 extremely important)
(Own research, 2015)

We probed a little deeper into the effectiveness of general marketing strategies. To this end, we polled participants on the importance of flyers. As we have already seen, when put up against other options, flyers are practically useless. (7. graphic) The diagram above clearly illustrates this too.

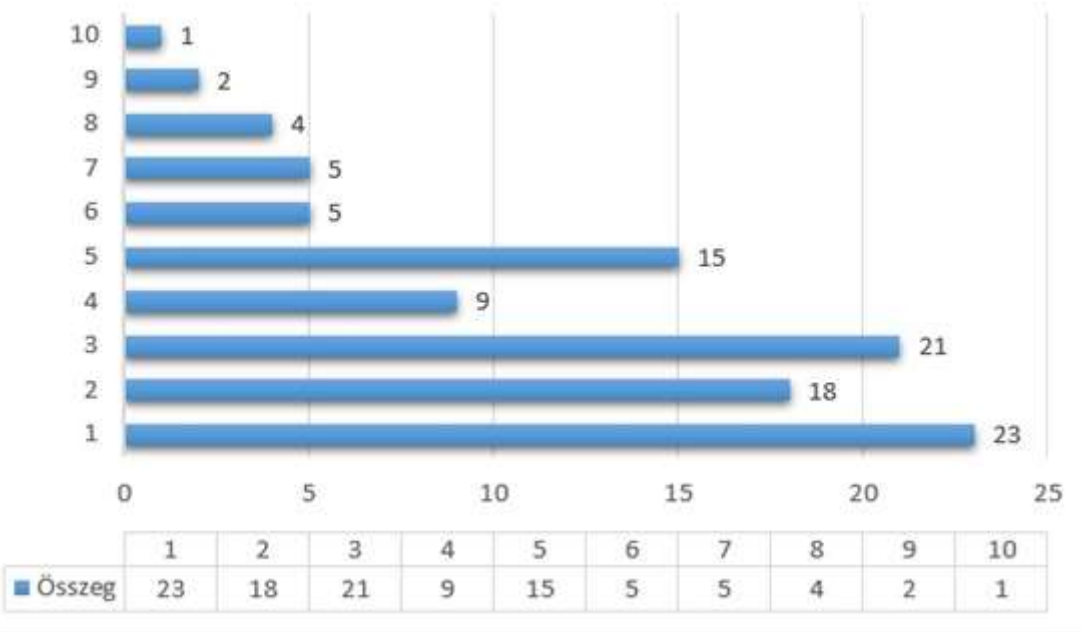
How much attention do you pay to TV and radio ads?



8. graphic How much attention do you pay to TV and radio ads?
(not at all 1-10 extremely important)
(Own research, 2015)

We examined the effectiveness of TV and radio advertising in a similar manner to the aforegoing. The diagram clearly shows that this is virtually useless too: people all but ignore these adverts when picking a place to eat. (8. graphic) In addition, we all know that these adverts can be very costly, and the possibility of targeted advertising is out of the question here, making reaching our target audience rather hit-and-miss. To sum up, we have to conclude that this represents the worst value for money in the PR world of all. These therefore have to be ruled out completely in gastromarketing.

How much attention would you pay to a poster promoting a restaurant?



9. graphicHow much attention would you pay to a poster promoting a restaurant?
(not at all 1-10 extremely important)
(Own research, 2015)

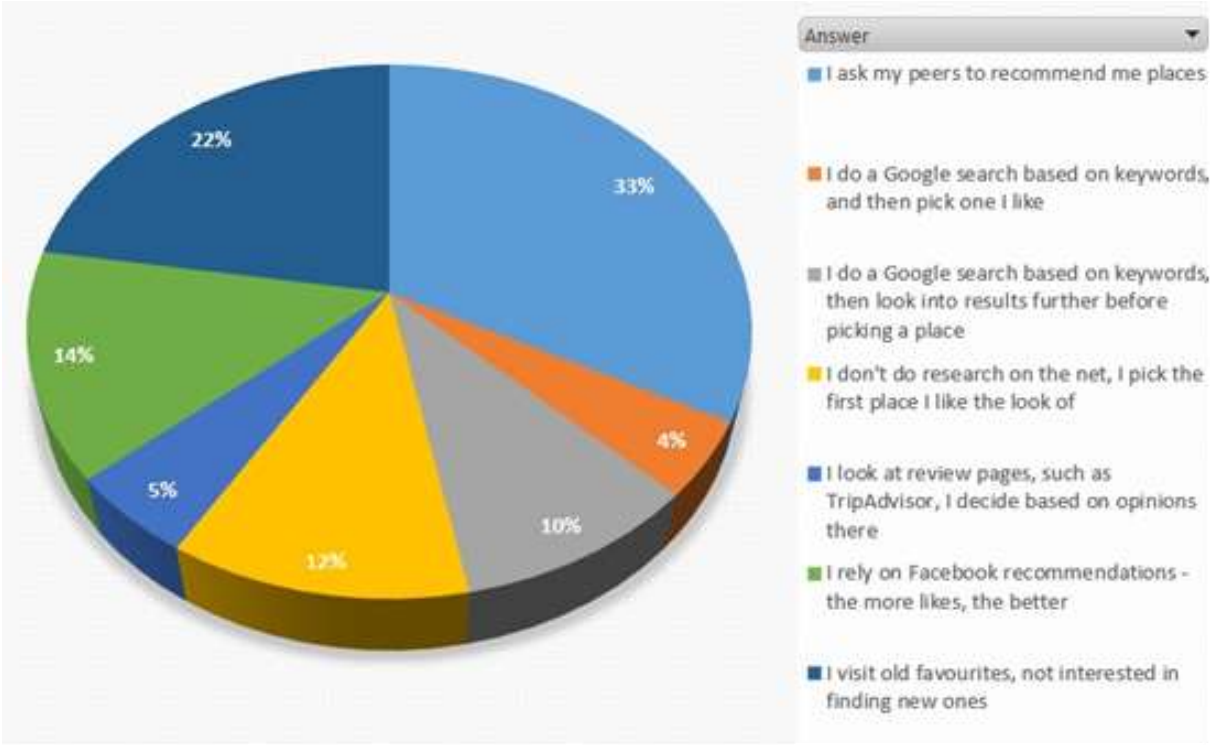
Placard advertising was seen just as ineffective as all other traditional offline methods; its value-for-money ratio was on a par with that of TV and radio adverts.(9. graphic) Those polled showed a near-unanimous disregard for placard advertising.

Where do you look first, when picking a place to eat out?

Here, respondents were free to mark more than one applicable reply. We tried to establish where consumers were most likely to look by their own admission, before picking a restaurant or other catering establishment to visit. Here we saw the top two factors from earlier crop up again: one, people follow their peers, and two, many have their familiar favourites and aren't open to experimentation. (10. graphic) Out of all online options, it was Facebook again that came out on top, which, when taken together with peers' opinions, suggests a readily deployable strategy that could woo new customers to restaurants.

We also looked into the percentage of deeper-probing punters whose first stop had been a Google search. It turned out that most who start with a Google search, do indeed investigate

further when they happen upon something tempting. (10. graphic) This means that paid CPC adverts in themselves are not enough: search results need also be backed up with recommendations and positive feedback, if we hope to get our message across. This highlights the importance of PR pieces and content marketing. Otherwise the orgranic search returns will always be grater than the CPC's. If your site is visible in both paid and organic results, both strategies will provide greater investment – so it is really important to pay attention to these tools.

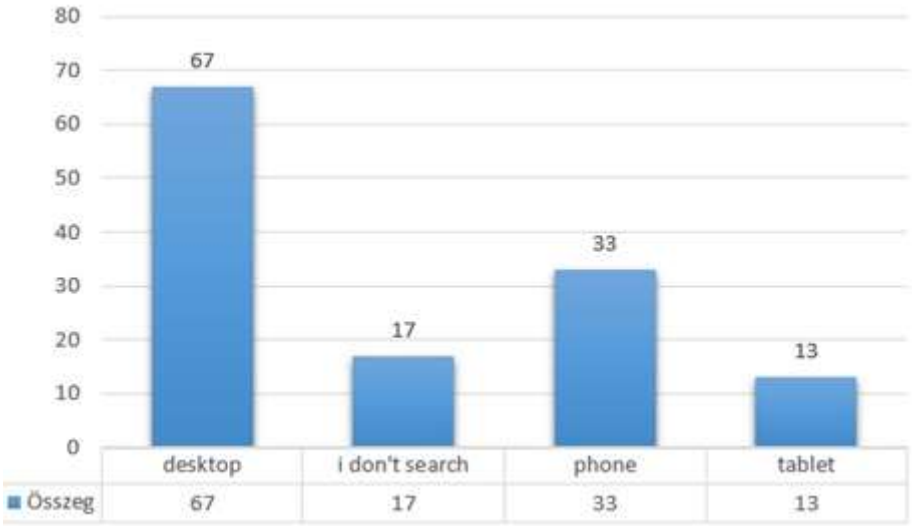


10. graphic Where do you look first, when picking a place to eat out?
(mark all that apply)
(Own research, 2015)

Based on this, we may claim that search engine optimalised websites are also vital in catering establishments' marketing strategy, as consumers' aversion to upfront advertising and hunger for relevant content was once again highlighted. In the same way, content marketing, when combined with Facebook shares, can lead to great results. As we have already stated, consumers hold their peers' opinions in high regard: a piece that goes viral attracts not just readers, but consumers also!

This point also showed how much less online opinion pieces matter in Hungary than they do abroad.

When looking for a place to eat out, do you search on your phone, tablet, or desktop?



11. graphic When looking for a place to eat out, do you search on your phone, tablet, or desktop? (mark all that apply)
(Own research, 2015)

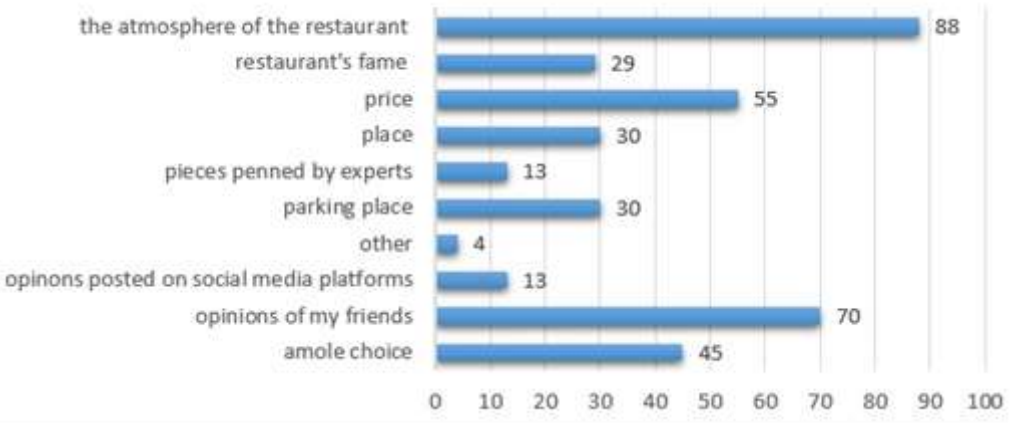
The importance of effective websites in the world of online marketing in 2015 can not be overstated. This matters from the point of view of measurability on the one hand, and from that of conversion on the other. The single most important deciding factor here today is whether the site is mobile-friendly. We aimed to highlight in this point that a mobile-optimised website is a must for restaurants too, and not just from the point of view of search rankings. We found that 31.7% of people use their phone, and 12.5% their tablet when searching for a restaurant. (11. graphic) This further proves that restaurants can't afford to forego having responsive sites.

What features are musts for you when choosing a restaurant?

We have already seen that online marketing techniques can be effective in the world of gastromarketing too, when applied properly. Our final question focussed on which overall factors were likeliest to produce results. Here, we listed the most common deciding factors in a multiple choice format, then prompted respondents to rank them. The opinion of peers came out on top here too, and though online articles and reviews ranked somewhat lower, it was clear that those who begin with a Google search tend to rely heavily on these nonetheless. (12. graphic) The top deciding factor was the place's overall look and atmosphere. A vital part of our communications then has to highlight the place's character: its atmosphere, and, by extension, that of the prospective dining experience must be captured and conveyed well.

Naturally, the look and atmosphere of a place is nowhere near enough for this. With services, the role of staff is crucial also, i.e. those who the customer finds themselves in contact with. Customers' overall favorable impression made of a place can be all but ruined by a single member of staff, so management would do well to screen their staff, and, id it comes to it,

their customers on the premises too, as they can also bring a place into disrepute. (Szabo – Komaromi-Gergely, 2011)



12. graphic What features are musts for you when choosing a restaurant? (mark all that apply) (Own research, 2015)

Conclusion

Our quantitative study focussed on the putative effectiveness of online marketing techniques in the world of gastromarketing.

Not surprisingly, Facebook and Google were joint favourites, which in turn puts them on top of our agenda when devising strategies. We also found that although industry experts' opinions and PR pieces were highly regarded due to punters' searching habits, they didn't come close to trumping personal recommendations and word of mouth. This is readily exploitable in online marketing, as several networks and techniques exist that place a given restaurant on someone's personal page – which, in the eyes of peers, may be synonymous with a personal recommendation.

Our initial hypothesis stated that the techniques of online marketing would be a highly effective, welcome addition to those of gastromarketing. Our research highlights that several factors have bearing on the decision making process. Strong contenders among these are PR pieces and industry experts' opinions, which hold sway in gastromarketing also. Or, if we view the situation in a wider context, and take peer recommendations as our starting point, we arrive once again at the importance of online presence – where else to promote dining habits than on social networks? Our first hypothesis thus stands.

Our second hypothesis can be similarly backed up with the significance of peer recommendations. Here, we aimed specifically to highlight the role of Facebook: although we have seen that it isn't on the strength of Facebook recommendations that they pick a dining experience if/when they happen to land on a given restaurant's page. Conversely, it seems that even a few negative comments can put punters off for good. This shows that Facebook is a highly influential tool, proving our second hypothesis.

Our third hypothesis stated that articles and reviews posted online sway prospective customers heavily when deciding on a dining experience. We successfully exploit the potential of PR pieces every day. Today the public are long past their saturation point with upfront advertising and all but ignore it. A well-penned PR piece however that lists the strenghts of a product or service can indeed be very effective. The article whose topic is carefully gauged to match the product or service to be promoted, reaches and sways our target group in our favor.

This was backed up by two findings: one, those who begin with a simple Google search do probe deeper once they find an appealing option, (here, the presence of positive input is crucial) , and two, that expert opinion is heavily sought after and highly prized, rendering it an indispensable part of any catering establishment's marketing artillery.

Our conclusions….

1. Facebook is extremely popular in Hungary amongst our target group, which renders it a exceptionally fecund platform of communication in gastromarketing also.
2. Though pages such as TripAdvisor are popular abroad, this isn't so in Hungary.
3. Opinions and ratings displayed on catering establishments' Facebook pages can be highly effective, so this is worth paying special attention to in the course of drafting an effective online marketing strategy.
4. Consumers' number one point of reference is peer recommendation. Online environments lend themselves to this well.
5. PR pieces published online also carry significant weight, so these should take precedence too.
6. Peer recommendations are the deciding factor amongst over half of those polled, while offline ATL means of communication are virtually useless.
7. Flyers have almost no bearing on restaurant choice either.
8. TV and radio advertising are even less effective than flyers.
9. Placard advertising is similarly ineffective: only a fraction of those surveyed responded positively here.
10. Peer recommendations are paramount. These are exceptionally well communicated in online environments.
11. Gastronomes often start searches prom portable devices, so homepages should always be mobile-optimised.
12. The second most important factor besides peer recommendations to be communicated is the place's look and atmosphere.

Summary

Online marketing devices are an exceptinally valuable addition to the world of restaurant advertising, although several factors should be borne in mind when formulating a strategy. Social media and PR pieces should take the lead in our communications, where special emphasis should be placed on peer recommendations and shocasing the given restaurant's

look and feel. In addition, consumers may voice their views via social networks' „check in" function.

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Author addresses

MÁTÉ, Balázs – CSONKA, Nikoletta – GABRIS Judit
Szent István University, Faculty of Economics
H-2100Gödöllő, Páter Károly utca 1.
E-mail: mate@hatekonyhonlap.hu

Lector: Dr. SZABÓ Zoltán, Szent István University Gödöllő, Hungary

USE OF EGOVERNMENT SERVICES IN RELATION TO INTERNET USE AND COVERAGE

PÁSZTOR, Márta Zsuzsanna – POPOVICS, Attila

Abstract

The e-government improvements that started in Hungary in 2003 seemed to have promised a lot of advantages for state administration and citizens. The implemented Hungarian developments, however, do not seem to meet the needs of customers as the use of services remains on a very low level. In the decision makers' view the solution of the problem is an ICT challenge. This however, is only true for some of the users as people who have and actively use the Internet still do not make use of e-government services.

This problem exists not only in our country but in many other European countries. In order to depict the possible direction of future developments we will use descriptive and multivariate statistical analysis to establish the connection between the use of electronic government services provided for citizens and the technical and knowledge factors serving as the basis thereof.

By examining the data from thirty European countries this paper aims to establish the connection between the level of ICT access and the usage of e-government services.

Key words: eGovernment, eGovernment usage by citizens, ICT access and digital skill levels

JEL classification: H11, O38, L86

Introduction

The accepted definition of electronic government in the science of public administration is "the extensive, knowledge-based transformation and rationalisation of the inside and outside contact system of the public sphere, as well as the provider style re-organization thereof, via the public utilization of information communication technology applications." (Tózsa, 2008). From the wide spectrum of e-government this article will analyse the customs of use of electronic services provided by the central (governmental) organizations to the citizens. The term electronic administration and e-government will be used as synonyms.

After a long process of public discussion the development of electronic government services started in Hungary in 2003. The first visible signs were the appearance of webpages of public administration organizations and the general and static information published on these websites. Next, the documents required for processing administrative matters appeared on the websites but these documents had to be printed and submitted the traditional way to the

authorities. The second level of development was marked by the interactive, controlled completion of documents and feedback but this level still contained traditional elements like communication of the authority's decision and payment of fees. On the transactional level of real online case management the completion and checking of forms, as well as the payment of fees and the communication of the decisions of the authorities are done electronically. This level forms the basis of the phase of integration where public organizations co-operate with the citizens and enterprises to find solutions for various life events. The next level of development is characterized by the mutual co-operation with users (see Figure 1). Methods of measuring the level of development have changed significantly. In addition to figures focusing on the supply-oriented implementation levels (Molnár, 2007) the activity of users – discovering citizens' demands and incorporating feedback into the services – has been increasingly emphasised.

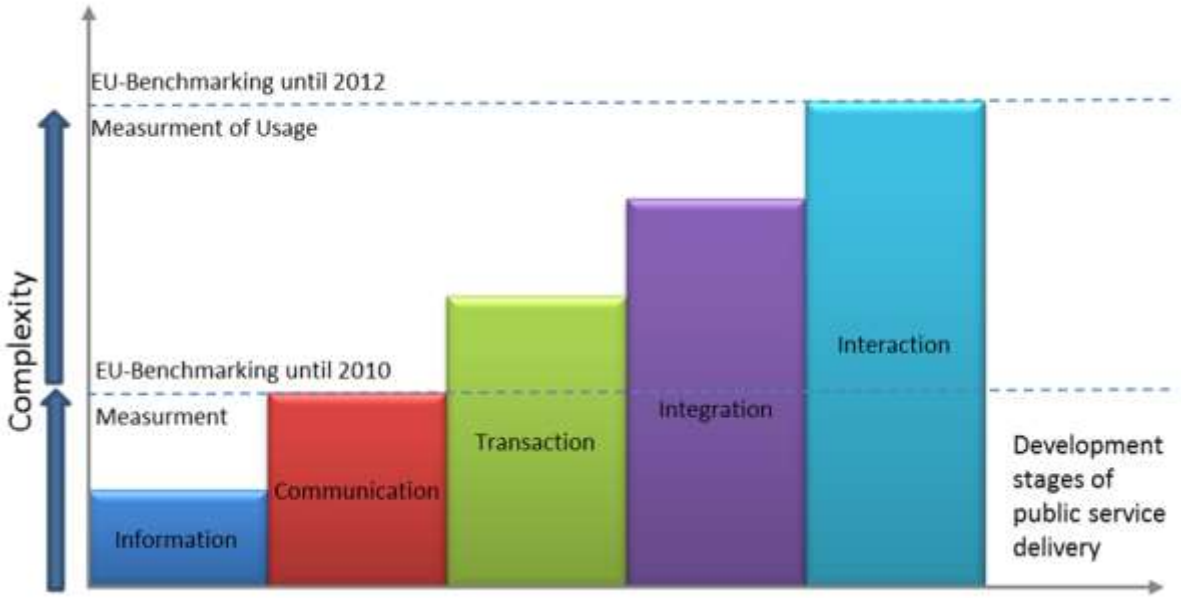

Figure 1 Development level of e-government services
(source: Capgemini, 2014, p. 12)

Based on a communication of the European Commission (2010) the benefits of e-government can be summarized as follows:

- it offers a cost-effective option for better serving citizens and businesses;
- helps to create participation-based, open and transparent governance;
- saves both money and time for public administration bodies, citizens and business enterprises;
- via sharing environmental data and information regarding the environment it can reduce the risks of climate change, man made disasters and natural disasters as well.

Services and usage

The starting point for central public administration services is the Kormányzati Portál (magyarorszag.hu), which is a collective site, electronic one-stop-shop, central identification system and single sign-on (SSO) authentication surface. This last function provides the

identification of clients who have the so-called "ügyfélkapu" (client gateway) access. Through client gateway electronic documents can be submitted in an authenticated manner and on- or offline forms can be sent to the organizations that enabled electronic administration. Client gateway access can be established by attending in person an organization appointed to register clients (government offices, tax authority, post offices, consular representations). As a collective site the webpage contains all the electronic information and services that public administration bodies and organisations provide to the citizens (and businesses). A Common List of Basic Public Services (CLBPS) containing 12 components that are most required by citizens was recommended to be introduced by the European Union within the framework of the e-Europe 2005 programme. Later, via the Life Event approach the analysis of providing 19 services has come to the forefront (Figure 2).

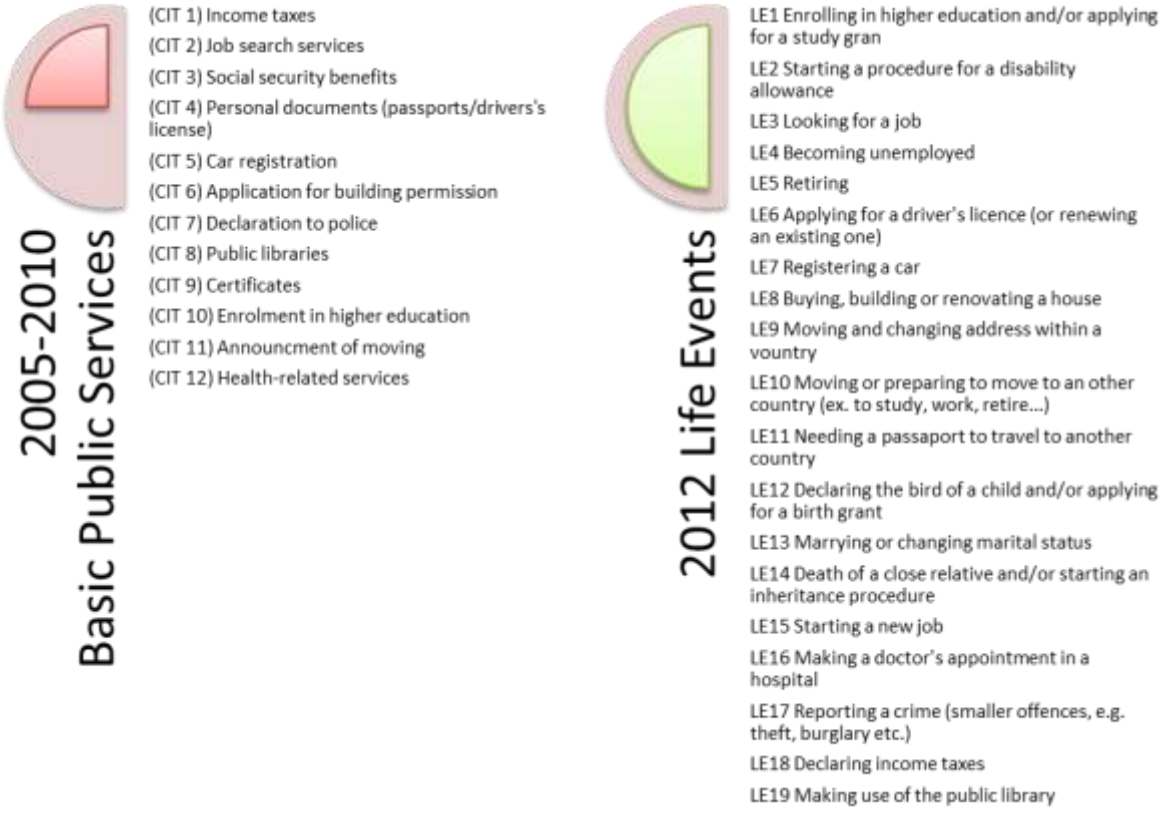

Figure 2. Change of list of services in evaluating e-government achievement
(source: own construction based on Capgemini 2007 and 2013)

With respect to Hungarian services various case managers used various solutions, as the examples below will show:

– Income tax and contributions: tax returns can be filled in, submitted and fees can be paid electronically. The forms published on the website of the National Tax and Customs Administration (NTCA) (nav.gov.hu) can be filled in using a general form completion programme, then using the client gateway identification the clients log in to magyarorszag.hu website and the system sends the tax returns to the NTCA. Taxes and contributions then have to be paid to the allocated bank account numbers.

- Job seeking: All information necessary for job-seekers can be found on the website of the National Employment Service (NES) (www.afsz.hu) such as: benefits, training programmes, assistance. In the job data base job-seekers can search among job opportunities notified to the employment offices (Virtual Labour Market Portal, VLMP). Other useful additional services are also available, e.g. the National Job Orientation Portal (self-assessment questionnaires, information on various professions and occupations, labour market information and career advice to support career planning, among other things) or the CareerHelp (predictable trends on the labour market, professions in demand and occupations where there is over-supply).
- Family support: On the website of the Hungarian Treasury (www.allamkincstar.gov.hu) information on all forms of family support required by law is available on the website for Private Persons/Family support. In order to apply for support various application forms are available that can be downloaded and submitted via post and applicants with client gateway access can submit benefit applications and track the progress of their cases on the eugyfel.allamkincstar.gov.hu website.
- Personal identification documents and car papers: the central government portal contains the most important steps and the list of necessary documents required for dealing with these issues in person. There is also a possibility to book an appointment online for attending the document office. Customers can also ask for an electronic message to warn them before their personal documents expire and may request new documents online to replace lost ones. On the website of the Central Office for Administrative and Electronic Public Services (nyilvantarto.hu) the progress of cases can be followed with an online case helper. In the course of modernizing services DocumentApp was created, through which lost documents can be replaced, changes to the ownership of vehicles can be notified and a certificate of good standing can be applied for.
- Application process to higher education institutions: www.felvi.hu website provides information on higher education institutions and the courses taught at these. From 2015 applications can only be submitted electronically and one type of communication (postal or electronic mail, internet, phone, text message) may be chosen regarding the results of the applications process and the relevant scores.

The Hungarian examples confirm the findings of Bertot and colleagues (Kovácsné, 2009) regarding the most common problems noted by users with respect to e-government services:

- lack of an integrated approach in establishing e-government services: the public authorities require the submission of client documents in different ways;
- the face and look of services and the diversity of information often makes it difficult to find and use the required content;
- technical requirements often demand the use of a specific browser, configuration, built-in programme, downloading of a file type which are difficult to obtain for a user with an average IT knowledge;
- the technical language used on e-government sites make the use of services difficult.

Use of the established services are on a low level. According to a survey of the Hungarian Central Statistical Office (HCSO, 2014) in 2013 "37% of households dealt with public authorities online, nearly 35% acquired information from the websites of these authorities, nearly 24% downloaded forms and more than 17% submitted these forms electronically to the given authority." It is worth noting that the majority of costumers using electronic administration do so in relation with the tax authority. In the survey prepared on behalf of the National Media and Infocommunications Authority (Ariosz, 2013) 17% of the respondents said that they had used the Internet for processing their public administration matters. However, the European Union's Digital Agenda for Europe (DA) initiative – and parallel with it, the National Infocommunications Strategy – states that the goal to be reached by 2015 is that 50% of citizens should use electronic public administration services and 25% of them should deal with public bodies through forms submitted electronically (European Council, 2014; Ministry of National Development, 2014). In the Hungarian system the submission of electronic forms is usually dependent on client gateway registration and only 22% of the Hungarian adult population has acquired such registration.

Decision makers usually view the task of bridging the gap between the required goal and present reality as an informatics challenge. In the SWOT analysis published in the National Infocommunications Strategy the problem was identified and as primary solutions increased access to broadband Internet and the reduction of digital illiteracy were set as goals. The volume of resources allocated to the bids show that principal importance is attached to hardware development (Kelemen, 2014; Dányi, 2014). The spread and accessibility of broadband Internet connection is a figure indicating the country's level of development and preparedness. In this regard we are not significantly behind the present EU average (coverage for the entire population is a goal set for 2020.) It is the manner of using the Internet where Hungary is lagging behind, i.e. in the use of electronic public services and online shopping (see Figure 3).

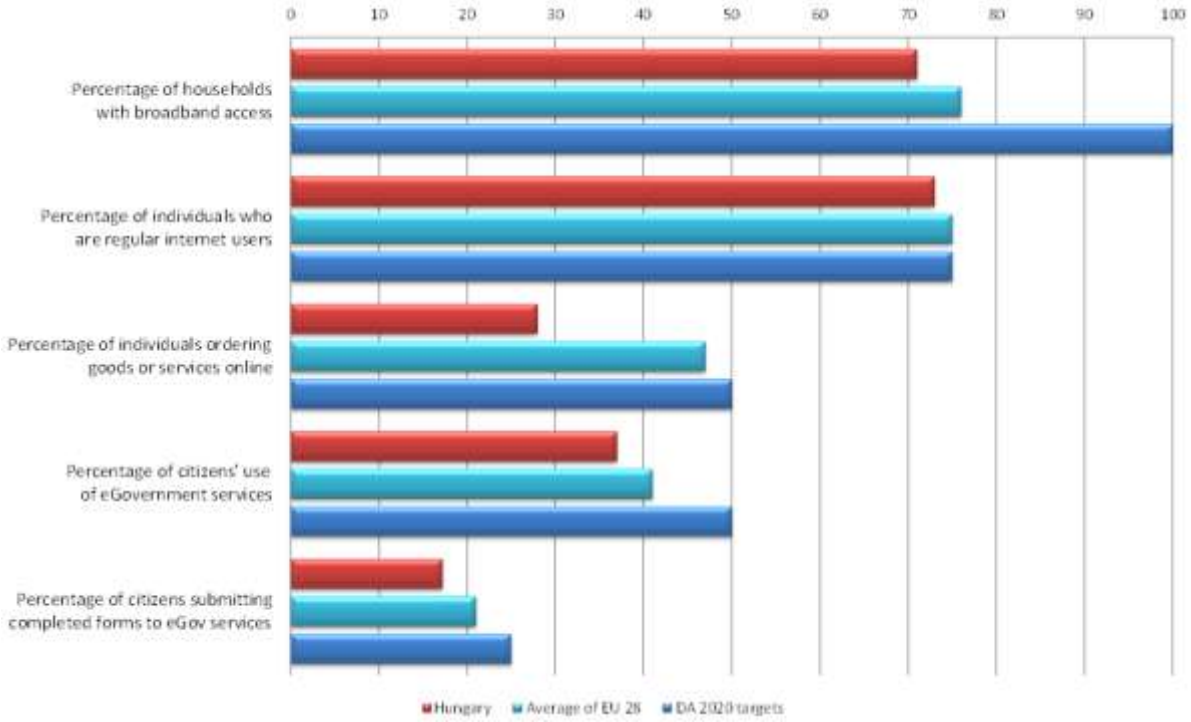

Figure 3 ICT levels and use in 2013
(source: own construction based on data from the Hungarian Central Statistical Office and Digital Agenda)

Material and Methods

Relatively few data is available to support the above described Hungarian situation thus in this extended investigation we will examine how the use of e-government services for citizens and the experienced deficiencies therein can be explained by:

- the lack of computer knowledge and underdeveloped informatics awareness;
- the lack of Internet equipment and places;
- the lack of Internet access, insufficient connections or low speed.

Examining data collected by Eurostat from the past 10 years in thirty European countries we will confirm or fine-tune the above connections (see Table 1).

Data is recorded by the statistics office of each country based on a model survey which complies with the relevant EU laws on data collection (Regulation (EC) No 808/2004 of the European Parliament and of the Council).

The database survey data was often only available for different years thus in order to ensure continuity in comparison the data from the missing years was generated by estimates.

Table 1. Available data in the Eurostat Internet database

Eurostat code	Abbreviation used in this paper	Description
I_IGOVIF/I_IGOVIF12	INFO	Percentage of individuals obtaining information from the websites of public authorities in the past 12 months.
I_IGOVFM/ I_IGOV12FM	ÜRLAP_LE	Percentage of individuals downloading official forms in the 12 months preceding the survey.
I_IGOVRT/I_IGOV12RT	ÜRLAP_FEL	Percentage of individuals uploading official forms in the 12 months preceding the survey.
I_IUGOV/I_IUGOV12	EKORM	Percentage of individuals interacting with public authorities via the Internet in the past 12 months.
H_IACC isoc_bde15b_h)	INT_PEN	Percentage of households with Internet access.
I_IUSE (isoc_bde15cua)	INT_HASZN	Percentage of individuals using the Internet at least once a week.
I_CEM (isoc_sk_iskl_i)	INT_H_FEJL	Percentage of individuals sending e-mails with attachments (indicating the skills level of Internet use.)
I_CCPY (isoc_sk_cskl_i)	SZG_FEJL	Percentage of individuals who copied or moved files or folders (indicating the skills level of computer use).

(Source: own calculation)

The following Table 2 contains the statistical values describing the data (number of valid data, standard error of the mean, standard deviation and variance).

Table 2. Descriptive statistics

		INFO	URLAP_LE	URLAP_FEL	EKORM	INT_PEN	INT_HASZN	INT_H_FEJL	SZG_FEJL
N	Valid	300	300	300	300	300	300	300	300
	Missing	0	0	0	0	0	0	0	0
Std. Error of Mean		1,069	,829	,855	1,154	1,213	1,190	1,060	,840
Std. Deviation		18,523	14,354	14,809	19,984	21,014	20,607	18,355	14,547
Variance		343,099	206,028	219,300	399,357	441,598	424,651	336,913	211,605

(Souce: own calculation in SPSS)

Examination of normality of the basic data reveals that the percentage numbers of individuals downloading and uploading forms lean to the left and have a peak whereas the distribution of the other variables can be considered normal. The connection between the data is strongly stochastic but, based on the done T-test, is not deterministic. Examination of the data pairs revealed that despite the strong correlation between them the connection is not direct proportionality but quadratic. In other words even when Internet penetration is relatively high it is worth focusing on technical and skills development as it will bring proportionately more users to e-government services than on lower levels (see Figure 4).

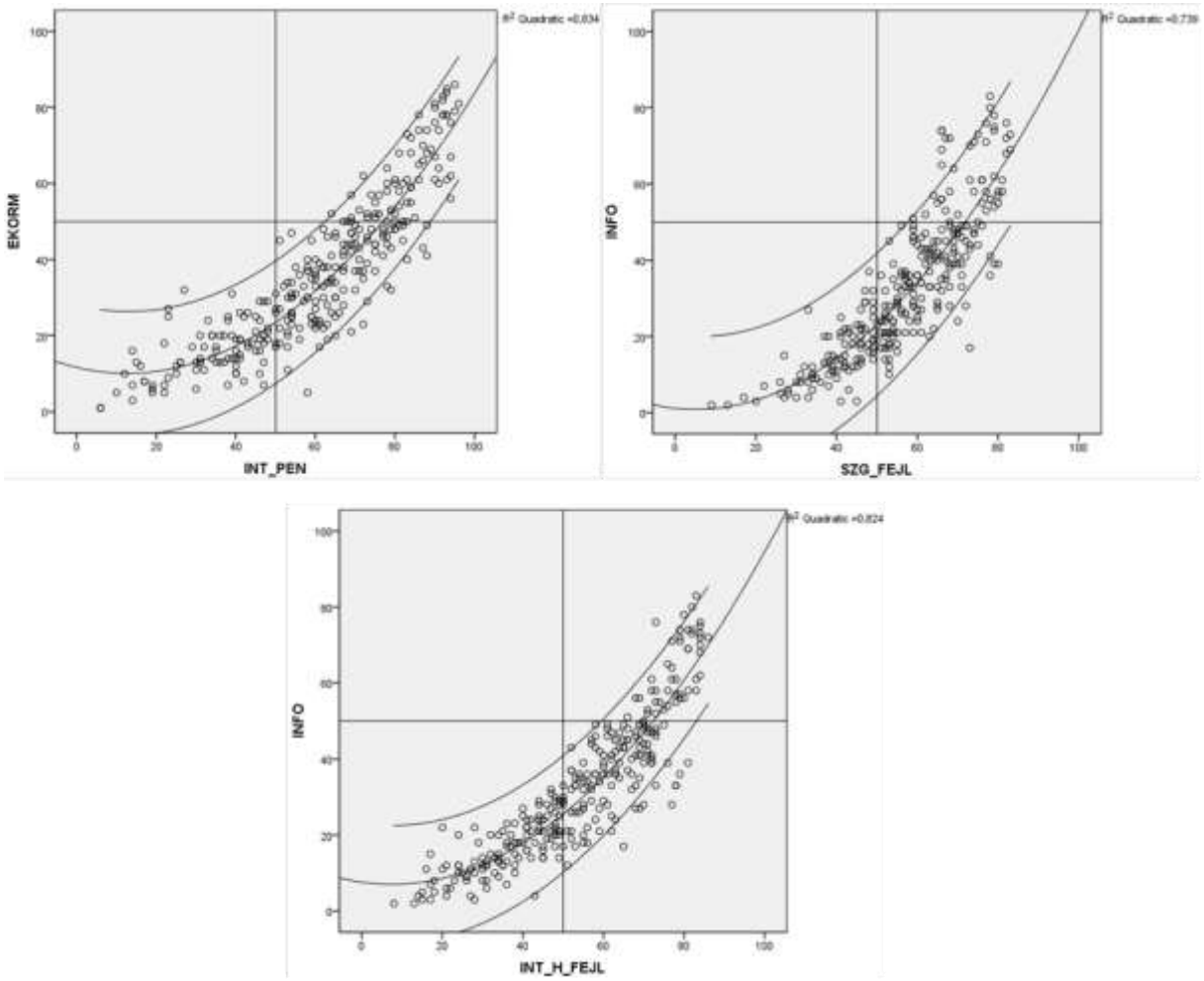

Figure 4 Connection of the examined data pairs with a fitted quadratic curve and 95% reliability interval
(Souce: own calculation in SPSS)

In its e-government survey Accenture examined 22 countries (Accenture, 2005) and concluded that based on the proportion of Internet penetration and e-government service users the following three groups can be defined:

- upcoming, in this group the percentage of e-government service users is 35% and Internet penetration is less than 55%;
- developing, in this group Internet penetration is more than 55% and the percentage of e-government service users is 43% on average;
- developed, in this group Internet penetration is more than 55% and the percentage of e-government service users is 64% on average.

In order to support and fine-tune the above grouping we intended to confirm – with the help of multivariate analysis (Szelényi, 2010) – that factors measuring the level of ICT development (Internet penetration and use; level of computer skills) have an effect on the use of e-government services.

Principal component analysis both by correlation and regression produced similar results and were determined by the use of e-government services and the level of ICT development with a slightly different direction (Figure 5).

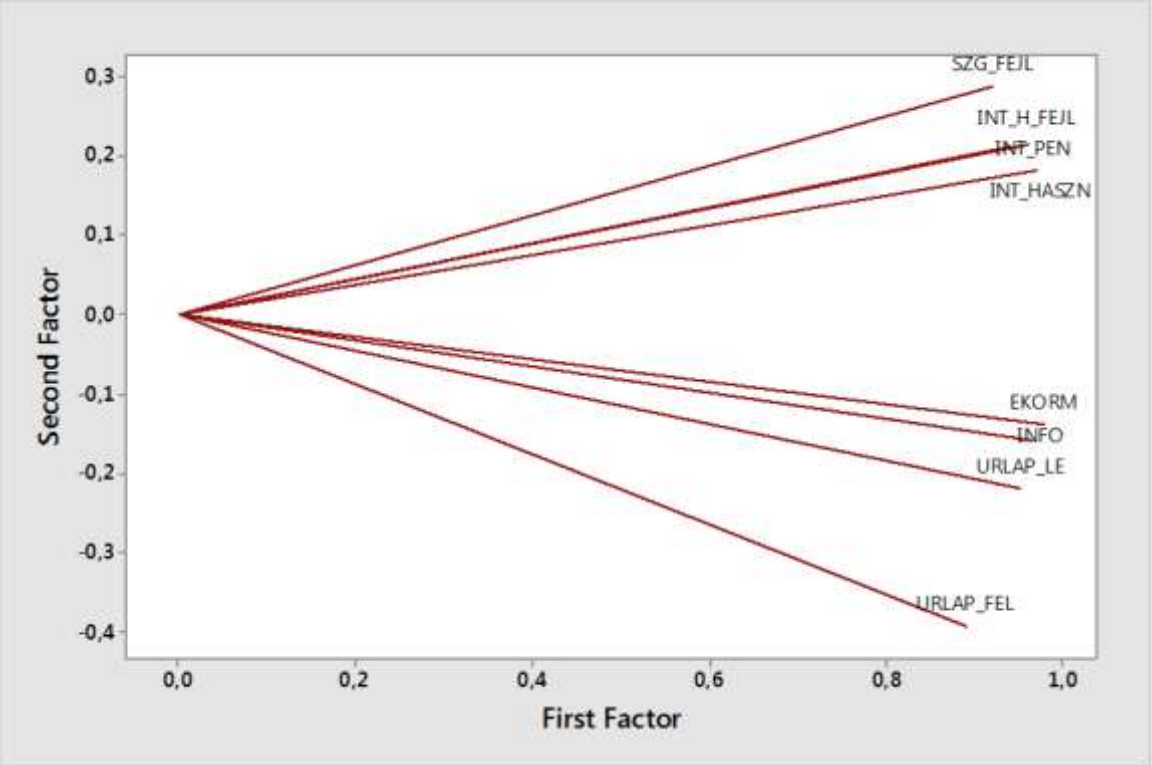

Figure 5. Data determining the first two components for the principal component analysis
(Souce: own calculation in Minitab)

Table 3 Results of principal component analysis

Eigenvalue	7,1836	0,4535	0,1242	0,0948	0,0680	0,0483	0,0194	0,0082
Proportion	0,898	0,057	0,016	0,012	0,008	0,006	0,002	0,001
Cumulative	0,898	0,955	0,970	0,982	0,991	0,997	0,999	1,000

Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8
INFO	0,360	-0,236	-0,295	-0,404	-0,320	-0,334	-0,139	0,575
URLAP_LE	0,355	-0,326	-0,104	-0,206	0,602	0,582	-0,002	0,118
URLAP_FEL	0,332	-0,583	0,305	0,648	-0,072	-0,176	0,011	0,025
EKORM	0,365	-0,205	-0,220	-0,295	-0,174	-0,141	0,062	-0,797
INT_PEN	0,351	0,315	0,607	-0,248	0,386	-0,413	-0,166	-0,020
INT_HASZN	0,362	0,270	0,203	-0,025	-0,293	0,236	0,771	0,132
INT_H_FEJL	0,358	0,320	0,101	0,149	-0,411	0,463	-0,593	-0,039
SZG_FEJL	0,343	0,427	-0,584	0,450	0,311	-0,241	0,047	0,020

(Source: own calculation in Minitab)

The first component explains 89% of the data and the second component explains 6% of the data thus the first two components cover 95% of the data.

In forming the first component all eight factors examined played approximately equal parts. In case of the second component percentage values of use are negative whereas ICT foundations are positive (Table 3).

Placing the examined countries and years in the coordinate system determined by the two main components (Figure 6) it can be seen that the early years data from slowly developing countries can be found in the first (bottom left) quarter whereas in the second (top left) quarter later years data of slowly developing countries and early years of more developed countries can be found. In the third (top right) quarter the early years of the best countries and the present data of the more developed countries can be found whereas in the fourth (bottom right) quarter the countries with the most individuals using e-government services can be found.

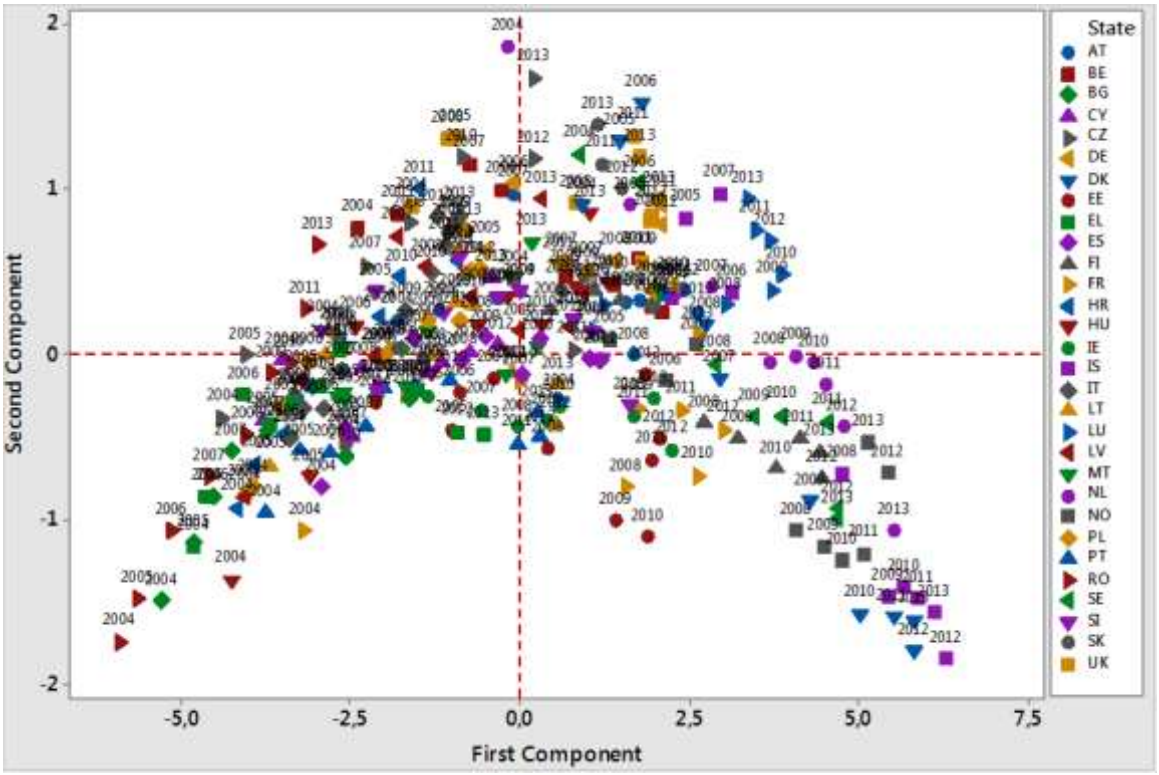

Figure 6 Data distribution in the coordinate system determined by the two main components (Source: own calculation in Minitab)

In order to confirm the grouping in the four quarters of Figure 6 a discrimination analysis was performed which confirmed 90% of the cases (see Figure 7 and Figure 8), however, the new grouping did not only affect the borderline data but signalling the strength of the first component resulted in more vertical groups.

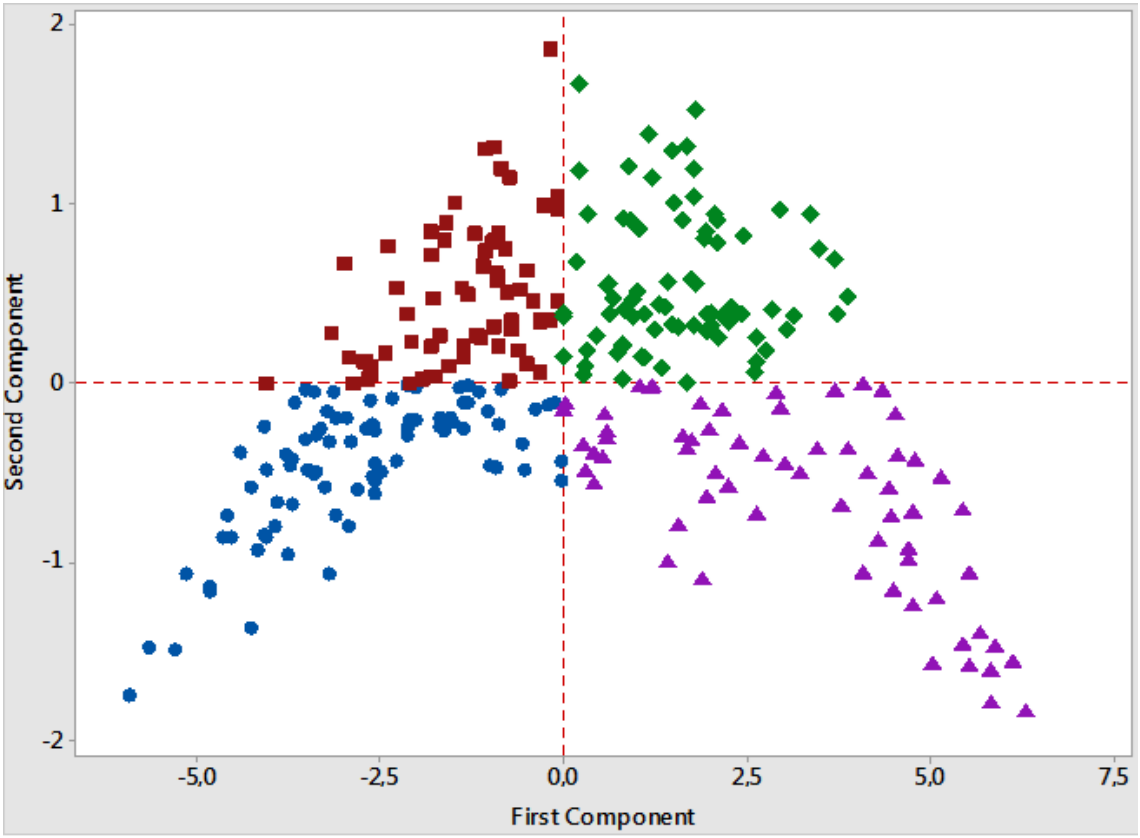

Figure 7 Four quarterly grouping of basic data by principal component analysis
(Source: own calculation in Minitab)

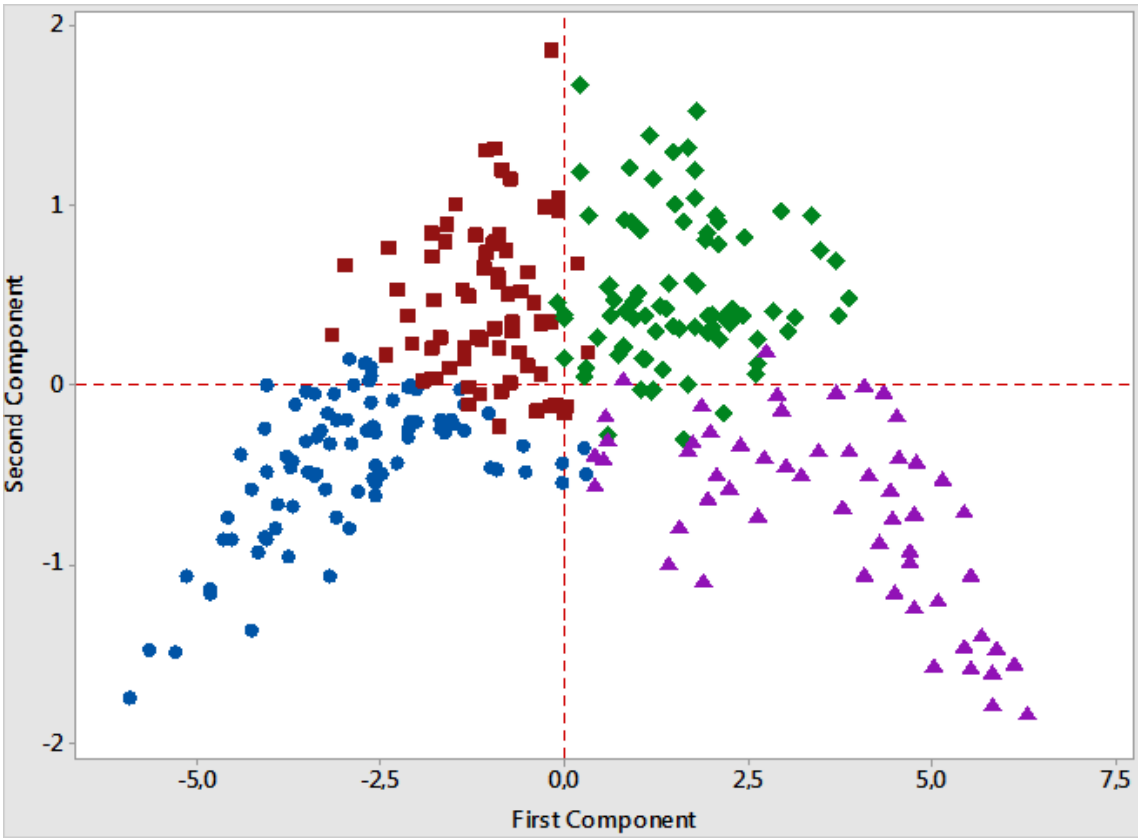

Figure 8 Grouping of the basic data after discrimination analysis
(Source: own calculation in Minitab)

We indented to confirm the above classes with cluster analysis thus taking the factor analysis groups as basis we validated the division by k-means method as a first test. It can be clearly seen in this case that the original grouping (Figure 7) is altered and the data is distributed based on the primary component (Figure 9).

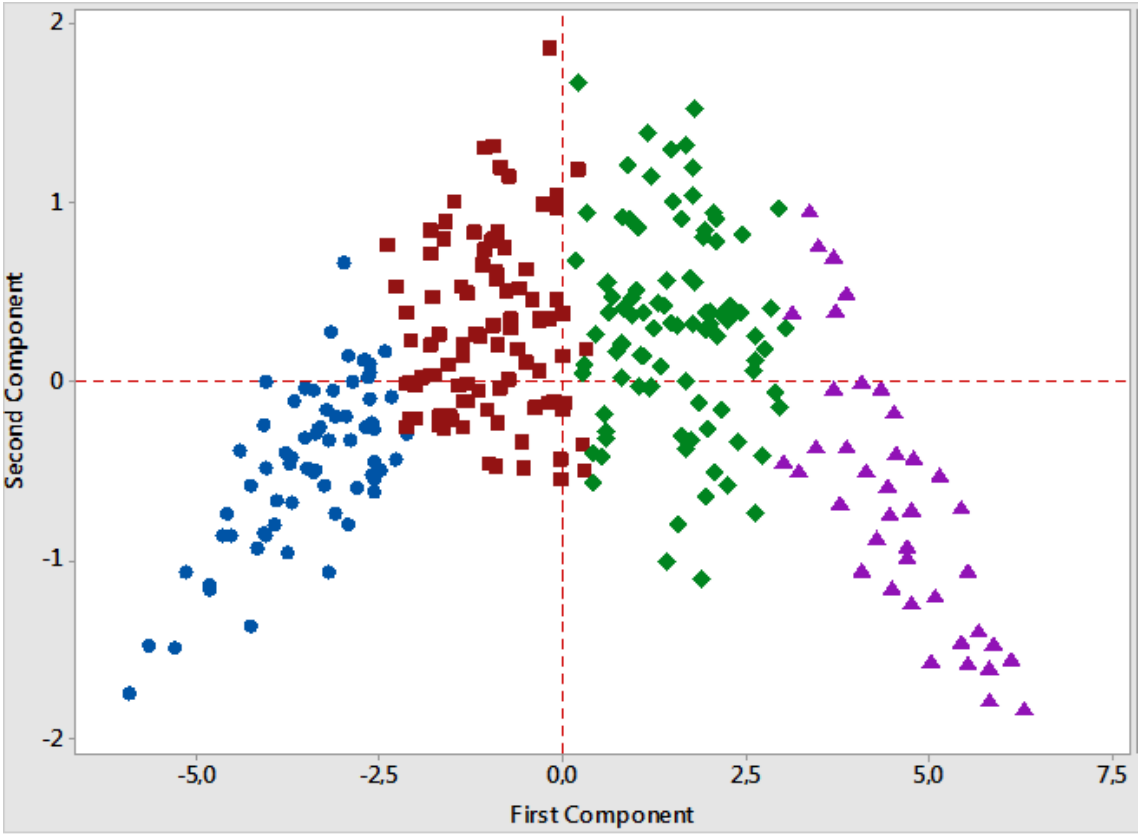

Figure 9 Results of k-means cluster analysis
(Source: own calculation in Minitab)

Examining the group characteristics of the established clusters (Figure 10) it can be concluded that usage of electronic government services by citizens is not directly proportionate to Internet penetration or computer skills.

According to Obádovics – Popovics (2010) the classification established was confirmed by comparison to complete-linkage clusters. In the groups formed by the more robust method the two peripheral classes have a lot fewer elements but the grouping is very similar to the k-means method, i.e. the data is divided alongside the principal component (see Figures 11 and 12).

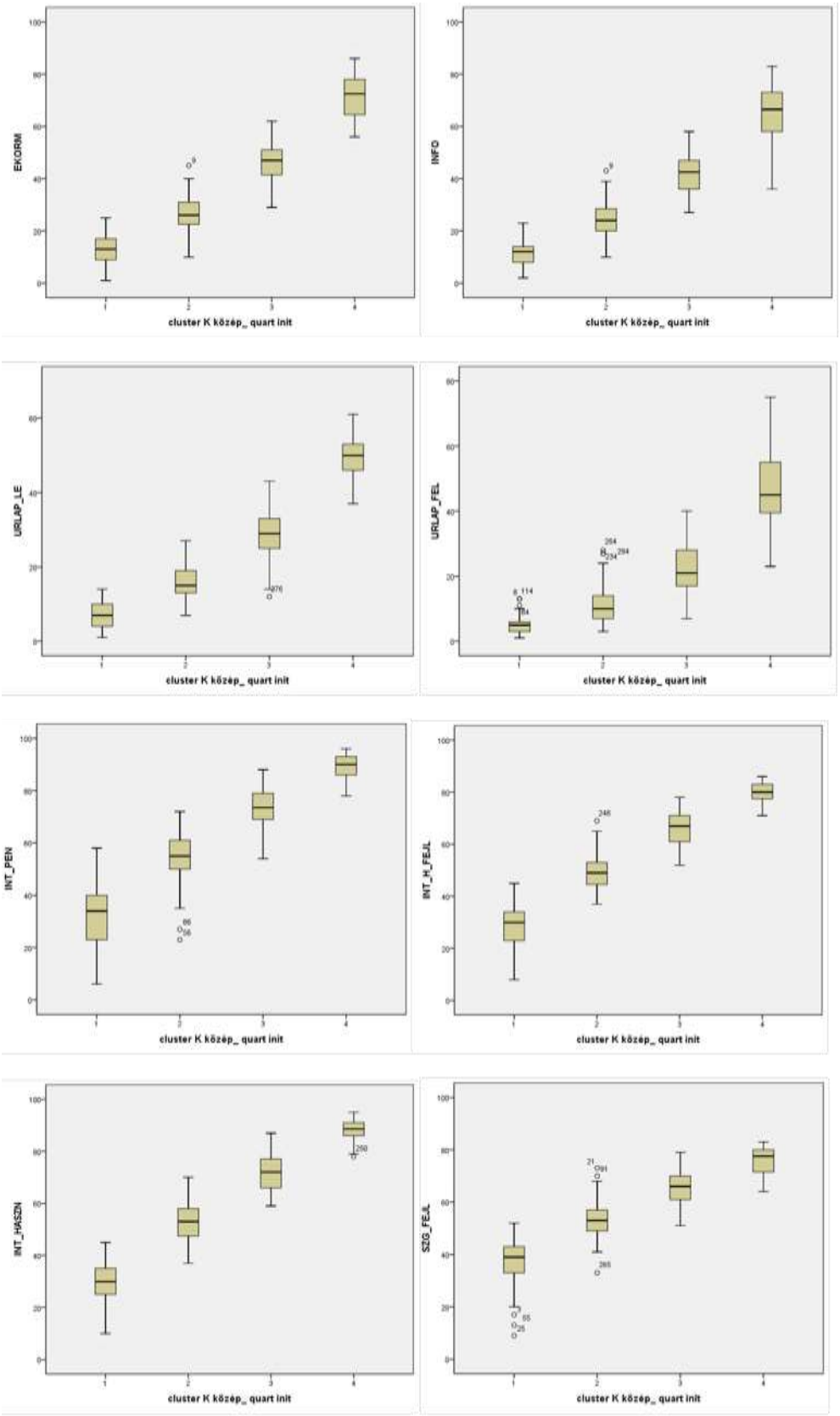

Figure 10 Box diagrams of examined feature by clusters
(Source: own calculation in Minitab)

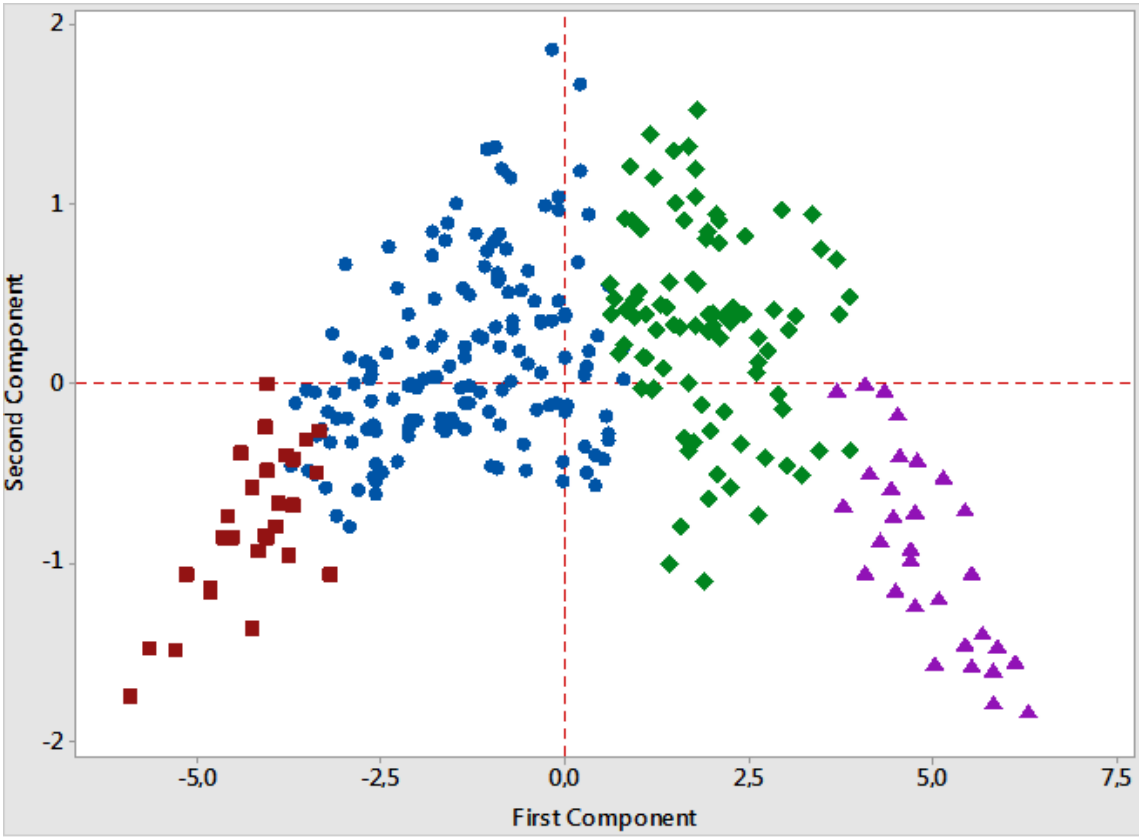

Figure 11 Clusters by complete-linkage clustering
(source: own calculation)

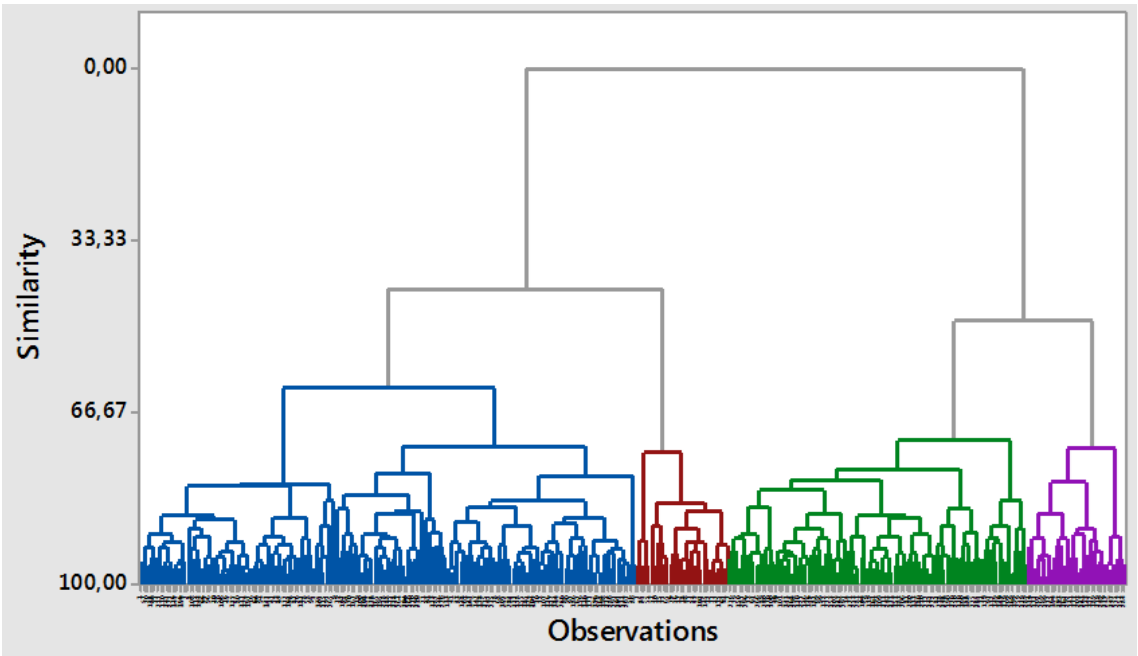

Figure 12 Complete-linkage clustering dendrogram
(source: own calculation)

Evaluation

We have examined different usage levels of e-government services in view of Internet penetration and digital literacy based on data from the past 10 years from 30 European countries.

We have concluded that there is a strong connection between the use of e-government services and technical knowledge and skills. However, the connection is not deterministic but higher levels of technical development will result in proportional increase in usage. Thus "total coverage" is a desirable object.

We attempted to present the explanatory factors of usage levels of e-government services by several multivariate methods and to measure the level of development with the help thereof but the strong Stochastic dependence compressed the explanatory factors into a single principal component. Based on the above the level of use of e-government services can be more accurately described by a complex index number than the cause-effect relationship between various factors.

The evaluation of the research into a similar topic by Seri – Zanfei (2012) concludes the existence of the Solow paradox. Improving Internet coverage and computer skills – the preferred method by governments – may play a role in increasing the activity of users but actual increase in usage cannot exclusively depend on these incentives. In future researches citizens' attitudes to using e-government services shall become an important factor.

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Author addresses

PÁSZTOR Márta Zsuzsanna, PhD Candidate, Szent István University
E-mail: pasztor.marta@gtk.szie.hu

POPOVICS Attila, Expert, Szent István University
E-mail: popovics.attila@gtk.szie.hu

Lector: Dr. SZALAY Zsigmond Gábor Szent István University Gödöllő, Hungary

ACCOUNTING DIRECTIVES IN THE ISLAMIC BANKING SYSTEM

SZÉLES, Zsuzsanna PhD

Abstract

Islamic banking is considerably different from conventional banking system since the Muslim religion forbids giving or receiving interest. The competition with conventional banks forced Islamic banks introduce new products and institutions such as Islamic bonds, structured products and mutual funds based on traditional Islamic financial products. Liquidity management is easier in Islamic banks because of their main source of liquidity is costumer deposits and their leverage is lower than in conventional banks.

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is an Islamic international autonomous non-for-profit corporate body that prepares accounting, auditing, governance, ethics and Shari'a standards for Islamic financial institutions and the industry. My main aim to show how works AAOIFI and what is the different between conventional and Islamic Banking System Control. As banks prepare for the impact of Basel III regulations, many Islamic financial institutions are finding they already exceed the requirements. So, does this mean that Basel III regulations will not affect Islamic banks in the same way they will conventional banks?

Key words: bank accounting, islamic finance, AAOIFI, Shari'a

JEL classification: M41, M48

Introduction

Due to the activities of financial institutions they have to operate according to strict regulations. The existence of bank regulations has not always been as obvious as nowadays. Is there a need to regulate banks or not, and if a regulation exists what should it focus on and how widespread it should be? The objective of financial regulation is to prevent financial crises by prescribing norms of behaviour and creating such institutions that continously control the keeping of laws in order to make the markets work properly.

Bank accounting in the European Union (EU)

The EU is harmonising the financial statements of listed companies in order to guarantee the protection of investors. By applying international accounting rules, it sets out to maintain confidence in the financial markets while facilitating cross-border and international securities

trading. Banks and other financial institutions accounting rules are described by the (http://ec.europa.eu/finance/accounting/ias/index_en.htm):

- Council Directive of 8 December 1986 on the annual accounts and consolidated accounts of banks and other financial institutions (86/635/EEC).
- Council Directive of 13 February 1989 on the obligations of branches established in a Member State of credit institutions and financial institutions having their head offices outside that Member State regarding the publication of annual accounting documents (89/117/EEC).
- However listed banks and financial institutions are obliged to follow the International Accounting Standards (IAS) as adopted by the EU.

International Accounting Standards (IAS)

The European Union (EU) is harmonising the financial statements of listed companies in order to guarantee the protection of investors. By applying international accounting rules, it sets out to maintain confidence in the financial markets while facilitating cross-border and international securities trading.

The objective of this Regulation No 1606/2002/EC is the adoption and application of international accounting standards in the European Union (EU) in order to harmonise the financial information presented by companies. The aim is to ensure a higher level of transparency and comparability of financial statements. Since 2005 all listed EU companies (including banks and insurance companies) must prepare their consolidated financial statements in accordance with the IFRS. Member States may also permit or require EU-listed companies to use this standard for their annual accounts and non EU-listed companies for their annual and/or consolidated accounts. For effective implementation, the adoption of an International Accounting Standard should provide an accurate and honest image of the company's financial situation and performance, correspond to European public interests and meet the criteria of understandability, relevance, reliability and comparability required of the financial information needed for making economic decisions and assessing the stewardship of management. The Commission is consulting with the Committee of the European Securities Regulators (CESR) to develop a common approach towards enforcing these rules. (http://europa.eu/legislation_summaries/internal_market/single_market_services/financial_services_general_framework/l26040_hu.htm)

The system is to be subject to an endorsement mechanism with a two-tier structure (http://europa.eu/legislation_summaries/internal_market/single_market_services/financial_services_general_framework/l26040_hu.htm):

- a regulatory level, with an Accounting Regulatory Committee made up of representatives from the Member States and chaired by the Commission. On the basis of the Commission's proposals, this Committee decides whether the IRFS are to be adopted. Its aim is to ensure full transparency and accountability vis-à-vis the Council and Parliament;
- a technical level, with an Accounting Technical Committee, the European Financial Reporting Advisors Group (EFRAG), made up of accounting experts from the private

sectors of several Member States. This Committee provides the support and expertise needed to assess the IFRS and to advise the Commission on whether or not to adopt the IFRS being considered.

Islamic financial system in Europe

The interest in the Islamic investments treated on religion bases is increasing. The Islam is the second largest religion of the world after Christianity. Figure 1 shows global muslim population This potential increasing of demand as well as the present community of Islam in West Europe and the Balkan Peninsula encouraged the financial sphere to establish financial institutes in Europe (Csongor et al, 2012). According to Varga (2012) a relevant contribution could be – following the Islamic banking system – the adaptation of built in moral restrictions in the financial analyzes besides the numerical ones (Basel III).

Figure 1: Global Muslim Populations – Selective Markets (2010)
Source: Ernst & Young (2011): A Brave New World of Sustainable Growth Report 2011-2012. The World Islamic Banking Competitivness Report. Ernst & Young, Dubai (pp. 15)

Groth within the Muslim population throughout the emerging markets of MENA (Middle-East and North-Africa) and Asia are key drivers behind increasing demand for Islamic financial services. Figure 2 shows MENA Islamic banking Assets (2015 Forecast). The forecast is the higest in Saud Arabia.

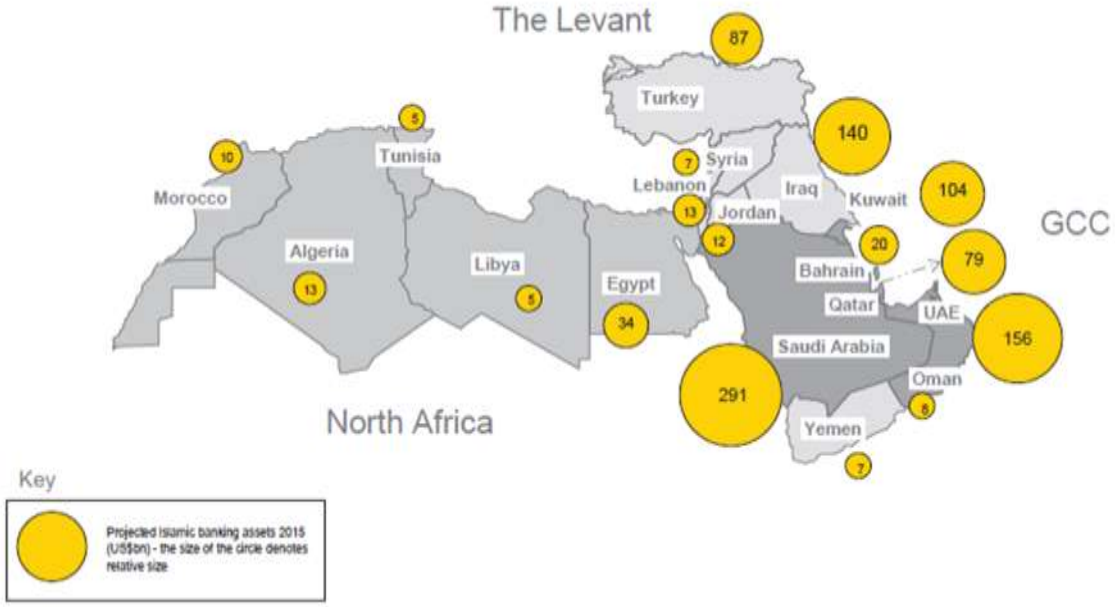

Figure 2: MENA Islamic banking Assets – 2015 Forecast (US $ bn)
Source: Ernst & Young (2011): A Brave New World of Sustainable Growth Report 2011-2012. The World Islamic Banking Competitivness Report. Ernst & Young, Dubai (pp. 10)

Ahari'a compliant assets represent a significant portion of the total banking system assets of the region.

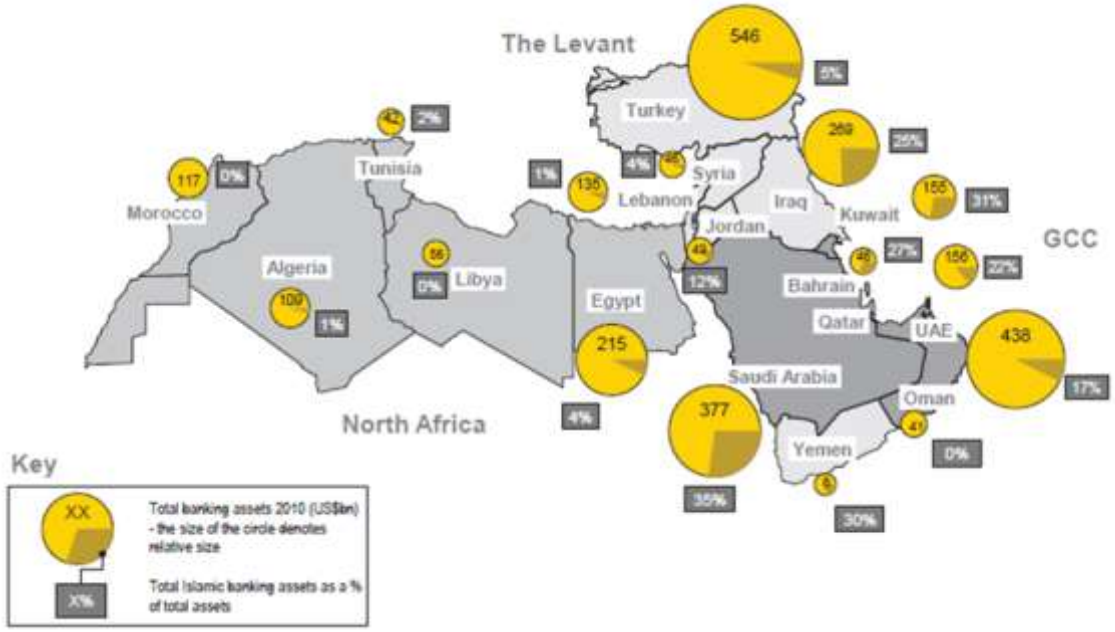

Figure 3: Bank Assets (US $ bn) and Islamic Ahare (%) in 2010
Source: Ernst & Young (2011): A Brave New World of Sustainable Growth Report 2011-2012. The World Islamic Banking Competitivness Report. Ernst & Young, Dubai (pp. 20)

Globally, there is increasing demand from both Muslims and non-Muslims for more information on Islamic finance. From a commercial standpoint, more institutions are seeking guidance on the regulations, standards, compliance, and legal processes used to conduct business activities in accordance with Sharia law, the moral and ethical code of Islam, which underpins Islamic finance.

Islam forbids Muslims from receiving or paying interest on loans. Islamic banks and finance institutions cannot receive or provide funds for anything involving alcohol, gambling, pornography, tobacco, weapons or pork. Islamic banks have proved a success because of the rules that forbid investing in collateralized debt obligations and other toxic assets that cause financial crises.

The Islamic banking system is being practiced in 50 countries worldwide, making it one of the fastest growing sectors in the global financial industry. Starting almost three decades ago, the Islamic banking industry has made substantial growth and attracted the attention of investors and bankers across the world.

Amid increasing support for Islamic finance, Shari'ah-complaint bank instruments have been gaining ground in the United Kingdom (shortly UK), with upsurge in its popularity among non-Muslims as well, British financial experts revealed. Adopted by the UK three decades ago, products of Islam finance range from Islamic savings accounts, investments, mortgages and insurance policies to Shari`ah-compliant student loan. Last September, the UK government has approved new Shari'ah-complaint loans for Muslim students, to help students overcome the latest rise in education fees. They estimate that 83 per cent of our fixed-term deposit savings customers and 47 per cent of our Isa customers who joined the bank last year were non-Muslim. (http://www.onislam.net/english/news/europe/485495-islamic-finance-thrives-in-uk.html)

The Sustainable Development Goals, the global development agenda for 2015 through 2030, will require unprecedented mobilization of resources to support their implementation. Their predecessor, the Millennium Development Goals, focused on a limited number of concrete, global human development targets that can be monitored by statistically robust indicators. The Millennium Development Goals set the stage for global support of ambitious development goals behind which the world must rally. The Sustainable Development Goals bring forward the unfinished business of the Millennium Development Goals and go even further (Ahmed et al, 2015).

A World Bank study (2015) has explored the potential of Islamic financial sector in supporting the Sustainable Development Goals. The Islamic finance assets grew at an annual rate of 17 per cent during 2009-2013 and are estimated to exceed $2 trillion. The Islamic finance, the potential source of development finance, is often overlooked. The Millennium Development Goals set the stage for global support of ambitious development goals behind which the world must rally. The sustainable development goals bring forward the unfinished business of millennium development goals (MDGs) and go even further. Developing countries are expected to speed up reforms to spur growth and improve MDG-related service

delivery, while donors would provide larger financial resources and international trade access. The estimated $15 trillion in losses from the global financial crisis highlight the vulnerability of the financial sector. A more effective role for Islamic finance in the implementation of Sustainable Development Goals would require supply of an innovative mix of products, adequate governance of Islamic finance intermediaries, and a supportive legal and regulatory framework. Based on the experience with the MDGs, and given the requirements of Islamic finance instruments for better ex-ante and ex-post understanding and scrutiny of transactions, the need for high quality data cannot be overemphasized.The study identified five tracks through which Islamic finance could support efforts to achieve the Sustainable Development Goals, and they are: financial stability, financial inclusion reducing vulnerability, social and environmental factors, and infrastructure finance (http://www.dawn.com/news/1182437/wb-explores-role-of-islamic-finance-in-development).

Islamic finance is seen by many as an island existing in a vast global system of financial institutions and regulations. Much of the international dialogue today is focused on finding common approaches for financial regulations, standards, and ethical codes so that the global economy can operate more reliably and efficiently (Khazzam, 2014). How does Islamic finance fit into this process? Must it fit in?

The role of the Islamic financial industry in supporting the Sustainable Development Goals will depend on the extent to which stakeholders can influence its direction. There are important factors on the demand side that are likely to change the dynamics of Islamic finance and could link it more profoundly to the Sustainable Development Goals, especially if one of the most distinctive characteristics of Islamic finance — backing financial transactions by real economic activities — is fully operationalized (Ahmed et al, 2015).

A Telescopic Perspective of Societies

The phrase telescopic perspective to refer to the idea that when we look at things from afar, we can find many commonalities among them that otherwise appear different up-close. Of course there are many differences between Sharia Law and the principles that drive modern capitalism, but it seems there are some underlying commonalities (Khazzam, 2014):

- The importance of reducing exploitative behavior from institutions, consumers, and all those involved in transactions;
- The importance of reducing economic uncertainty and the dangers it creates for all of society; and
- A sensitivity to social responsibility—to ethical behavior and the cultural values that impact positively upon society (for many western societies this is only just beginning to emerge with corporate social responsibility [CSR], sustainable business practices, and other movements).

How the different systems attempt to arrive at these ends varies, but ultimately, both are constructive in nature. They concern the necessity of mitigating negative consequences. And in the modern sense, both seem to facilitate wealth and to some degree, the diffusion

of its benefits to society. In both systems, people seek to conduct themselves along principled frameworks based on societal values and ideals. Where they do differ is through the lenses of culture, religion, and perhaps the experience of history.

The Evolution of Different Financial Systems

The modern principles and frameworks that underpin the financial industries encompass everything from economic theory to ethics. Many take origin from practices established in Medieval trading centers, such as Florence and Venice. They have evolved over time from thinkers such as Adam Smith, Jean Baptiste Sey, and John Maynard Keynes, whose theories provided explanations for everything from supply and demand to valuation and state/regulatory intervention. The rationale for how and why such principles conform to human nature was supported by Christian theologians, such as John Calvin, and political theorists, such as John Locke. The point here is that the financial principles common to most societies today have evolved across many disciplines and are caught between many strands of debate. Islamic finance too is routed in a long tradition of theory and practice. In the Medieval Period, traders from the Islamic world engaged with the same European societies (e.g., Venice and Florence) that gave rise to the financial principles many of us utilize today. These societies were concurrently formulating a rationale to address concepts such as economic uncertainty, valuation, investment, money-lending, and contracts. Much of this rationale was based on Sharia Law and the moral codes of the Quran. The body of ideas we regard today as "Islamic finance" represents a reformation of these principles that took place in the 1970s and 80s as investment and banking activities between western societies and the Middle East significantly increased. They have enabled the growth of the Islamic banking industry and the facilitation of trade for a variety of other industries, not necessarily because different modern societies are conforming to the same financial systems, but rather because a broader set of principles are able to co-exist All societies seek the soundness of transactions, reliable agreements between parties, and the creation of wealth. And perhaps at a more intuitive level, all humans are averse to exploitation, deceptive practices, and any form of system that cannot protect property and the norms and conventions we use to exchange goods and services (Khazzam, 2014).

Universalism: Are We Speaking the Right Language Yet?

It can be argued that a key feature of globalization is the notion that the practices and systems of different societies (whether they are financial, technological, or based on human rights) should become increasingly similar. Ideally, this would allow different societies to interact on common terms with universal conventions. In the end, most of us have the same objectives; however, we use different "languages" to arrive at them. Some may use the language of religion, others may use the languages of the social sciences (e.g., economics, sociology, and political theory) to explain the principles to which we aspire. Perhaps before we think about globalization—about how different practices such as Islamic finance are to be integrated with the mainstream—we need to consider the ends and not the means. The "right" language of globalization may ultimately be just that: a simple understanding of what all or most societies ultimately seek. If we can all agree upon such overarching objectives, we may find it easier to

achieve them. In this regard, trying to converge the complex systems and financial principles that currently distinguish our societies may actually be holding us back from developing more effective conventions. Perhaps someday, a truly global financial system will exist: one that is far simpler and far more accessible than anything we know today (Khazzam, 2014).

Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)

Mission is standardization and harmonization of international Islamic finance practices and financial reporting in accordance to sharia.

The rapid expansion of the Islamic financial industry that started in the 1970s was not initially accompanied by the creation of a set of internationally recognized accounting rules. In consequence, Islamic institutions around the globe had to resort to developing their own accounting solutions for their new products, rendering comparisons across institutions difficult, and sometimes even giving the impression of lack of transparency. The need for a body of accounting standards purposely designed to reflect the specificities of Islamic products became even more pressing as new and more complex instruments were being marketed. To close this widening gap, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) was created in 1990 (Sole, 2007).

AAOIFI was established in accordance with the Agreement of Association which was signed by Islamic financial institutions on 26 February, 1990 in Algiers. Then, it was registered on 27 March, 1991 in the State of Bahrain.

The visions of the Organization are followings:

- To guide Islamic Finance's markets operation and financial reporting on Sharia principle and rules.
- To provide Islamic Finance markets with a standard that can support growth of the industry.

This Organization is an Islamic international autonomous non-for-profit corporate body that prepares accounting, auditing, governance, ethics and Shari'a standards for Islamic financial institutions and the industry. Professional qualification programs (notably CIPA, the Shari'a Adviser and Auditor "CSAA", and the corporate compliance program) are presented now by AAOIFI in its efforts to enhance the industry's human resources base and governance structures. As an independent international organization, AAOIFI is supported by institutional members (200 members from 40 countries) including central banks, Islamic financial institutions, and other participants from the international Islamic banking and finance industry, worldwide. AAOIFI has gained assuring support for the implementation of its standards, which are now adopted in the Kingdom of Bahrain, Dubai International Financial Centre, Jordan, Lebanon, Qatar, Sudan and Syria. The relevant authorities in Australia, Indonesia, Malaysia, Pakistan, Kingdom of Saudi

Arabia, and South Africa have issued guidelines that are based on AAOIFI's standards and pronouncements (http://www.aaoifi.com/en/about-aaoifi/about-aaoifi.html).

Founders

The founding members are the Islamic financial institutions that are signatories to the Agreement establishing AAOIFI in 1989, and those that have been subsequently accepted as founding members. These are followings:

- The Islamic Development Bank
- Dallah Al Baraka
- Faysal Group (Dar Al Maal Al Islami)
- Al Rajhi Banking & Investment Corporation
- Kuwait Finance House
- Albukhary Foundation

Total of 88 standards issued (by AAOFI):

(a) 48 on Shari'a,
(b) 26 accounting,
(c) 5 auditing standards,
(d) 7 governance,
(e) 2 codes of ethics.

AAOIFI standards are followed – as part of regulatory requirement or IFIs' internal guidelines – in jurisdictions that offer Islamic finance across Middle East, Asia Pacific, South Asia, Central Asia, Africa, Europe, and North America; and Islamic Development Bank Group.

The objectives of AAOIFI are:

1. To develop accounting and auditing thoughts relevant to Islamic financial institutions;
2. To disseminate accounting and auditing thoughts relevant to Islamic financial institutions and its applications through training, seminars, publication of periodical newsletters, carrying out and commissioning of research and other means;
3. To prepare, promulgate and interpret accounting and auditing standards for Islamic financial institutions; and
4. To review and amend accounting and auditing standards for Islamic financial institutions.

AAOIFI carries out these objectives in accordance with the precepts of Islamic Shari'a which represents a comprehensive system for all aspects of life, in conformity with the environment in which Islamic financial institutions have developed. This activity is intended both to enhance the confidence of users of the financial statements of Islamic financial institutions in the information that is produced about these institutions, and to

encourage these users to invest or deposit their funds in Islamic financial institutions and to use their services (http://www.aaoifi.com/en/about-aaoifi/about-aaoifi.html).

General Assembly

The General Assembly is composed of all founding, associate, supporting and observing members and regulatory and supervisory authorities. Observer and supporting members have the right to participate in the meetings of the General Assembly but without a right to vote. The General Assembly is the supreme authority and convenes at least once a year.

Conditions for Membership

- A member shall be from amongst the categories of organizations listed in Article 3 of this Statute.
- A member shall pay the prescribed membership fee and the annual subscription fee subject to paragraph to the Statute.
- A member shall comply with AAOIFI's Statute and by-laws.
- A member shall satisfy any other conditions that may be laid down by the Board of Trustees.
- Powers of the General Assembly

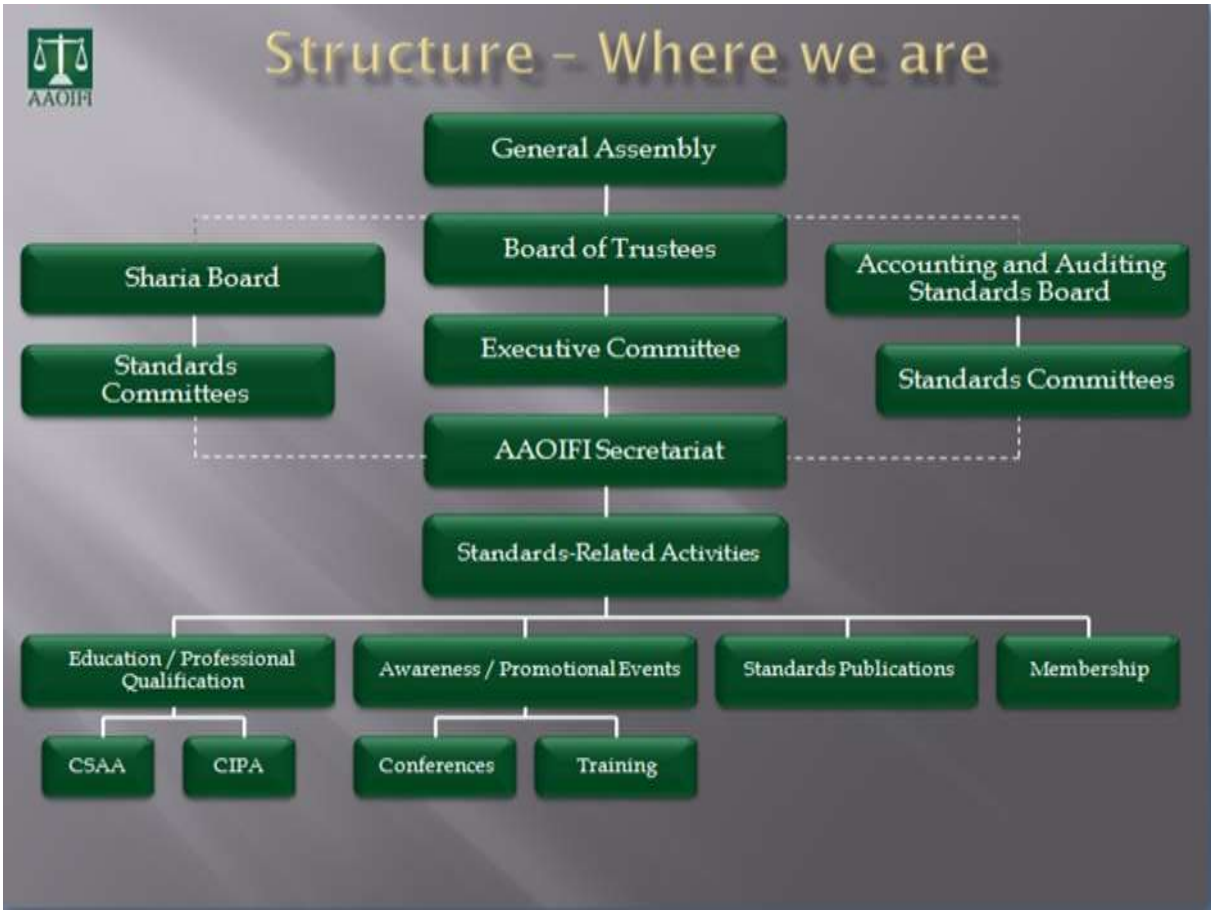

Figure 4: AAOIFI structure
Source: http://aaoifi.com/en/about-aaoifi/aaoifi-structure.html

Shari'a Board

The Shari'a Board is composed of not more than twenty members to be appointed by the Board of Trustees for a four-year term from among fiqh scholars who represent Shari'a supervisory boards in the Islamic financial institutions that are members of AAOIFI, and Shari'a supervisory boards in central banks.

The powers of the Shari'a Board include, among others, the following (http://www.aaoifi.com/en/about-aaoifi/sharia-standards-board/overview1.html):

- Achieving harmonization and convergence in the concepts and application among the Shari'a supervisory boards of Islamic financial institutions to avoid contradiction or inconsistency between the fatwas and applications by these institutions, thereby providing a pro-active role for the Shari'a supervisory boards of Islamic financial institutions and central banks.
- Helping in the development of Shari'a approved instruments, thereby enabling Islamic financial institutions to cope with the developments taking place in instruments and formulas in fields of finance, investment and other banking services.

- Examining any inquiries referred to the Shari'a Board from Islamic financial institutions or from their Shari'a supervisory boards, either to give the Shari'a opinion in matters requiring collective Ijtihad (reasoning), or to settle divergent points of view, or to act as an arbitrator.
- Reviewing the standards which AAOIFI issues in accounting, auditing and code of ethics and related statements throughout the various stages of the due process, to ensure that these issues are in compliance with the rules and principles of Islamic Shari'a

Standards Board

The Standards Board is composed of twenty part-time members who are appointed by the Board of Trustees for a five-year term. Members of the Standards Board represent the following various categories: regulatory and supervisory bodies, Islamic financial institutions, Shari'a supervisory boards, university professors, organizations and associations responsible for regulating the accounting profession and/ or responsible for preparing accounting and auditing standards, certified accountants, and users of the financial statements of Islamic financial institutions. The Standards Board meets at least twice every year and its resolutions are adopted by the majority of the votes of the members voting. In case of a tie, the chairman of the Standards Board shall have the casting vote (http://www.aaoifi.com/en/about-aaoifi/accounting-auditing-standards-board-aasb/accounting-auditing-standards-board-aasb-overview.html).

The powers of the Standards Board include, among others, the following (by AAOFI):

- To prepare, adopt and interpret accounting and auditing statements, standards and guidelines for Islamic financial institutions.
- To prepare and adopt code of ethics and educational standards related to the activities of Islamic financial institutions.
- To review with the aim of making additions, deletions or amendments to any accounting and auditing statements, standards and guidelines.
- To prepare and adopt the due process for the preparation of standards, as well as regulations and by-laws of the Standards Board

Shari'a Standards

- Trading in Currencies
- Debit Card, Charge Card and Credit Card
- Default in Payment by a Debtor
- Settlement of Debt by Set-off
- Guarantees
- Conversion of a Conventional Bank to an Islamic Bank
- Hawala
- Murabaha to the Purchase Orderer
- Ijarah and Ijarah Muntahia Bittamleek
- Salam and Parallel Salam
- Istisna'a and Parallel Istisna'a

- Sharika (Musharaka) and Modern Corporations
- Mudaraba
- Documentary Credit
- Jua'la
- Commercial Papers
- Investment Sukuk
- Possession (Qabd)
- Loan (Qard)
- Commodities in Organized Markets
- Financial Papers (Shares and Bonds)
- Concession Contracts
- Agency
- Syndicated Financing
- Combination of Contracts
- Islamic Insurance
- Indices
- Banking Services
- Stipulations and Ethics of Fatwa in the Institutional Framework
- Monetization (Tawarruq)
- Controls of Gharar in Financial Transactions
- Arbitration
- Waqf
- Hiring of Persons
- Zakah
- Impact of Contingent Incidents on Commitments
- Credit Agreement
- Online Financial Dealings
- Mortgage and its Contemporary Applications
- Distribution of Profit in Mudaraba-based Investments Accounts
- Islamic Reinsurance
- Financial Rights and Methods of Disposal Thereof
- Bankruptcy
- Liquidity Management
- Protection of Capital and Investments
- Investment Agency
- Stipulations of Transaction Profit Calculations.
- Options of Amanah (Trust)

Accounting Standards

- Conceptual Framework FOR Financial Reporting by Islamic Financial Institutions
- FAS 1- General Presentation and Disclosure in the Financial Statements of Islamic Banks and Financial Institutions

- FAS 2- Murabaha and Murabaha to the Purchase Orderer
- FAS 3- Mudaraba Financing
- FAS 4 - Musharaka Financing
- FAS 5- Disclosure of Bases For Profit Allocation Between Owners' Equity and Investment Account Holders
- FAS 6- Equity of Investment Account Holders and their Equivalent
- FAS 7- Salam and Parallel Salam
- FAS 8- Ijarah and Ijarah Muntahia Bittamleek
- FAS 9-Zakah
- FAS 10-Istisna'a and Parallel Istisna'a
- FAS 11- Provisions and Reserves
- FAS 12-General Presentation and Disclosure in the Financial Statements of Islamic Insurance Companies
- FAS 13- Disclosure of Bases for Determining and Allocating Surplus or Deficit in Islamic Insurance Companies
- FAS 14- Investment Funds
- FAS 15- Provisions and Reserves in Islamic Insurance Companies
- FAS 16- Foreign Currency Transactions and Foreign Operations
- FAS 17- Investments
- FAS 18- Islamic Financial Services offered by Conventional Financial Institutions
- FAS 19- Contributions in Islamic Insurance Companies
- FAS 20- Deferred Payment Sale
- FAS 21- Disclosure on Transfer of Assets
- FAS 22- Segment Reporting
- FAS 23- Consolidation
- FAS 24- Investments in Associates
- FAS 25- Investment in Sukuk, Shares and Similar Instruments
- FAS 26 - Investments in Real Estate

Contact between IFRS and AAOIFI nowadays

Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) and the International Accounting Standards Board (IASB) held an outreach meeting with the international Islamic finance industry on 9 April 2015 in Bahrain. During the outreach meeting, AAOIFI and IASB, the body that develops and issues International Financial Reporting Standards (IFRS), exhanged views with the international Islamic finance industry on issues relating to application of international accounting standards for Islamic finance. The meeting also discussed issued that Islamic financial institutions might need to address in applying IFRS 9 Financial Instrument for their financial reporting, if they are required to adopt the same. IFRS 9 is a standard issued by IASB that deals with, amongst others, classification and measurement of financial assets. The outreach meeting was attended by over 50 participants, comprising senior representatives of AAOIFI, IASB, central banks and regulatory authorities, national accounting standards boards from a number of countries

including Saudi Arabia, United Arab Emirates, Indonesia, Malaysia, and Turkey. In addition to its role in developing standards for the international Islamic finance industry, AAOIFI is also a member of the IASB's Consultative Group on Shariah-Compliant Instruments and Transactions. (http://aaoifi.com/en/news/aaoifi-iasb-held-outreach-meeting-9-april-2015.html)

As banks prepare for the impact of Basel III regulations, many Islamic financial institutions are finding they already exceed the requirements. With above-average Tier 1 capital, strong customer deposits and much lower levels of leverage and trading book risks, well-managed Islamic banks will not be looking for additional capital. So, does this mean that Basel III regulations will not affect Islamic banks in the same way they will conventional banks? Bankers are not so sure. For a start there is the issue of liquidity. Despite apparent progress towards improving Islamic liquidity through increased sukuk issuance, for instance, there remains a lack of eligible liquidity instruments and adequate central bank facilities. This gap in the market would have to be filled to make Basel III compliance possible.

Islamic banks have not been spared by the global financial crisis, which prompted G-20 leaders to focus on regulations aimed at improving the quality of bank capital. Many were exposed to risky expansion plans and high-risk concentrations, in particular in the real-estate sector. Limited exposure Islamic banks are traditionally small, with limited cross-border exposure. Thanks to its sound fundamentals, the bank has not been exposed to the high-risk investment that weakened conventional banks. Even so, improving standards and complying with Basel III remain sensible measures for banks to take in the light of the crisis. exposed to the excessive risk of conventional banks. Most sharia-compliant institutions also have considerably higher capital adequacy ratios than conventional banks. Islamic finance offers limited options to raise alternative forms of capital and so results in a lack of subordinated debt in sharia-compliant form, as well as fewer preference shares. (http://www.thebanker.com/Markets/Islamic-Finance/Islamic-banks-hold-Basel-III-ad)

Conclusion

Seven years ago the financial markets of the world shook. The impacts have been here ever since. Is it enough to change some rules to make the global financial system more predictable? Either, you take the Hungarian foreign currency based mortgage loans, the subprime crisis in the USA, or the virtual world of huge markets of financial derivatives; it can be declared that beyond the severity of current rules, fundamentals need to be rethought.

Islamic banking is considerably different from conventional banking system since the Muslim religion forbids giving or receiving interest. The competition with conventional banks forced Islamic banks introduce new products and institutions such as Islamic bonds, structured products and mutual funds based on traditional Islamic financial products. Liquidity management is easier in Islamic banks because of their main source of liquidity is costumer deposits and their leverage is lower than in conventional banks.

The rapid expansion of the Islamic financial industry that started in the 1970s was not initially accompanied by the creation of a set of internationally recognized accounting rules. In

consequence, Islamic institutions around the globe had to resort to developing their own accounting solutions for their new products, rendering comparisons across institutions difficult, and sometimes even giving the impression of lack of transparency.

The need for a body of accounting standards purposely designed to reflect the specificities of Islamic products became even more pressing as new and more complex instruments were being marketed. To close this widening gap, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) was created in 1990. One of the main goals of this organization is to design and disseminate accounting and auditing standards that can be applied internationally by all Islamic institutions.

The AAOIFI also plays a crucial role in pursuing the harmonization of Shariah-based rulings across jurisdictions. As mentioned above, the fact that supervisory bodies in different countries tend to rely on their own Shariah experts, may result in contradictory statements regarding the acceptability of a given instrument. Thus, financial products that are permissible in some countries, could be deemed as non-Islamic in others. Such disparity could discourage the cross-border use of Islamic products and constrain the growth potential of this industry. It could also result in pernicious regulatory arbitrage.

In those jurisdictions where Islamic finance is still nascent, regulators and financial institutions should familiarize themselves with the standards set by the AAOIFI, and apply them to the maximum extent possible. The application of already tested accounting and auditing conventions could alleviate the burden on supervisors facing the new challenges imposed by Islamic banking.

Furthermore, the pursuit of international consistency would not only ease the task of supervising internationally active institutions, but it would also ultimately favor the regulated institutions, as Islamic transactions would become better understood, and thus more attractive for Muslim and non-Muslim investors across the world. It would additionally foster the integration of Islamic institutions into the international financial community.

Due to the activities of financial institutions they have to operate according to strict regulations. The existence of bank regulations has not always been as obvious as nowadays. Is there a need to regulate banks or not, and if a regulation exists what should it focus on and how widespread it should be?

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Author addresses

Dr. habil. SZÉLES, Zsuzsanna PhD head of department, associate professor
Szent István University, Faculty of Economics and Social Sciences

Institute of Business Science, Department of Financal Management and Controll
Email: szeles.zsuzsanna@gmail.com

Lector: Dr. SZŰCS István, Szent István University Gödöllő, Hungary

INTRODUCTION OF SMART MEASUREMENT AT AN ENERGY SERVICE COMPANY

Vivien SZUNYOG

Abstract

The electricity providers set up smart meters (gas and power) at different households. They are interested in cost-effectiveness and that the profit how much can be increase by reducing expenses. The smart meters allow to read the periodical consumed energy (in a year, a month, a day, an hour or even in quarter period) without visiting it physically by a specialist. Smart meters can be switch on and off also from the centre.

From the largest business partners and industrial clients suppliers measure the consumed energy via automatic readers. In the year of 2012 they made available this method for retail segment and SME enterprises too.

I introduce the smart meter and its advantages. The examined electricity supplier company launched a pilot project for investigate the European Union goals. I describe the energy policy of the European Union, the power packages and the essence of Climate 20/20/20 within the Europe 2020. After the presenting European laws and directives I give a short describe about the project. The theoretical part followed by an NPV calculation about the smart meters. In conclusion I summarize my results, make a consequence and suggestions.

Key words: smart metering, NPV, Europe 2020, climate package

JEL classification: Z – Other special topics

Introduction

The electricity providers set up smart meters (gas and power) at different households. They are interested in cost-effectiveness and that the profit how much can be increase by reducing expenses. The smart meters allow to read the periodical consumed energy (in a year, a month, a day, an hour or even in quarter period) without visiting it physically by a specialist. Smart meters can be switch on and off also from the centre.

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Europe 2020. After the presenting European laws and directives I give a short describe about the project. The theoretical part followed by an NPV calculation about the smart meters. In conclusion I summarize my results, make a consequence and suggestions.

Material and Methods

The smart metering pilot was launched in 2012 by one of the leading electric supply companies. As a participant of the project, I took part in the preparation of the scratch data (such as the making of list segmentation or allocating consumers). I used my own notes accumulated in the space of three years as my principal sources in addition to the company's private documents (many of which are secret). As a source for introducing the aims of the European Union (Climate 20/20/20) and its energy policy, I used the book and website referred to in the bibliography.

During the pilots, the desired aim is first probed on a smaller part of the whole process. This pilot project was designed to give a solid foundation to the introduction of the smart measuring for the entire consumer society of Hungary. For the calculations I used the data and values applied during the project as well. (The Hungarian Energy and Public Utility Regulatory Authority introduced an initiative in reference to the continuation of the project, in which they explain in detail what kind of costs should be taken into account and where.)

Why is smart is the „smart meter"?

Smart meter is able to communicate into two directions so data can be read from the measurement centre without sitting home and waiting for the man who reads the meter.

The smart meter has several counter to be able to count many tariffs. It can store 15-minute- data in its memory. It has a home-display on which it can inform customers about their electricity users' habits, data. Besides, we can make different counting and calculating or planning counting. Consumers, who have not paid their electricity bill, can be disconnected from the system or reconnected into the system after paying off the bills.

The „smart meter" will be spread on the area of water and heating in the future. It can help to maintain a „clever home" system meanwhile it is also the basic of a clever network systems.

Main advantages and expected basic functions

- two-direction-communication
- limitation of power
- modifying of the distance tariff setting
- reading other energy data via smart electricity meter
- collecting data
- transferring system data to SAP
- insurance of time synchrone
- ability for tariff downloading
- authority of distance turning off/ returnig

- indicating of the device (turn on, off, alarms)
- measuring data of out systems (export, import)
- presenting counting data

Energy policy

Energy policy is the manner in which a given entity (often governmental) has decided to address issues of energy development including energy production, distribution and consumption. The attributes of energy policy may include legislation, international treaties, incentives to investment, guidelines for energy conservation, taxation and other public policy techniques. In 1986 the ministers of the European Union's members set new goals. They made a work material from the barrels of the energy market, then they continually tried to pull down these barrels until 1992.

In 1997 the Committee put down energy policy aims of the community. There were energy supplying, growing integration of member states' energy markets and forming sustainable energy policy in its centre.

After accepting the first electricity and natural gas principle package, the second one was accepted in 2003, the third one in 2009.

Before liberalization achievements, in the member states there were law and natural monopolies on the field of distribution, transportation and production. Customers were against the vendors monopoly vulnerable. The implementation of a single energy market is hampered by monopolies organized on a national basis unlike operating systems and leading to prices.

The full energy market liberalization would mean that energy customers are free to choose to whom they want to get power.

I would like to briefly present in a few sentences the physical and economic structure of the networks to help the understanding of the system. The electricity power is transmitted into supplier network by high-voltage electricity line or sometimes to individual customers through the transmission network. Should not be forgotten that there is a big difference between electricity and gas, because gas cannot be stored, so the supply and demand must be balanced. The access to natural gas storage capacity is an important element of the regulation.

The first gas and electricity package

The first gas and electricity package was introduced after the adoption of the so-called transit principles - The guidelines were concerned that the business community informed the statistical office about the invoiced prices , terms of services , pricing schemes and presentation of consumer categories

The first step of liberalization, establishing common rules for the internal market in electricity directive and gas. The regulation should be flexible and gradual, since big differences were

seen between the national energy system. A temporary system was put in place due to the transition to competition reimburse costs incurred. The policy package for public service obligations, licensing of production capacities, network access, and the system operator and independence of selecting contained provisions. Accounting separation and independent regulatory authorities had considerable role in the first "package".

The second liberalization package

The cross-border services is often limited by shortcomings in the infrastructure networks and pipelines. The accounting separation requirement was not sufficient and emission reduction in the rate has slowed down, which is significant because of the environmental aspects.

In June 2003, the principles which were developed by the Council and the European Parliament's draft directive, were accepted but, Member States had to adjust their own rules to the principles by July 2004 . Its aim was to speed up the liberalization of the energy market

The Comission published the current guidelines and legislation of creation of a European energy policy, in agreement with the need to promote competitiveness and an integrated, efficient European energy market which continues developing.

Member States should provide the universal service in the field of electricity supplying to the domestic consumer and small business as defined in the supply of quality electricity in a Member State is entitled to on transparent prices.

In contrast, the supply of gas to electricity can not be considered automatically. It is considered to be a public service by the decision of the Member State.

Until 1 July 2007, Member States had to make a separate legal entity set up as a distribution system operator. The 2007 Draft allows opportunity to prevent ownership unbundling.

The third liberalization package

Based on a real race to develop electricity and gas markets, the Commission has prepared a proposal in response to improper functioning of the market. After the 2007 publication became known as the Third Energy Package. Four main issues involved. Firstly, energy producing and energy service activities must be separated from the distribution and transmission network operation. Secondly, establishing of the European System Operator Cooperation Agency was decided. Thirdly, effective access were also discussed to get better functioning of the market. Finally, the importance of transparency and the role of the transmission system operators were specified.

We can therefore say that the essence of the third liberalization package is a stronger separation the energy production and service activities from the network operation activities.

Climate Change and Energy Package

It was introduced also in 2007, however, it was only adopted in December 2008 as the Climate Change and Energy Package. It is also called climate package. This is a major step towards a common energy policy. The document was made with the following objectives:

1. The cause of greenhouse gas emissions should be reduced compared to the 1990 level at least 20%. Once this has been achieved, the next target will be 30 %.
2. The share of renewable energy by 2020 to be achieved in the Community's energy consumption by 20% 2020 fuel consumption cover a minimum of 10 % of renewable resources in the Member States. Reduce energy consumption by 20% compared to the level projected for 2020 by improving energy efficiency.
3. The climate package is a key component of the EU Emissions Trading Scheme (ETS). The system is designed to provide enterprises cost-effectively reach their emission reduction goals. The 27 countries of the EU plus Norway, Iceland and Liechtenstein participate in EU ETS. In 2009, the system covers the EU's total emissions 40% Companies in the ETS system receive a predetermined amount of carbon dioxide emission quotas, and they can deal with it. If a country does not use the amount allocated to him and the rest can be sold on the current exchange rate on the market. However, if you do not fit into the given amount, you have several options. Firstly, you can buy quota on the open market from someone who has more than one. Another option is to try to reduce the emissions by energy efficiency, or any other emission-reducing investment. The benchmark is the year 2005.

We can say that this is the largest and most comprehensive energy policy packages. It promotes energy-efficient materials and research increase the demand of environmental energy technology products and services, and improve the state of the environment."

Not only counted in the value of the carbon dioxide emissions, but also the technological issues of energy consumption-based emissions.

The consumption of natural gas is no tax on residential carbon dioxide, therefore an incentive to put this advantage unlike the power consumption.

The climate package also includes criticisms of being too rigid in the ETS and non-ETS sectors separation. The household energy consumption by cutting back more cheaply available in carbon emissions cuts. The building energy demand for heating energy consumption of the entire country is about. 30-40% of the total. Reducing not only create jobs, but also reduce dependence on natural gas. If the flexible interoperability were done, it would be much easier to achieve the objectives of the climate package. Unfortunately, the issuance of non-ETS sectors, countries that do not will fall, but growth is expected in 2020.

The pilot project

This pilot project is planned for short interval to prepare for a search and plan. This project will help set up the basic hypotheses, research and development trends define the long–term projects, strategies and regulations.

The pilot project could be called as a demo project. This can help you learn the difference between description and operation of the system. It is usually the last step on the way to the final decision. It can be demonstrated by the makers of the pilot that the system is actually used. Understandably, the system introduces capabilities within the organization for the skeptics. You do not want to start a project without a pilot, because in doing the pilot, the risk mapping will be provided at the request of errors. If pilot is omitted, the first elements of the system can be a problem, a number of improvements will be needed in the future and there may be further developments below.

So the pilot projects is the use of cost-benefit estimates, controls , hardware , software , systems and database design, development and evaluation of procedures and alternatives. A "quasi" test environment can be examined the effects of the changes to be introduced later.

The main objectives of the project:

- Distribution model of cooperation in the implementation of the massive building. The measurement data distribution -run cost-cutting survival as a parallel network of communication can be eliminated with this model.
- Gain experience
- Building the smart metering system based on the SMART network
- Development of data mining methods
- Energy consulting

Parts of the Project

Smart metering pilot project was divided into two parts: commercial and technological project.

The commercial pilot is to calculate the results provide transparent, which the Hungarian Energy Office and the economy can apply to energy efficiency matters. Here they use GPRS technology to communicate with the centre equipped with gauges measuring. The main objective of this project is to find out the basis for a nationally representative sample of consumers.

Three cities were selected for the pilot process in the area of this energy service company (East Hungarian and North Transdanubian Electricity Network, Power Company). They are Tiszavasvári, Szolnok and Zirc. Meters have been installed here full- or part- transformer area overlays. In these areas, two different measurement data acquisition software were used for testing (BPL and PLC). Our main aim is to achieve a reduction of network losses.

Data used in the calculation

Because of the complexity of the topic I will list below some of the factors that are important in terms of the calculation:

- How much is 1 unit meter? (by meter types)
- What are the logistics costs?
- What are the costs of equipment?
- How many pieces of meters were installed?
- How much is a data concentrator?
- How much is installing and testing the data concentrator?
- What are the costs of developing the SAP system?
- What is the value to save the benefits of smart meters? You do not have to go out ...
  - to read
  - to switch off
  - to switch on
- How many average reading / switching off / on are there in a year?
- How much money can be saved from the theft detection?
- What are the costs of going to the scene due to measurement error?
- The current cost of training technicians?
- Are there any additional costs to the monthly invoicing?
- How much money can be saved by reducing the power loss?
- Will the customer number fall?
- How many years is the lifetime of the smart meters?

According to these details I tried to make the ROI calculation to give a real picture.

The NPV calculation of Procedure

The calculation of the basic approach is to compare the current per capita (standard meters) and smart meters and meters of so-called investment.

The total cost of the process contains:

- costs related equipment (maintenance, SIM card)
- Non- technical losses
- Data Operating expenses (reading, on / off exits due to removals and IT support costs)
- inquiries for billing and bill due to meter
- receive-able for impairment based approach
- A one-time installation costs (eg. equipment)

During the present value counting, I took the cost of difference between the traditional (existing) and smart meters, because conventional meters must be fitted if there is no smart meter

Operating costs

The annual amortization is not taken into account, as in the NPV calculation that should be ignored (unless the tax factors are incorporated in the calculation, where the depreciation tax reduction factor, but there has already been included in the net cash flow). In case of equipment related to the annual maintenance cost of the repair of small consumer conventional gauges faulty equipment has been established on the basis of the collection, while for smart metering, we assumed that the meters have to get off to 3%, that were generated by the call-out fee.

The fee of the SIM has accounted among the operating costs .Meters At the 5% of meters it is presupposed to need a direct SIM card , whereas in other cases the card get to the data concentrator.

Reading process costs (normal reading, moving in and out)

In the case of smart meters below the reading cost we understand the communication costs. We hypothesized that 5% of the meters will be unique GPRS card while 95% of the concentrator is connected to the data concentrator.

The number of occasional readings is quite low (due to moving in and out off the house etc.) is approx. the normal reading of 0.6%. This cost is much higher than the cost of regular reading.

I took into account the uncertainties in the meter readings of unit price increases dramatically because of poor logistical organization legibility (scattered meters in area), it can affect the calculation.

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Result and Discussion

We can see that the NPV is positive. After the details of the calculations, we can say that, taking into account a 10% discount factor of the project, the smart meter system returns for the company.

This company is the largest provider of smart metering representatives participated in a pilot project in return, so we can say that is probably worth the installation of smart metering systems across the country. The results of companies will be cost-cutting.

1. table – Net present value and the data used

	Discount factor	Explicit period	Salvage	Total NPV
Investments (-)	10%	62,59	30,16	92,75
Costs (-)	10%	70,82	57,45	128,27
Profit of industry operators candidate gains	10%	133,32	127,13	260,45
Consumers' profit (+)	8%	204,52	252,27	456,79
Enviromental profit (+)	8%	21,20	26,81	48,00
Balance		225,62	318,59	544,21
Balance at industry operators candidate		-0,09	39,51	39,42

Source: own calculations

Cash flow shows how flows cash, while the NPV dating shows that the investment is worth it or not. Negative NPV is not worth the investment, because the investment may not be recoverable. NPV = 0 border incident, when revenues just equal the expense. In case of positive net present value is clearly worth the investment to begin, because the future income (present value) is greater than the total cost .

Conclusion

If the smart measuring system is really going to be introduced, 2-3 million set of equipment will be needed. One part of the change-over will be returned at the suppliers obviously, because the balance will be pushed on the positive side by the expenses cutting of meter-counting, investigating-rate of electricity stealing. Of course it is not the total expense. Expenses are divided into three parts among suppliers, goverment and customers.

It is an advantage for the suppliers because they can reduce their expences. On the other hand, the national economy is on its right direction to achieve the European Union's goals of so called Climate 20/20/20

Projections of the measuring equipment I would highlight the need to prepare for the future electricity providers large amounts of measuring procurement. After all, as an initial investment they have to face a significantly higher amount. However, later, as we can see from the results of the pilot the investment will pay for itself over the years.

According to the Hungarian legislation, if it is possible, it is advisable to replace conventional meters to smart meters when their term of authentication expires. With this step, we can say that the company would save money. Since in this case the change of measurement would be required otherwise. The higher costs would come only from the price difference between the two measuring system.

From the aspect of service providers the introduction of smart metering system would be even more profitable if the government provided opportunity of installation for several years.

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Author addresses

Vivien SZUNYOG, student
4 Rákóczi Street, Kondó, H-3775

Lector: Ing. Norbert GYURIÁN, PhD., J. Selye University, Komarno, Slovak Republic

IN SITU ANALYSIS OF INTERNAL ENVIRONMENT OF MUNICIPAL STRATEGIC PLANNING- MUNICIPAL AND CORPORATE SECTOR SYNERGIES

Ivett TATARNE VARGA

Abstract

This study is an evaluation analysis of a new municipal strategic planning model, based on cooperation of public and corporate sector in the field of preparation and implementation of EU and state co-financed projects under different operational programmes in the past five years.

The study is the first publication of a detailed statistical analysis of a primer research survey conducted at local level, as part of internal analysis of municipal strategic planning. Those employees of the Municipality of the City Budapest and municipally owned companies were chosen in research sampling who have already participated in projects implemented with municipal-corporate cooperation. The analysis examines the project management structure both at municipal and at corporate level through a definite EU project-model, with a special regard to companies with full or majority municipal ownership.

The primer research was conducted "in situ" environment and it analyses the municipal-corporate project cooperation model in its real, ongoing implementation phase, including all levels of decision-making and implementation both at municipal and corporate sides.

Keywords: strategic planning, project management, increase of funding absorption, sustainable development

JEL classification: O0210

Introduction

Mainly corporate-sector aspects are examined and analysed in national and international scientific literature in connection with strategic planning. Available models in this field were introduced in order to improve such economic indicators of different companies as productivity, competitiveness or market share.

Strategic planning is a series of decisions in which we define main goals for an organization in general and also for a specific policy area in order to make our organization capable of accommodation to its external environment and its changes in the most effective and successful way. Four types of a strategy can be distinguished: reactor, defender, prospector

and analyzer (Snow, 1978), mainly defined for the corporate sector. Also, a strategy has different levels within the organization (Csath, 1998.).

“In business life, strategic planning means definition and evaluation of alternative ways to fulfil a mission or an aim, and the selection and detailed elaboration of the alternative to be followed” (author’s translation from Barakonyi, 1999).

According to Barakonyi, in case of organizational strategy, besides the higher-level strategy of the company, there are strategies at other levels, too, so this was organizational-, business- and functional strategies can be distinguished.

Strategic planning is a constant, routine model of the corporate sector, which is based on analysis of internal and external environment, definition of the aims of a strategy and identification of tools and methods for implementation (Mészáros, 2002). Utilization of resource synergies, interpretation of organization models in a broader sense and corporate-sector strategic planning, based on different organizational models are well examined in relation to the business sector (Mintzberg, 1987). According to Johnson “the strategy ensures advantages for an organization in its changing environment by combination its resources through fulfilment of market needs and requirements of the owners” (author’s translation, 1997). According to another approach “strategy defines the route to reach goals and objectives of an organization...and it is mainly defined by the internal and external environment and the objectives to be followed” (author’s translation, Rue, 1986)

In case of the municipal sector, with a special regard to the city of Budapest, the interpretation of the above mentioned ways of strategic planning, strengths, weaknesses, opportunities and threats determined by the internal and external environment, give possibilities for introduction of new cooperation models. Strategy can be defined by resource based analysis (Mintzberg-Ahlstrand-Lampel, 1998, and Grant, 2007) of course, by taking into account requirements, defined by external environment.

The organizational models defined by Henry Mintzberg can be applied for public sector organizations, too but in case of each organizational structure, a distinction between strict structural and operational model is suggested, with a special regard to the implementation of special policy activities.

Preparation and implementation of integrated projects are also possible with the municipal-corporate organizational model, as experts of different policy areas are delegated to strategic teams, at the same time the goals, defined by the Commission Services for the city, can be achieved more easily: „Put in place and reinforce an appropriate governance and management structure in major cities (especially Budapest), to ensure integrated planning and management;”

A new strategic management model was introduced in Budapest in 2010 at the municipal sector. The model is based on cooperation between the Municipality of the city of Budapest and its public utility companies. The motive for working out this model was that decrease and

structural rearrangement of financial resources were expected in the Central Hungarian Region for the 2014-2020 EU budgetary period, at the same time, changes in the support ratio were expected too, regarding to the fact that the Central Hungarian Region with the city of Budapest is among more developed regions when talking about its eligibility of funds. The importance of this theme is strengthen both by the European Commission for Europe 2020 [COM (2013) 246 final)] and by the Position of the Commission Services on the development of Partnership Agreement and programmes in Hungary for the period 2014-2020 documents. The budgetary period calls for such main focuses as smart sustainable and inclusive growth, at the same time the need for integrated approach also appears in order to ensure a better absorption and combination of different financial resources and funds.

Though this study concentrates mainly on the extended internal structure of the Municipality of Budapest, from the point of view of the municipal sector, it is important to analyse both the external and internal environment of a potential strategic management model.

It is also worth mentioning that planning and implementation of strategic management models is a continuous activity (Csath, 1998) with aims and strategic actions for implementation. During evaluation of results the successfulness of a strategy or a model has to be measurable by pre-defined indicators. As it is defined by the above mentioned Commission document, too: „a description of the strategy and its objectives, a description of the integrated and innovative character of the strategy and a hierarchy of objectives, including clear and measurable targets for outputs or results. The strategy shall be coherent with the relevant programmes of all the CSF Funds involved;"

The Municipality of the City of Budapest is an owner of an enormous economic potential; the total equity of its directly or indirectly (through the holdings) owned companies is more than 100 Billion HUF without the BKV Zrt. (Budapest Transport Privately Held Corporation) and the joint venture companies. In 2010 a new holding model was introduced in Budapest for the integrated control and leadership of transport and public utility services. Two holdings were founded: one for the unified management of public service companies (BVK-Budapesti Városüzemeltetési Központ, literally the Centre for Budapest City Management) and the other for the coordination and management of all transport-related tasks. This latter body is the Budapesti Közlekedési Központ (literally translated as Centre for Budapest Transport, hereafter referred to as BKK). Among others important reasons for implementation of this model were to ensure the owner-driven strategic planning and realization and support of the needs of the owner as the contracting party. A new level was introduced within the institutional structure between the municipality and its public utility and transport companies. This level of the holdings ensures integrated management in policy organization, ordering services and control in harmony with both the needs of the owner and professional viewpoints of each policy area (dr. György 2010). The reorganization of this model is due in 2015. according to the decision of the Budapest Municipal Assembly of 26.11.2014. and all public utility and transport-related tasks are planned to be organized through one integrated city management system.

Material and Method

The economic potential of the municipally owned companies is worth examining from different point of views. The joint analysis of the municipal/public and corporate sectors and taking advantage of synergies within different organizational and operative structures gave the opportunity of planning and introduction of such a new model which ensures far better absorption of EU funds with the availability of such financial areas that were not accessible with former application for tenders neither for EU and state co-financed operational programs, nor for direct EU, EEA (European Economic Area) or Norway Grants. As an answer for the above mentioned structural reorganizations and absorption problems, a new project-management model was introduced, based on close cooperation of the municipal and corporate sector.

As it was mentioned earlier, Budapest is rich in a sense that most of its companies responsible for compulsory public utility services are owned by the municipality. At the same time, according to a survey conducted in 2010, the surprising fact was realised that not a single project was under implementation by the municipality together with any of its utility companies despite of the fact that the know-how of special public utility services was at the side of companies, whereas they were not eligible for EU resources or only to a limited extent. The municipality was eligible for funding, for example for projects of the Environmental and Energy Operative Program (KEOP) but the experts of special areas were on the corporate side. These circumstances gave the basis of the cooperation model, in which both parties contribute with their own and specific resources and, at the same time, complement deficiencies of the other party.

Steps of preparation of a new model

Firstly it is important to identify available resources both at municipal and corporate sides. During this, similarly to SWOT analysis, it is essential to define Strengths, Weaknesses, Opportunities and Threats (Pearce-Robinson, 1988) but in a broader sense than in case of a single company with a special regard to the main aim, notably better absorption of funds. In this aspect, definition of competitiveness and of competitive advantage, which are central motives in the corporate sector, are less typical in the public sector, except for interpretation as a competition for achieving different funding opportunities.

The second step is identification of abilities, also related to the whole structure. Advantages of the cooperation model are easy to define in a case if we do not compare it with the external environment or with other potential applicants for funding but examine of efficiency of tendering applications of the municipality and its companies separately from each other.

Examination of capital-income generating ability of resources and abilities as the third step in for-profit corporate sector is also modified in this model, thought its financial results can inevitably be identified in income statement of the company concerned.

It is important to mention that improvement of standards of compulsory public utility services and their assets, properties and equipments are obviously contribute both to the efficiency of the municipality and the company, too. So in this sense the value driver effect can be certified between results in municipal and corporate sides and resource availability through the new model.

When defining the new strategy, in opposition to the former EU strategic management model of the municipality, a new, two-level organisational model was introduced in which we integrate the necessary municipal and corporate resources. At the same time, those weaknesses that were identified in each side were to be eliminated in a way that we replace them from the other side.

Identification of ability-gaps and definition of missing capabilities were defined not only for the future but for present situation, too. For example, in the corporate side a possible ability-gap is the lack of relevant EU project management knowledge which can be replaced from the side of the municipality whereas municipal side lacks specific policy area competences (e.g. in the field of waste-management) which is available at the municipally-owned company. The strategic intent, notably to improve funding absorption in case of the municipality, and to improve the quality of compulsory public utility services in case of municipally owned companies, as well as the detailed analysis of basic abilities at both levels can together define the new focus areas (Hamel-Prahalad, 1989).

Needs analysis and expectations

The results of the strategic management model that was introduced in 2010 today can be evaluated after a 4-year long implementation period. The assessment of abilities and resources are based on a methodology defined by Grant at the same time, the basis of the evaluation is not a single company but the municipality and its directly or indirectly owned public utility companies together.

Projects, prepared and implemented through this model, are based on real needs for development which was ensured and confirmed by the fact that the selected projects had previously been defined and included in the business plan of the company. This way the implementation period could have been shortened and capital reserves or future developments on the corporate side could be substituted by funding resources available for the municipality.

The following expectations were defined in connection with planning and reorganization of asset liability management (ALM) management.

- Introduction of EU-conscious approach in the field of strategic planning both on municipal and corporate sides.
- Reorganization of corporate liability management based on capital reserves or credits by taking into account possible EU funding in corporate strategic planning.
- Reorganization and harmonization of “classical” business planning periods (short, medium and long-term periods) with the EU budgetary periods of seven plus two years.

- Prioritization of planned and well-founded improvement projects of long-term return (above five years) with high social benefit in the field of public utility services.
- Avoiding ad-hoc planning, evaluation of those projects that were defined in the business plan of the company and accepted by corporate supervisory boards or by board of directors of the holdings.
- Concentration of resources and sharing different tasks between the municipal and corporate sides both during preparation and implementation phases of the projects.

Expected results on corporate side after introducing the new model were the followings.

- Shortening of development and implementation periods.
- Partial substitution of corporate capital reserves.
- Improvement of the quality of compulsory public utility services.
- Improvement and renewal of different assets (vehicles, instruments, and technologies) and sites of the company.

Expected results on municipal side after introducing the new model were the followings.

- Introduction of short, medium and long-term business-approach strategic planning.
- Involvement of new opportunities in funding absorption that were neglected in the past.
- Introduction of high-quality task performance in compulsory public utility services, in harmony with the expectations defined by the continuously changing legal environment. For example: introduction of door-to-door selective garbage collection within the area of the whole capital city.
- Improvement and taking advantages of synergies between municipal and corporate sectors.

Results and Discussion

Results in figures

From the implementation of the model described above, three EU co-financed projects have been started by the Municipality of the City of Budapest in connection with waste management in KEOP construction. The projects were chosen from the business plan of the Budapest Public Space Maintenance Non-profit Inc. (hereinafter: FKF Nzrt.).

The tender dossier of the first project was assembled in 2011 under the construction KEOP-1.1.1/B /10-11-2011-0002 called „The implementation of door-to- door selective garbage collection system in the capital". The project had two main aims. First, to improve the quality of waste management by introducing door-to-door selective garbage collection within the whole city, at the same time to improve environmental-consciousness of citizens. Second, to fulfil legal requirements in accordance with 2006/12 EC and 2008/98 EC directives and to comply with the national law according to the requirements of the Act CLXXXV. of 2012 and the capital city's regulations in accordance with the Council of Budapest Decree No. 26/2013. (IV.18.).

As a result of the successful application the Municipality of the City of Budapest implemented an approximately 5.4 billion HUF investment with the 4 838 029 006 HUF financial support of the European Union and the Hungarian Government and with 589 591 684 HUF contribution of own resources of FKF Nzrt. The Municipality of the City of Budapest fulfils its legal liability, forced from January 2015 that prescribes introduction of selective public garbage collection at all households. Another significant outcome of the project is that, according to the data of the company, nearly 300 new jobs were created during implementation. Within the project 200 k new selective points with 403 k new bins and 63 trucks were purchased of which 60 trucks are for garbage collection and 3 vans are for handout of selective garbage bins. All vehicles are alternative, environmental-friendly, CNG-driven trucks.

The second project called "Expansion of environmental-friendly technologies of waste management system of the capital, improvement of proportion of waste processing and waste recycling" under KEOP-1.1.1/B/10-11-2013-0002 construction.

The EU and state funding is 8 431 049 682 HUF but together with own related investments of the waste management company, the total amount of investment is more than 12 billion HUF. This phase is closely connected to the above mentioned first project as new technologies are under purchase and improvement and expansion of present and new, selective waste-management related sites will be constructed within this project. The following elements are included in this phase. Implementation of a new landfill in North-Pest with 600 k tons capacity, to ensure long-term placement of slag coming from waste incineration. Two new, selective waste-sorter plants with the capacity of 15 k and 40 k tons per year. Two new awareness-raising and recycling centres. A new centre for logistics and services and a plant for mechanical pre-treatment, for refuse-derived fuel (RDF) production with the capacity of 150 k tons per year. In the incineration plant a new lumber mill and a metal separator are under purchase. And last but not least a gas engine is under implementation to gain energy from depony gas in Pusztazámor with the capacity of 2 MW in the first phase and 3MW expansion possibility in the second phase.

The third project is in connection with improvement of quality of compulsory public utility service in the field of non-selective solid waste collection. The project called "Procurement of tools for diversion of waste from landfill – improvement of the assets of waste management of the capital and modernization in the field of informatics" under KEOP- 1.1.1/C/13-2013-0019 construction. Within this project 64 special machines and vehicles are under procurement, with the EU and state co-financing of 2 755 092 742 HUF.

According to the unclassified balance sheet of the FKF in 2012, the share capital was 15 439 400 HUF, the capital reserves were 14 761 672 and the equity was 33 706 770 HUF (www.fkf.hu). As it can be seen from the projects presented above, and the data of the balance sheet of the company, the funding derived from EU and state co-financing gave way to project implementation that would not have been possible within a nearly 5-year period.

Results of the primary research

Beside the evaluation of the economic and financial aspects and results of the new model, it is also essential to evaluate the experience and opinion of those employees both at municipal and corporate sides who actively participated in the implementation of projects under this new structure either at the operative or at the decision-making level. Knowing the results, the sustainability and further improvement of the model can only be ensured through continuous and systematic monitoring.

Regarding to the fact that during the preparation and implementation of projects under this new model employees from different organizational and operational structures were involved, moreover sometimes external specialists or experts were also employed, the sample of the research was expanded to all decision-making and operative levels.

The research can be defined as a specific, in situ precision primary research, mainly descriptive type, though in some elements it also examines causative connections and exploratory research elements, for example in connection with the qualification and work-experience of the human resource involved in the research. When defining the sample and the framework of the research it was an important aspect to involve all organizational units and all levels of the operational structure to ensure the representativeness of the sample both at municipal and corporate sides. This way the methodology of sampling combined purposive and quota sampling as people questioned were defined according to the definite criteria that they were members/employees within the new project management structure. The leaders of the two organizational structures were involved as the primary group of the sample then responders were reached through the leaders with snowball method. Only those employees could have been involved to the research who participated in projects at all levels of the structure, defined by the researcher, and of course matched the previously defined criteria.

According to preliminary estimation, a 40-member sample could have been acceptable and 50-member sample was expected as an outstanding number of samples. In opposition to the previously defined expectations, a higher number of appreciable questionnaires were collected with 65 responders that gave the opportunity for the analysis of a bigger sample, at the same time it also means, that more employees participated in project-management that had previously been estimated.

First part: general descriptive analysis

In the general descriptive part of the survey the members of the sample were identified according to their work place and their position in the hierarchy. The sampling method ensured the possibility for multivariate analysis, too.

According to the survey conducted, 73% of the employees came from the municipal 27% from the corporate side. As the beneficiary of the analyzed projects was the municipality, this proportion is in harmony with the composition of the mixed project-teams. As the legal and

financial responsibilities of these projects are at the municipal side, the HR-requirements are in harmony with the needs and reflect the real manpower proportions of each side.

In relation to workplace hierarchy 69% of responders were subordinate staff, 20% were at the middle and 9% at the top-management level and 1 external expert was identified (probably from the corporate side).

Second part: abilities and resources

The analysis of resources gave a surprisingly positive result, 97% of employees have higher-level qualification and only 3% work with medium level qualification. Besides these, only 13% have no specific qualification that is needed for project implementation.

By the analysis of specific area qualifications, the following knowledge was identified: 23% technical/architectural, 22% economic/financial, 19% project management as outstanding areas, beside these 12% legal, 9% procurement and 2% communication qualifications were identified. The latter data show that there are some specific areas that are needed only in a special phase of project preparation and implementation and only participate in the work of the teams when this special knowledge is needed. In relation to work experience outstanding results were detected as the vast majority of the employees have many years of specific work experience and had already participated in many projects.

14% of the workers have basic, 52% medium-level and 20% higher-level foreign language knowledge which gave the opportunity to expand the application of this model to participation in international projects, too.

Third part: preparation and planning

46% of responders often, 8% always take part in preparation of projects, whereas 25% rarely and 21% never participate in this activity. The possible explanation for the latter data can be explained by the fact that the preparation and implementation phases of the projects are separated and there are employees who only participate at the implementation phase. It is also worth mentioning that strategic decisions are mainly made at the decision-making/top management levels.

An important positive feedback is that 49% of the employees find risk-analysis important, 51% outstandingly important even at the preparatory phase, also forming of project-teams (92%) and the involvement of future operator (88%) were also found important.

Fourth part: implementation

According to practical experience of the implementation phase, faulty or deficient technical implementation (43%) and planning/preparatory mistakes (35%) were found to be the most serious ones, at the same time they think that these risks can be decreased significantly with better preparations.

94% of responders vote for the relatively permanent project-teams and 95% found it important to apply experts during projects even at the beginning phase of project-work.

It is not a positive opinion but worth taking into account that according to 63% of the responders, implementation is more efficient at the corporate side than at the municipal side. Regarding to the proportion of participants from the two sides in the sample it also means that great number of employees even from the municipal side also think that the corporate side works more dynamically. As up to now the EU co-financed call for proposals made it impossible to implement these projects at the corporate side, it is worth identifying the reasons for the differences and applying those experiences of the corporate sector that might decrease the difference between the two sides.

According to 74% of employees EU co-financing or other outer financing (e.g. bank loans) mean further difficulties during project preparation and implementation, so identification of impedimental factors is also important here and ensuring of dynamism within the structure can be a possible solution.

Fifth part: follow-up and monitoring

Operability (34%) and financial sustainability (30%) were defined as outstanding factors after implementation and according to 92% of employees follow-up monitoring and feedback can contribute to better future project preparation. Unfortunately 84% said that feedback is very rare, though it would have been useful, so a possible solution can be the introduction of compulsory operational monitoring feedback.

Sixth part: cooperation

Only dynamic and flexible cooperation between the workers of different organizational structures can ensure effective implementation according to 74% of responders which means that cooperational model has to be reviewed and possibly reorganized according to this opinion by strengthening synergies.

According to the majority of responders preparation of projects based on strategic decision of leaders derived from professional and financial needs though the question on extensive professional consultation shared the opinions.

Projects based on bottom-up initiatives are not typical according to the responses, at the same time it is important to mention that all projects within this model are based on detailed needs analysis and strategic planning and also the volume of these projects practically makes it impossible to start them in a bottom-up way. Possible failures of projects could not be identified but there was consensus among responders that the key to success is cooperation.

Conclusion

By the analysis of EU-related tasks of the Municipality of Budapest it can be stated that by the point of view of strategic planning, the city and so the municipality has numerous tasks

and of course on-going projects practically in all thematic priority areas defined for developed regions by the EU. The new and integrated approach in city management and strategic planning is a good opportunity to harmonize developments and take advantage of synergies between different policy and implementation areas. By taking into account the goals of the EU 2020 thematic priority areas it is obvious that those can be accomplished only in case of close project cooperation between all actors of different levels within the region and at international level, too.

The model of this kind of cooperation expansion can and should of course be broaden and developed by other actors such as universities, research-centres, non-governmental organizations in order to open further resources and increase absorption of funds.

After the analysis and evaluation of the model introduced in 2010 it can be stated that EU funding management and project management can adapt to new challenges and changing funding systems if it reacts to changes with an extended, more dynamic and multi-actor structure.

The introduced model can be improved further as the cooperation can be broaden with other actors and levels and also, as it was justified through the research, it can be applied even in case of international projects, too, as the necessary qualification, efficiency and language knowledge is available within the structure.

Further analysis and application of the results of multivariate analysis can be the next step in improving the model and also, further surveys can be conducted among other companies of the Municipality of Budapest. Their adaptation in the public sector can open the possibilities of new synergies, too, and the mentioned model can be applied in other fields with other actors for example in the field of innovation, research and development, together with research centres and universities. With the expansion of co-operative partners, new synergy-effects can be reached, so this way the civil sector, researchers and universities can contribute to the availability of funding resources of potentially new target areas for the public sector.

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Author addresses

Ms. Ivett TATARNE VARGA
H-2119, Pécel, Sukoró u. 2.

Lector: Dr. SZALAY Zsigmond Gábor Szent István University Gödöllő, Hungary

TRUST FACTOR OF AUDIT IN CASE OF INVESTMENT FUNDS

TÓTH, Márk PhD - JÁVORNÉ VÉGH, Klaudia PhD —BÁRCZI, Judit PhD

Abstract

The trust factors imposed on economic actors, that is institutions dealing with financial issues on the money markets depend basically on the operation, stability and reliability of supervising bodies. When the actors in the finance sphere become unfeasible or unreliable, it will involve the negative assessment of auditor sector, too. The aim is to apply the method of auditing process and filter out all those distorting factors which substantially affect the actual image. The analysing work performed with the professional attitude of methodological applications is able to point out all the anomalies to the furthest extent in regard to the finance and income situation of the given business organisation. The objectivity, impartiality and reliability of audit assessment is extremely important in case of organisations like financial ventures concerned by multiple actors, that is more investors.

Key words: audit, ethics, trust factor, standards, decision mechanisms

Introduction

The trust factors imposed on economic actors, that is institutions dealing with financial issues on the money markets depend basically on the operation, stability and reliability of supervising bodies. When the actors in the finance sphere become unfeasible or unreliable, it will involve the negative assessment of auditor sector, too. The aim is to apply the method of auditing process and filter out all those distorting factors which substantially affect the actual image about the business venture. The analysing work performed with the professional attitude of methodological applications is able to point out all the anomalies to the furthest extent in regard to the finance and income situation of the given business organisation.

The objectivity, impartiality and reliability of audit assessment is extremely important in case of organisations like financial ventures concerned by multiple actors, that is more investors.

Trust factor of audit in case of investment funds

Audit is basically a question of confidence. The role of audit is not very significant when the investors consider options for decision-making. Audit, as an aspect of trust, does not really appear in the decision-making mechanism of people who intend to invest in organisations managing financial funds. It is due to the fact that audit is a control process in the life of the business venture and the users of its outcomes do not rely on the institutional system of audit. Audit in itself should be able to help assessment which provides the basis for investors'

decision-making. Audit was introduced in the economic life as a relatively new element after the post-socialist transition. In the first years it represented an organic, impulsive impression in the attitude of persons directly related with the given business venture but not all the stakeholders. Audit and auditor, as an institutional system operating separately from the enterpreneur and authorised to form independent assessment, is able to verify information needs serving as the basis of business decisions. This role, however, has only a limited function in the practice because the users of information collected from enterprise management do not rely mainly on this, its existence is only a compulsory item in the annual report. The reason, why it has been formed this way over the years, why the audit has lost some of its prestige and importance, cannot be explained by the role of auditors or auditing organisations which have assisted the fraudulence of some domestic and international business ventures (e.g. ENRON). The professional credibility is not really reinforced by the auditing reports issued without qualification for financial investment funds which have presumably committed economic fraud recently.

In our opinion, audit institutional system has an outstanding and increased role in the objectivity of assessment concerning the business ventures, if the implementation of audit methodology - approved and applied at national and international level - is perfectly suitable to filter out those error sources which may come from actions targeting the distortion of actual business events. A thoroughly and profoundly elaborated and implemented audit work program, together with the collection of appropriate and enough supporting documents, can form a real, actual and reliable image about the business venture. In our view, the auditing methodology applied in case of financial investment funds published in media either were not properly selected or implemented or resubmitted as feedback, or they reached to a bunch of incorrect conclusions. Experiences suggest that in order to ensure proper control, the audit of dominant financial corporations which are concerned by many investors, like e.g. the audit of well-known investment funds, should be made by independent auditors, too, delegated by the entities involved in investment. In order to ensure full independence, when this type of auditor is chosen, it would be worth drawing random from the auditor database at the cost of the financial organisation. The working methods chosen by the different auditors can be different but the varying processes cannot result significant differences in terms of outcomes.

Moreover, ensuring publicity and increased transparency in connection with financial institutions is also extremely important. The development of information technology would enable to issue daily, weekly or monthly reports about the business venture for the stakeholders by automatically providing information about the important and publishable data of the venture to those concerned in the investment. Audit, as the main supervising and controlling body over the accounting system and financial reports should continue to ensure that the information is correct and reliable. The completeness and level of development of professional principles can provide appropriate tools. It should also be considered that millions of enterprises are concerned by audit in national and international terms and the process and outcomes of audit work flawlessly in case of the vast majority of them.

Of course, like all the tasks and implementation, it should aim to eliminate the revealed sources of error and to carry out modifications in the interest of the evolution of the given science.

The common feature of financial enterprises is that they keep their books and records in an exact way, according to the act on accounting or the IFRS. This regulation and framework is supposed to ensure the presentation of numerical parameters of the business venture. The uploading of data in the applied systems is made with the help of human resources through stable electronic systems. The aim is always to ensure appropriate, reliable and real image about the organisation which enables to evaluate the business processes in an inductive way. The information database or business administration systems available for the financial enterprise in themselves are suitable to keep statements and records required by legal regulations fully and precisely. Like all systems, of course, these may also be sources of errors. In the practice, there is usually a multiple controlling mechanism in numerous processing phases in order to ensure the precision and closed loop of data. These wedged control panels should guarantee the precise processing of numerical outputs received from the business venture. For the decision-making process at information users it is inevitable to provide clear numerical parameters which could enable even a less-qualified financial staff to make decisions

The quality of reports based on the numerical outcomes collected from the different financial enterprises substantially depend on the operation of supervisory bodies, their efficiency and thoughtfulness as well as the transparency of the methods they use.

These supervising institutions are typically the following: competent sector of the Hungarian National Bank, auditor assigned freely by the enterprise, internal controller employed freely by the enterprise, as well as the independent professional assessment organisations with professional competence, etc. It is clear that there are a lot of forums which help to learn about the operational activities of financial enterprises. By examining these institutions in details it is obvious that the aim is always the same, the methods, however, are different. It is the common interest of investors and external stakeholders to form a congruent image about the organisations concerned. The control forums can use alternative methods but should reach the same conclusion about the examined financial corporations. From the aspect of investors, the development and existence of trust factors basically depends on the operation, stability and reliability of the above listed controlling bodies. For an outside observer, the auditor - as person responsible for the reliability of the report about the enterprise – is the guarantee that the financial income conditions are reliable and true. Audit should appear in the life of the enterprise like a generally acknowledged, compulsorily applied independent control. Its role is increasingly highlighted and important because both the investors and creditors extensively rely on its objective opinion. The guarantees of audit work processes arise from the applied domestic and international standards regarding the methods. These standards cannot be disregarded in the course of auditing. The implementation of these standards is not voluntary, they are obligatory. The auditor should always approach the given enterprise on the basis of professional skeptisicm as laid down by standard no. ISA 250. Questioning all the assets and

liabilities and the related business events should lead to the conclusion, the result of which can be the legal compliance of the enterprise. The auditors should collect enough and suitable evidence to support the items connected with financial records. The auditor should always prepare for events which may imply the manipulation of financial records.

These are typically the following:

- Unusual payments in cash,
- Transfers to certain bank accounts,
- Unusual transactions to tax heavens,
- Payments which are not properly documented,
- Unauthorised transactions,
- And, what is very interesting, the auditors should also follow the news on the media.

If the auditor learns some events which might be connected with violation of law and legal regulations, he or she should by all means collect information about the nature and conditions of the issue. Moreover, profound information should be obtained to explore the real situation. And finally, the impact of the given offense on the financial records should definitely be assessed.

The relevance of investment funds and work of auditors, as well as the question of auditor's responsibility

The question of auditor's responsibility is not necessarily and not fully clear for all the economic actors including investors. The auditing process, as legal institution, presumes that such an important task, like auditing is obviously paired with high level of professional responsibility. The question of responsibility is also discussed by standard No. ISH 250 which distinguishes two main categories. One of them is whether the auditor collected enough and appropriate evidence concerning the compliance of financial statements with law and legal regulations in terms of form and content. The other one is, how much the enterprise has gone beyond the borders of offense regarding the legal framework within which the enterprise conducts its business activities and what are the impact of this possible offense on the operation of the enterprise and the produced financial statements.

The sphere of responsibility of auditor is recognised by IFAC (International Federation of Accountants). The auditor occasionally has a role in the infringement of law and legal regulations. The auditor violates the law not necessarily deliberately but due to the deficiencies concerning the implementation of working methods, badly structured working program and, consequently, the incorrect assessment of risk factors, and many other error sources coming from inappropriate professional attitude. The deliberate auditor offense as such, is unethical behaviour which is dangerous for the society and besides implying the weight of a crime it also raises questions about the moral attitude of the offender. It is dangerous because it is projected on the profession, too.

Basic auditing procedures inevitable for the control of financial statements

During the process of auditing, strategies and objectives should be chosen for auditing work from many possible options considering the specific features of the financial enterprise as economic actor. The basic method of examination is that all the items of financial statements are analysed in the course of auditing. Supporting evidence is collected for each book entry thus ensuring full accounting supervision and reliability. In case of larger enterprises - like for example, the investment funds – the itemized examination is not feasible. Therefore in these cases the selected methods do not target the individual entries of the enterprises but the accounting and financial system and the related internal control. Of course, with the help of representative sampling, through random selection, a lot of business transactions and deals are analysed and evaluated in a deductive way with profound cross-section examination. In these cases auditing and risk methodology is primarily used to select the set of high-risk factor elements of financial statement for the examination. The auditing methodology introduces several approaches by categorising the examination procedures:

a) Basic examination procedure
b) Balance sheet approach
c) Business risk-based approach
d) Auditing risk-based approach
e) System-based auditing
f) Controlled testing
g) Analysing procedures

a) In the course of the basic examination procedure the analysis focuses on essential account balances and transactions. These typically consist of analysing procedures and testing of completed transactions.
b) The essential point of balance sheet approach is that it regards balance sheet as the most important part of financial statements. It is based on the presumption that the correct construction of balance sheet year by year will result correct profit-and-loss statement. This method is typically used in case of small and medium-scale enterprises.
c) By applying the business risk-based approach the auditor determines the important business risks the client may potentially face. The risk concept of the auditor is extended on the whole business venture and tries to explore those factors which may affect the ability of the company to achieve its goals. The auditor is basically interested in those risks which may have an impact on the financial statements. The inherent risk and the control risk are part of business risk. This type of method requires a permanent relation with the client because better understanding of the enterprise, thorough knowledge of its conditions enable the auditor to apply this approach.

d) The auditing risk-based approach is a widely favoured method. It combines the comprehensive audit risk analysis with the inherent, controlling and exploring risks. The inherent risk arises from the probability occurence of essential errors. For example, not booked business events or booking of transactions and related partners which do not have any real content.
The auditor's risk = inherent risk x controlling risk x exploring risk.
By estimating the inherent risk the following should be considered:
   - The financial situation of the client;
   - The economic sector of operation;
   - The history of the client;
   - The expectations of creditors and investors which induce good results by exerting pressure on the client; and
   - The sources and types of the client's assets.

   The auditing risk model has quite a few advantages: it reduces the probability of under- or over-auditing and result a more efficient and successful auditing. It utilises the benefits of information technology and mechanised auditing methods. It enables to demonstrate the business events more rationally and convincingly in a lawsuit,
   Its limitations: audit sets a subjective value in case of inherent risk and control risk. Some parts of the system can be indicated as strong, while other parts are weak. The auditor spends more time on developing the mechanism and collecting evidences for examination.
e) System-based audit: the volume of business events and transactions of a large-scale enterprise sets a limit to the completeness of audit. The examination of all the transactions would not necessarily be enough to obtain the evidence for the assessment. Therefore the system-based audit focuses on the treatment of booking entries in the financial records, the inclusion in financial statements and the differences.
   The financial records are needed to reveal the financial situation of the company. These records should be adequate enough to introduce and explain the transactions of the enterprise. It is very important that the records supply relevant information to the board of directors and meet the content and formal requirements of balance sheet and profit-and-loss statement as it is laid down by law. First of all, an appropriate accounting system is required for this, depending on the size, type and complexity of the enterprise. In case of financial enterprises, only a system with such specification will be suitable.
f) With the concept of controlled testing the aim of audit tests is to determine the direction of testing.
   It is based on two simple elements
   - The errors in financial records are usually either over- or undervalued. These can be due either to omissions or misstatements;
   - The set of correlations in the accounting system helps the auditor to find a way among assets, liabilities, as well as income and expense invoices.

Therefore if an asset is overvalued, the liability on the other side should also be overvalued.

Its advantages are as follows:

- Reduces the time of audit;
- Ensures that overvaluation or undervaluation does not happen therefore it reduces the risk of occurence of misstatements in financial records;
- It is easier to set up statistical sampling.

Disadvantage:

- It is a basic need that the assets and liabilities, as well as income and expenses are authentic.

g) The analysing procedures are usually used as sources for collecting basic evidence. It is a testing method which confirms the compliance of information in accounting records with the preliminary expectations of auditor. The auditor makes risk assessment by considering the relevance, reliability and comparability of data to be used. The consideration of essentiality, as an aspect also depends on the examination procedure of auditor. The analysing procedures consist typically of main indicators and the evaluation of trends. The data, indicators and statistics connected with the enterprise should also be considered. The seasonal factor, the general inflation, sectoral factors, changes in technological environment and local economic environment can also have an impact.

When any of the above auditing methods is applied the classification of statements of financial records should be examined and regarded as an essential element as regulated by ISA 500 standard.

These groups are the following:

Existence

This is the most important statement. Its main point is whether an asset or liability exists at the given date. The auditor should spend a lot of time with this task. It is important to ascertain the existence of assets and liabilities because all the further statements are related to this. The financial claims and liabilities provide the basis of operation for an organisation dealing with financial investments and portfolio management.

Rights and obligations

The auditor should make sure that the given asset is owned by the enterprise, for example, the available stocks kept in inventories have already been sold or actually belong to the closing balance at year-end.

Occurence

The starting point from the aspect of business venture is whether the given transaction or event happened or not within the given period. In this context it should be considered whether

the enterpreneur had the appropriate competence to purchase the given asset or to settle the liabilities within a given accounting period. This is the statement which should be tested together with fullfilment methods, in the course of which the initial assumption appears as part of the accounting system.

Totality

The statement within the procedure is that all the assets and liabilities, as well as the related transactions and all the existing business events are considered during the allocation within the system. The testing of totality is usually started with analytical supporting documents in an inductive way and finished with the book entries of financial statements. This is a kind of a controlled testing, going into details concerning the entries that are existing or should be existing.

Evaluation

It is about the value of assets and liabilities according to the books. If an asset or liability is recorded at acquisition cost, it should be checked whether there are any related plus costs or obligations. The early cost and the changes of cost should always be verified with documents for the reliable audit.

Measuring

In this case that statement should be confirmed that the evaluation of a given transaction or event was recorded with the correct amount, for the correct period and appropriate income or expense. This statement is intended to control the examination of profit-and-loss statement. The original transactions are accounted at original acquisition cost thus most of the entries will become part of profit-and-loss statement. In return, however, adjustment - like, for example, active and passive accruals - are needed at the end of the year. This accounting technique ensures that incomes and expenses are settled correctly for the appropriate period.

Introduction and disclosure

It is part of the examination whether the publishing, classification and introduction of a given entry correspond to the requirements of the applied financial reporting. This should be examined in all cases in relation to the applied standards. The auditor is obliged to control in the frames of verification procedure whether the given entry was disclosed, classified and explained correctly in the financial records. .

Working papers as basic pillars of audit documentation procedure

It is a basic control requirement during the auditing process to keep records of all the completed auditing tasks. These working papers are usually standardised. The working papers later prove that efficient audit was performed. The sum of certificates about the completed work is drafted on the working papers.

Some general objectives should be met when the working papers are produced. They should be sufficiently detailed and completed in order to enable the auditors to transfer the completed work and conclusions to some other auditors who possibly also want to learn about the audit of the given enterprise. It should be absolutely up-to-date and assigned to a given date. It should include all the factors which were available at the date of examination and served as logical, reasonable support for conclusions. The working paper can help the auditor later on if the revealed difficulties, related evidence and conclusions should be used somewhere, even in a lawsuit.

The existence of working papers increases the efficiency and success of audit, the working papers give information to the members of the group about the completed and would-be tasks. These papers support the assessment of auditor in regards to financial statements at the end of auditing work.

The systems used by the business enterprise and the reliability of systems

The financial enterprises perfom complex, diverse and numerous transactions during their activities. In order to handle these transactions, it is very important that the construction of the information set is correct, precise and fair. It is required that only approved transactions are included in the system, they should be recorded and processed precisely. The already recorded information should be stored in the system without changes. In order to implement the audit method this vertical information should be presented adequately by the business enterprise.

The executive officers concerned should obtain relevant, coherent, precise and actual information from the system. Data processing within such a system depends not only on trusted staff but the efficient internal control, too. From the aspect of audit, the assessment of such systems is not a simple task in terms of reliability and integrity.

The audit typically:

a) assesses the whole controlling environment;
b) examines accounting policy;
c) strictly investigates the implementation of evaluation procedure laid down in accounting policy;
d) tries to map risks (business, inherent, control and exploration risks);
e) tests the transactions connected with economic events;
f) tests the precision and actuality of applied methods and records;
g) carries out analysing methods;
h) examines whether the information technology is closed and reliable.

The auditor should face risk factors connected with new technological difficulties due to the implementation of information technology systems. These risks can be filtered out only with the help of an appropriate audit trail.

The typical risks arising from the specific information technology features and complexity of systems:

a) the IT failure can endanger the continuation of the enterprise;
b) the computer viruses may modify databases and modules;
c) data losses or modifications caused by external factors, e.g. hackers;
d) malfunctions or data losses during the electronic storage of data;
e) fraud, as deliberate data distortion which can be potentially committed anonymously in connection with the IT systems;
f) the closed loop of applied IT systems cannot be ensured in 100%;
g) the IT systems may ease money laundering;
h) the paper-based transactions are disappearing therefore the lack of audit trails result more and more problems („paperless" office);
i) fraudulent data collection from the IT system is relatively easy.

The auditor should be aware of system risks arising from the implementation of information technology. It is inevitable for them to assess the forms of potential risks and should make efforts to set up efficient internal audit.

Role of internal monitoring

Efficient internal monitoring is inevitable for the perfect operation of senior management and for the support of decision-making. The main task of internal monitoring is the protection of assets possessed by the enterprise. The existence and maintenance of related accounting records. Ensuring the reliability of accounting and financial information produced within the business enterprise. Development and operation of systems for efficiency and transparency and, above all, creation and supervision of conformity with law and legal regulations. The internal monitoring is responsible for observing the directives, to explore and treat the risks emerging at the enterprise. Internal monitoring lists the potential risks. It develops the ability of the enterprise to ignore the occuring risk impacts. In case of a well-functioning company the internal monitoring is incorporated in the company culture, it is an organic part of operation. The internal monitoring is accountable primarily to the board of directors, directly to the company top management. The internal monitoring contra management operates in a kind of a back-and-forth feedback system. The company management cannot work without financial control, therefore the lack of this control may lead to operational risks.

Conclusion

In summary, it can be concluded that the continuously enhanced audit methodology ensures proper techniques for performing full range and transparent audit. In order to ensure reliable, precise and useful audit, the applied standards and their elements should be completed fully and professionally. At present, the main task of audit and related organisations is to restore the shattered reputation. It is not an easy task because the existence of trust factors has been rather gappy. The quality control system of the Chamber of Hungarian Auditors (MKVK) has tried to filter out the negligence and serious professional errors by using post factum

representative sampling. The control in itself does not mean audit. It performs supervising tasks and not by the auditor therefore it does not affect the auditor in the assessment.

In the future, the increased efficiency and more frequent presence of MNB (Hungarian National Bank) as supervising authority in the operational processes of financial enterprises will be needed. Reliable organisation with enough trust factor for the investors will not operate in the future with the possibilities of market expansion.

There are a lot of wedged, independent control panels in the operation of financial organisations. Due to the differences arising from their different working methods and by ensuring congruence, these panels guarantee the reliability of numerical data derived from financial management. The elaborated professional methodologies and the applied IT systems can evoke management anomalies like in case of financial investment funds but typically only by deliberate human intervention.

The weak point of accounting and financial systems generally can be related to one given person. The auditor himself is responsible for the adequacy of implementing compulsory methodology.

Therefore audit should be an essential, reliable and stable pillar in the exact and transparent operation of economic actors.

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Author addresses

TÓH, Márk PhD, associate professor,
Szent István University, Institute of Business Sciences
Email:toth.mark@t-online.hu

JÁVORNÉ VÉGH, Klaudia PhD, first assistant
Szent István University, Institute of Business Sciences
Email: vegh.klaudia@gtk.szie.hu

BÁRCZI, Judit PhD, associate professor
Szent István University, Institute of Business Sciences
Email:barczi.judit@gtk.szie.hu

Lector: Dr. SZÉLES Zsuzsanna, Szent István University Gödöllő, Hungary

RELATIONS BETWEEN PLACE MARKETING AND EMPLOYMENT

URBÁNNÉ TREUTZ, Ágnes

Abstract

One of today's developing disciplines is place marketing. It is essential to make environmental analysis to determine marketing strategy of the settlements. For this purpose STEEP macro environmental analysis serves as a basis, which is one of the pillars of the economic environment. In my work I deal with employment within the economic environment and their points of contact to the place marketing.

All in all, I demonstrate how the demographic processes shape, the changes in the employment structure, and how these influence the employment and their importance in place marketing.

Keywords: place marketing, employment

Introduction

During my research, my goal is to explore the presence of place marketing, the marketing strategy of the settlements in rural areas, how the marketing activities are presented in the Hungarian villages, how they adjusted to the challenges of the present, what their plans are, what strategy they use. I consider it important to analyse the three main target groups (residents, tourists, entrepreneurs) of place marketing in rural villages and micro-regions, how their importance appears. I focus on the tourism as an outbreak opportunity, how that could be used by the settlements, mainly the underdeveloped areas. My aim is to get an overall picture about the marketing activities of the rural settlements and the tourism connected to it, and based on this overview I can evaluate their marketing activities and create different segments.

To exploit the potential of the rural areas, the situation of the villages needs to be assessed because that could develop the settlement with a strategy from the point of view of the local residents and entrepreneurs, and as a destination from the point of view of tourists.

Material and Methods

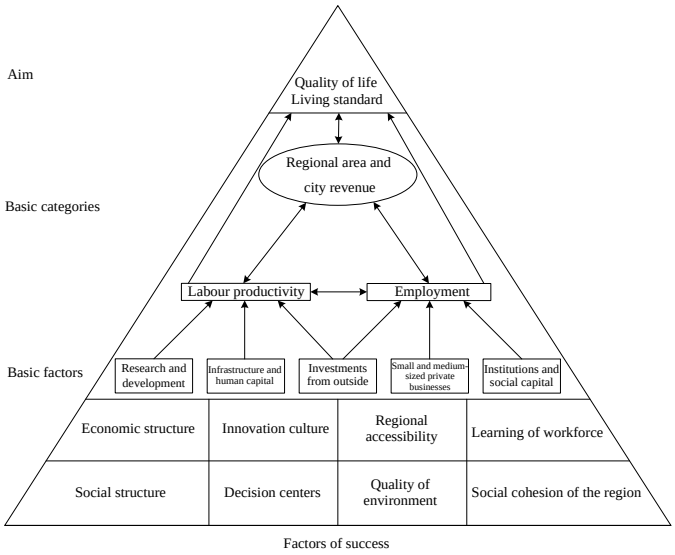
My aim is - based on the available secondary information – to explore the connection between the place marketing and employment, and the employment's influence to the settlements. Beside the secondary research based on the results of Hungarian national census I analyze after Edit Lettrich's employment structure analyzing (1965) the changes

in the employment structure in the Counties of Hungary. I examine the employment rates, the unemployment rates and the migration processes in the case of the Counties.

Result and Discussion

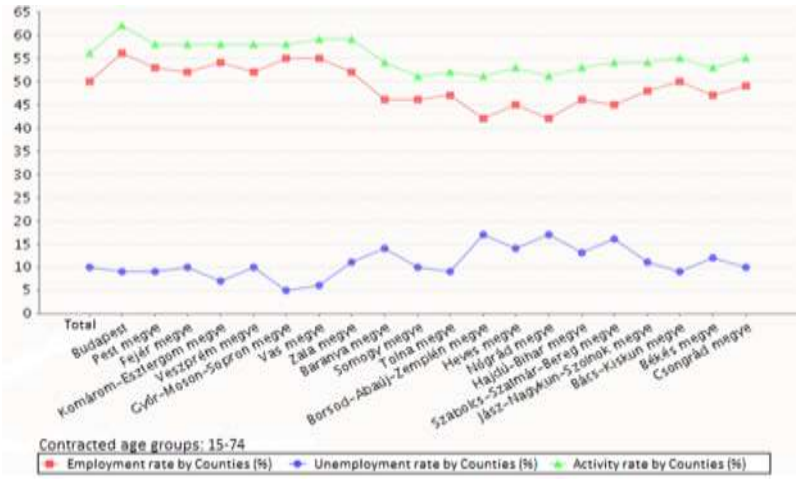
The place marketing is one of the today's developing disciplines, which uses that kind of marketing methods what is over the economical activity takes the social components into consideration too. The common appearance of nonprofit marketing and business marketing result in "coopetition", namely compete in cooperation. Due to the appreciation of the globalization this type of marketing activity gets a great emphasis, because from the largest cities to the smallest villages they want to keep their viability. For a settlement to retain its viability and the competitiveness needs quick reaction to changes. From the point of view the marketing, the settlement is the product itself, which has a complex (wide range of supply and have different service packages), dual nature (besides the objective, physical appearance it emphasizes the subjective perception and experience), and it is difficult to develop (it has a lot of target groups, which are necessary to be gained with different methods, and also it is the result of a long term process to fix a refreshed or new image). To reveal the advantages of a settlement, the settlement's position needs to be analyzed. (Piskóti-Dankó-Schupler, 2002 – Szabó-Komáromi-Gergely, 2011)

During the macro analysis it needs to be dealt with the factors of macro environment, the employment of the group of economic factors. The employment has an effect not only on the macro factors (e.g.: demography) but in micro level in case of the place marketing on the three target groups: local residents, entrepreneurs and tourists. If there are entrepreneurs in the settlement, they could employ local residents, who have work, so their livelihood are insured, and they do not need to commute daily to their workplace. The company will pay the local taxes for the settlement, so the settlement's benefit may arise not only from sociological, but also from economical considerations too. If the settlement is developed, it will be attractive to move in to the settlement for other people, and will be attractive from the viewpoint of the tourists because they prefer choose a dynamic developing settlement as a destination to one in backward position. The competitiveness of a region is significantly determined by the rate of employment and the labor productivity. (Béresné Mártha, 2009) It is supported by the pyramid model of the regions, areas and cities competitiveness (Picture 1) by Lengyel (2000), in which the three main categories - which affects the main factors - also appears the employment, the labor productivity and the income. (Piskóti, 2012)



Picture 1: Pyramid model of regions' and cities 'competitiveness
Source: Lengyel, 2000 [p. 979]

Based on 2012 data, it could established that the employment rate of the Hungarian counties is the highest in Budapest (56,7%), the lowest is in Borsod-Abaúj-Zemplén County (42,5%). The activity rate is the highest in Budapest (62,5%), and the lowest is in Nógrád County (51,2%). (http://statinfo.ksh.hu) (Picture 2)



Picture 2: Economic activity rates by Counties between the age of 15 and 74 in 2012
Source: http://statinfo.ksh.hu/Statinfo/haViewer.jsp, 2015

The level of employment in the Hungarian labour market is correlated with the high inactivity, which can connected to the low qualification. The reason for this, after the change of regime, that people who live in disadvantaged areas – who live in rural living environment -, they could not participate in agricultural work which required larger volume of living labor, through to large-scale production has become more efficient in consequence of mechanization. (Mészáros-Szabó, 2014) Due to the narrowing local labour market, the ability of self-supportation of disadvantaged rural areas in essence come to the end. (Szabó, 2013) It supported by the stratification of the Hungarian employment structure, on the basis of Lettrich Edit (1965), after that it could keep an eye on the changes. (Table 1-20) In the 1960s the agricultural sector found a bigger role in some Hungarian Counties (Baranya, Bács-Kiskun,

Békés, Csongrád, Hajdú-Bihar, Somogy, Szabolcs-Szatmár-Bereg, Zala). These areas were "moderately agricultural type" while the other Counties became industrialized. In the Counties which were „moderately agricultural type", 55-75% of the employees were employed in the agriculture. In these cases – except in Békés County – in the 1970s the agricultural sector had a significant role too, but thanks to the urbanization it increased the number of employees in the industrial and the service sector instead. In these cases the "Temporary type" is common where the ratio of agricultural employees is relatively high (36,6%-54,9%), and depending on whether the industry or the tertiary sector is the dominant one, we can talk about Temporary type being urbanized by the industry or with tertiary expansion (service sector). In the 1990s the urbanization was typical in all Counties. Where the percentage of employees in the industry and "other" (service) sector together were between 63,4 and 85%, they were urbanized by the I. degree. Where these employees' percentage together was above 85%, they were urbanized by the II. degree. Depending on the quotient rate of employees of the industry and the service sector, we can rank these areas in subtypes. If the quotient is I:T>1,33, the County classifies as an industrial type, if it is I:T=1,33-0,66, then as a mixed type (industry and service sector are both dominated), while when it is I:T<0,66, then it can be classified as an „other" type (dominated by the service sector). Based on the above it can be stated that in the whole area of Hungary the number of employees in the agricultural sector is decreasing and the number of employees in the service sector is increasing. In spite of this in some areas the importance of the industry sector near the tertiary sector could be demonstrated based on the data gathered in in 2001 (e.g.: Fejér, Győr-Moson-Sopron, Heves, Komárom-Esztergom, Nógrád, Pest, Tolna, Vas, Zala County). Based on the last national census (2011) it is typical that the most employees are employed in the service sector in all Hungarian Counties.

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	53,9	24,5	21,6		Temporary type urbanized by the industry
1970	48,2	24,4	27,4		Temporary type with tertiary expansion
1990	15,2	38,6	46,2	0,84	Urban type, urbanized by the I. degree, mixed type
2001	7,0	31,8	61,3	0,52	Urban type, urbanized by the II. degree, "other" type
2011	3,2	24,8	72,0	0,34	Urban type, urbanized by the II. degree, "other" type

Table 1: Baranya County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	62,2	16,2	21,6		Moderately agricultural type
1970	46,5	28,4	25,1		Temporary type urbanized by the industry
1990	31,0	31,3	37,7	0,829	Urban type, urbanized by the I. degree, mixed type
2001	13,7	32,4	53,9	0,600	Urban type, urbanized by the II. degree, "other" type
2011	7,6	29,7	62,8	0,472	Urban type, urbanized by the II. degree, "other" type

Table 2: Bács-Kiskun County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	57,8	18,2	24,0		Moderately agricultural type
1970	34,7	35,2	30,1	1,17	Urban type, urbanized by the I. degree, mixed type
1990	26,4	33,6	40,0	0,84	Urban type, urbanized by the I. degree, mixed type
2001	11,5	33,4	55,1	0,61	Urban type, urbanized by the II. degree, "other" type
2011	5,6	29,4	65,0	0,45	Urban type, urbanized by the II. degree, "other" type

Table 3: Békés County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	10,9	49,7	39,3	1,26	Urban type, urbanized by the II. degree, mixed type
1970	35,4	34,2	30,4	1,13	Urban type, urbanized by the I. degree, mixed type
1990	12,7	45,0	42,3	1,06	Urban type, urbanized by the II. degree, mixed type
2001	3,9	34,3	61,8	0,56	Urban type, urbanized by the II. degree, "other" type
2011	2,1	28,9	69,0	0,42	Urban type, urbanized by the II. degree, "other" type

Table 4: Borsod-Abaúj-Zemplén County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	58,8	19,3	22,0		Moderately agricultural type
1970	39,9	34,3	25,8		Temporary type urbanized by the industry
1990	19,0	36,2	44,8	0,81	Urban type, urbanized by the I. degree, mixed type
2001	11,8	29,2	58,9	0,50	Urban type, urbanized by the II. degree, "other" type
2011	6,3	23,8	69,9	0,34	Urban type, urbanized by the II. degree, "other" type

Table 5: Csongrád County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	38,8	31,9	29,3		Temporary type urbanized by the industry
1970	21,9	44,6	33,9	1,32	Urban type, urbanized by the I. degree, mixed type
1990	14,5	45,9	39,6	1,16	Urban type, urbanized by the II. degree, mixed type
2001	5,9	43,4	50,7	0,86	Urban type, urbanized by the II. degree, mixed type
2011	2,5	32,1	65,4	0,49	Urban type, urbanized by the II. degree, "other" type

Table 6: Fejér County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	34,2	34,9	30,9	1,13	Urban type, urbanized by the I. degree, mixed type
1970	20,9	47,0	32,1	1,46	Urban type, urbanized by the I. degree, industrial type
1990	14,9	40,7	44,8	0,91	Urban type, urbanized by the II. degree, mixed type
2001	5,8	39,5	54,7	0,72	Urban type, urbanized by the II. degree, mixed type
2011	2,6	32,1	65,4	0,49	Urban type, urbanized by the II. degree, "other" type

Table 7: Győr-Moson-Sopron County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	64,8	14,3	20,9		Moderately agricultural type
1970	45,4	23,3	31,3		Temporary type urbanized by the industry
1990	21,0	34,8	44,2	0,79	Urban type, urbanized by the I. degree, mixed type
2001	8,8	30,7	60,4	0,51	Urban type, urbanized by the II. degree, "other" type
2011	4,0	26,1	69,8	0,37	Urban type, urbanized by the II. degree, "other" type

Table 8: Hajdú-Bihar County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	43,2	26,5	30,3		Temporary type with tertiary expansion
1970	32,7	34,6	32,7	1,06	Urban type, urbanized by the I. degree, mixed type
1990	14,2	41,3	44,1	0,95	Urban type, urbanized by the II. degree, mixed type
2001	5,6	38,7	55,7	0,70	Urban type, urbanized by the II. degree, mixed type
2011	2,7	31,8	65,5	0,49	Urban type, urbanized by the II. degree, "other" type

Table 9: Heves County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	45,4	24,6	30,0		Temporary type with tertiary expansion
1970	27,2	36,4	36,4	1,00	Urban type, urbanized by the I. degree, mixed type
1990	21,3	37,0	41,7	0,89	Urban type, urbanized by the I. degree, mixed type
2001	8,5	35,1	56,3	0,62	Urban type, urbanized by the II. degree, "other" type
2011	3,7	32,5	63,9	0,51	Urban type, urbanized by the II. degree, "other" type

Table 10: Jász-Nagykun-Szolnok County
Source: based on KSH and
www.regionaldata.org data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	21,2	48,9	29,9	1,64	Urban type, urbanized by the I. degree, industrial type
1970	16,3	48,0	35,7	1,34	Urban type, urbanized by the I. degree, industrial type
1990	13,9	45,7	40,3	1,13	Urban type, urbanized by the II. degree, mixed type
2001	4,4	45,3	50,3	0,90	Urban type, urbanized by the II. degree, mixed type
2011	1,9	36,2	61,9	0,59	Urban type, urbanized by the II. degree, "other" type

Table 11: Komárom-Esztergom County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	35,0	30,0	28,4	1,27	Urban type, urbanized by the I. degree, mixed type
1970	30,4	38,0	31,6	1,20	Urban type, urbanized by the I. degree, mixed type
1990	13,8	46,6	39,6	1,18	Urban type, urbanized by the II. degree, mixed type
2001	3,0	43,5	53,5	0,81	Urban type, urbanized by the II. degree, mixed type
2011	2,1	34,4	63,6	0,54	Urban type, urbanized by the II. degree, "other" type

Table 12: Nógrád County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	29,6	38,7	31,7	1,22	Urban type, urbanized by the I. degree, mixed type
1970	20,5	50,0	29,7	1,68	Urban type, urbanized by the I. degree, industrial type
1990	14,3	38,9	46,8	0,83	Urban type, urbanized by the II. degree, mixed type
2001	3,72	32,3	64,5	0,50	Urban type, urbanized by the II. degree, mixed type
2011	1,8	24,4	73,8	0,33	Urban type, urbanized by the II. degree, "other" type

Table 13: Pest County
Source: based on KSH and
www.regionaldata.org data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	57,2	16,7	26,1		Moderately agricultural type
1970	40,3	27,9	31,8		Temporary type with tertiary expansion
1990	22,4	38,4	49,1	0,578	Urban type, urbanized by the I. degree, "other" type
2001	8,5	31,9	59,6	0,535	Urban type, urbanized by the II. degree, "other" type
2011	4,3	27,6	68,1	0,404	Urban type, urbanized by the II. degree, "other" type

Table 14: Somogy County
Source: based on KSH and
www.regionaldata.org data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	54,7	14,9	30,4		Moderately agricultural type
1970	50,1	18,9	31,0		Temporary type with tertiary expansion
1990	21,7	34,3	44,0	0,780	Urban type, urbanized by the I. degree, mixed type
2001	5,9	31,0	63,1	0,490	Urban type, urbanized by the II. degree, "other" type
2011	3,9	28,5	67,6	0,421	Urban type, urbanized by the II. degree, "other" type

Table 15: Szabolcs-Szatmár-Bereg County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	53,1	20,8	26,1		Temporary type with tertiary expansion
1970	36,4	33,7	29,9	1,13	Urban type, urbanized by the I. degree, mixed type
1990	22,0	37,5	40,5	0,93	Urban type, urbanized by the I. degree, mixed type
2001	9,8	36,4	53,8	0,74	Urban type, urbanized by the II. degree, mixed type
2011	4,3	32,4	63,3	0,51	Urban type, urbanized by the II. degree, "other" type

Table 16: Tolna County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	45,7	23,7	30,6		Temporary type with tertiary expansion
1970	29,3	39,3	31,4	1,25	Urban type, urbanized by the I. degree, mixed type
1990	18,0	36,5	45,5	0,80	Urban type, urbanized by the I. degree, mixed type
2001	5,6	45,3	49,1	0,92	Urban type, urbanized by the II. degree, mixed type
2011	2,7	35,2	62,1	0,57	Urban type, urbanized by the II. degree, "other" type

Table 17: Vas County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	35,7	33,9	30,3	1,12	Urban type, urbanized by the I. degree, mixed type
1970	24,1	38,1	37,8	1,01	Urban type, urbanized by the I. degree, mixed type
1990	14,7	41,3	44,0	0,94	Urban type, urbanized by the II. degree, mixed type
2001	4,9	41,9	53,2	0,79	Urban type, urbanized by the II. degree, mixed type
2011	2,6	33,8	63,6	0,53	Urban type, urbanized by the II. degree, "other" type

Table 18: Veszprém County
Source: based on KSH data own edition,2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	55,3	20,4	24,2		Moderately agricultural type
1970	46,1	27,2	26,7		Temporary type urbanized by the industry
1990	16,3	39,5	44,2	0,894	Urban type, urbanized by the I. degree, mixed type
2001	5,5	38,9	55,7	0,698	Urban type, urbanized by the II. degree, mixed type
2011	3,0	31,3	65,7	0,476	Urban type, urbanized by the II. degree, "other" type

Table 19: Zala County
Source: based on KSH data own edition, 2015

Year	Agriculture (%)	Industry (%)	Tertiary (%)	I:T	Standardization
1960	1,2	48,1	50,7	0,95	Urban type, urbanized by the II. degree, "other" type
1970	1,8	49,3	48,9	1,01	Urban type, urbanized by the II. degree, mixed type
1990	3,0	36,0	61,0	0,59	Urban type, urbanized by the II. degree, "other" type
2001	0,5	18,9	80,6	0,23	Urban type, urbanized by the II. degree, "other" type
2011	0,4	12,9	86,7	0,15	Urban type, urbanized by the II. degree, "other" type

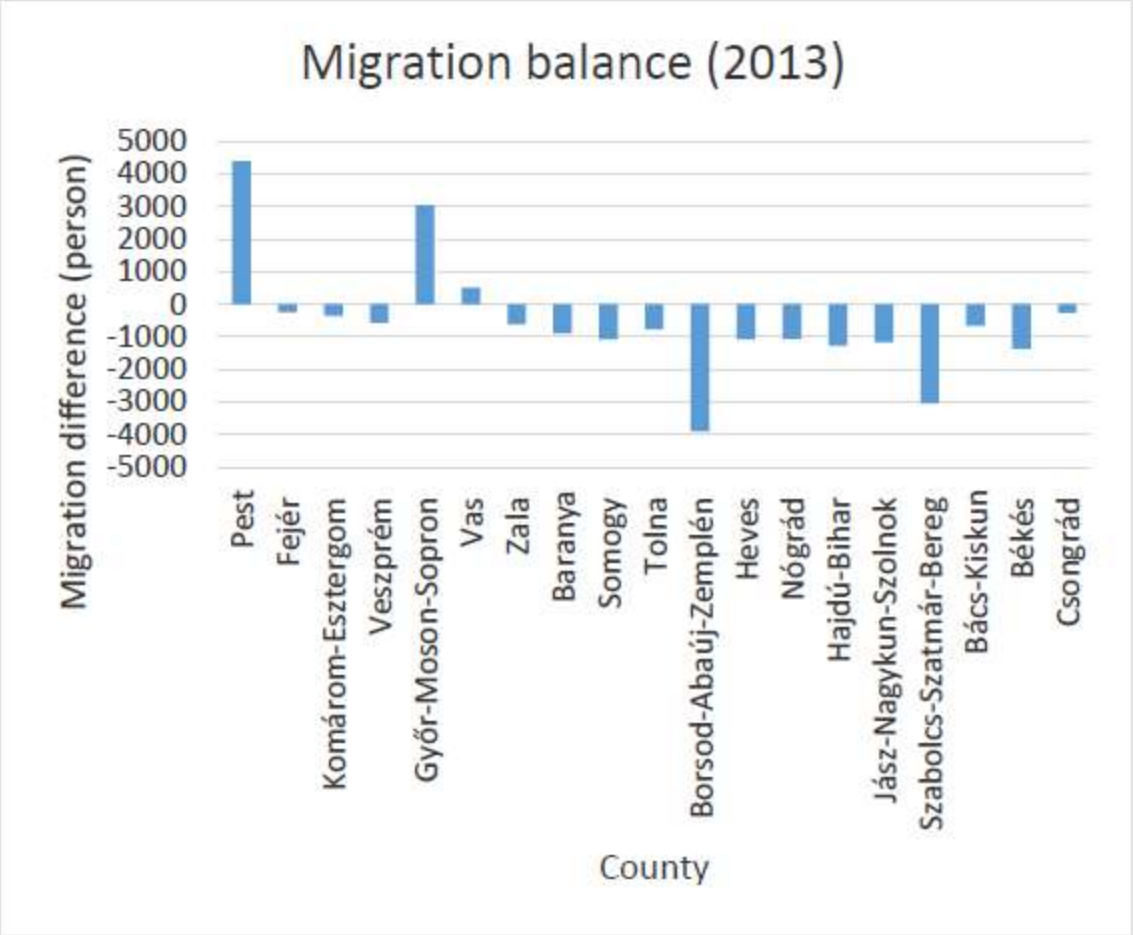
Table 20: Budapest
Source: based on KSH and
www.regionaldata.org data own edition, 2015

The unemployment rate is the lowest in the county of Győr-Moson-Sopron (5,3%), the highest is in Nógrád (17,5%). (http://statinfo.ksh.hu) The root of serious economic and social problem is the low employment rate in Hungary. (Munkácsy, 2011) In a settlement where the employment is low, the unemployment is high, so there are a few local and potential

enterprises who wants to settle down, therefore the living for the local residents will be hard and limited (they have to commute to settlements where work opportunities are available), and for the tourists the settlement will not be a potential destination. In settlements where cumulatively disadvantaged unemployment people live, there is bigger chance that they did not return back to the labour market. This could generate deep depression in employment in the settlement. After a European Union's regulation the disadvantaged employee is, who long-lasting unemployed (for 6 month he has not worked), or older than 50 years, or has low qualification (has no secondary school's qualification), or he lives in (big) family (with one or more dependant), or belong to an ethnic minority, or comes from the woman's character (in certain jobs sexual unbalance). (Tésits-Alpek, 2013) In those places where disadvantaged employees live, those kind of developments would be needed which generate not only workplaces but help to get the abilities and qualifications to occupy the job. (Némethné Pál-Papapek, 2012) To the effect of the economic crisis the unemployment increased in Hungary. Until 2008 the unemployment rate was under 8% focusing on 2000s. From 2008 until 2013 the value of the rate was around 10%, which decreased to 7,1% in 2014 from August to October. (http://www.ksh.hu) One of the reasons of the decrease of the unemployment is the public employment which is temporary problem solving. Though it supports the unemployed person to go back to the labour market, but according to experiences, insignificant number of the public employees come back to the labour market because they are do not motivated. Due to this the number of supported work places grows. Analysis point to that the work places which come into being with work places creating, only small part of them generate increasing in the employment for long-term. (Major-Tétényi, 2013) The people who are in need are supported by public funds. They work in non-profit and public sector, mainly in the field of service sector they provide the public interest, mainly the maintenance and development of a local infrastructure. (Csehné Papp, 2008) All these are independent from the competitive sector, it did not destroy their function. The public employment programs were introduced in 1996, and it took place in 2001 to adopt the public purposes employment form. The latter had a central control program in 2009, namely "Way to the work" program. Due to the employees who took part in public purposes employment went back to the labour market in lower rate, the people who were involved looked at the program as a tool, which provides their supply further. This "helps for the people on relief to get stucked" (Szabó, 2013 [p. 475.]), which defers, preserves and generates social conflicts. (Szabó, 2013) The conflicts can be traced back to the fact that the programs are most often used when the distribution of unemployment not equal between different social groups, therefore the number of unemployed people will be high. (Csehné Papp, 2008 - Szabó, 2013) In Hungary the employment conflicts are typical, mainly in rural areas, villages. It can be attributed to the decreasing role of the agricultural sector, the greater mechanization and the fewer claim of the live labour. (Tóth, 1998)

The high rate of the unemployed and on relief people is typical in the peripheral areas of the country, where the rate of the ethnic minority is high at the same time. These areas have negative image from the point of view of place marketing, the presence of tourism, the number of residents and the enterprises who want to settle down is not typical, and at the same time the migration increase in inverse ratio.

It is important to analyze the migration data, because in most cases the reason of the migration is the lack of work place. During my work I analyzed the Hungarian Counties with the exception of Budapest, leave out the outstanding figures (the biggest migration balance can be found in the capital city). It can be observed that in the case of Pest, Győr-Moson-Sopron and Vas County the migration balance is positive and in the case of other Counties are the migration balance is negative. The migration rate is high in the peripheral areas, in part of north and north-east of Hungary, in Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg County. (Picture 3)

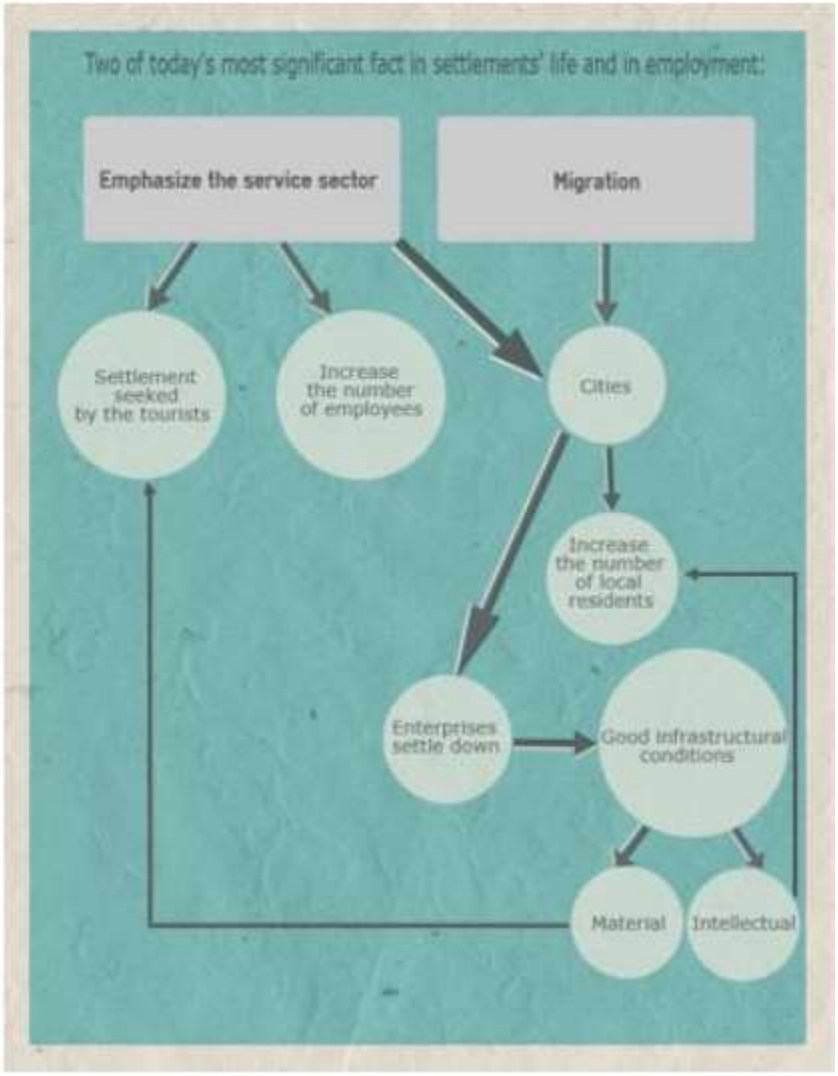


Picture 3: Migration data by Hungarian Counties
Source: based on http://statinfo.ksh.hu/Statinfo/haViewer.jsp own edition, 2015

The migration processes decrease not only the work force capacity but they cause damage in the cultural, social processes as well. (Mészáros-Szabó, 2014) In that case, if a settlement goes broke in social, cultural aspect, the local residents become inactive in the collective actions, they will not have an interest to make the settlement attractive for others. They get into that spiral, which generates further negative processes in the life of the settlement. That area where there in not enough qualified workforce due to the migration of qualified workforce will not be a potential settling target point.

Conclusion

With the undermentioned conclusion figure I summarize my work and its main connections. (Picture 4)



Picture 4: The main connections between employment and place marketing
Source: Own edition, 2015

Nowadays the two most significant facts in the life of settlements in connection with the employment are the emphasizing of the service sector and the migration. The service sector can mainly keep pace with the continuously changing trends in cities. In the little villages due to the lack of work places the residents have lower income, and that is why the demand is lower towards the services of this sector. Which is the consequence of the sector's come to the front, on one hand that the number of employees increase, on the other hand it is easier to attract tourists to a given settlement where different services available to meet their needs. The other fact is the migration, which tends to the biggest cities where work places are available which can absorb the available workforce who are unemployed. With the settling down of these people the number of local residents increase and it gives opportunity to other enterprises to settle down which could employ the growing number of employees. The term

of this is the good infrastructural condition, both intellectual and material respect. If the state of the intellectual infrastructure is suitable between the local residents, this can lead to well-run enterprises. The good physical infrastructure is not only indispensable for the establishment and settling down of new enterprises, but it is essential for the tourism to operate in the settlement. Of course to achieve this it is necessary have intellectual infrastructure too, because to meet the claim of tourists can not be done or only with difficulties without suitable qualified workforce. It is typical to Hungary that small villages with low number of residents are emptying out, which results in lack of material and intellectual capital. In these villages the number of residents who move away – mainly the young people – is continuously increasing. On one hand this appears as a reurbanization process in the case of cities, but at the other hand, in parallel to the above, we can talk about the desurbanization process where the number of families that move to the conurbation area is increasing. This could mostly be afforded by the well-to-do families.

All in all, one of the primary goals of the settlements are ensuring the welfare, well-being and improve the quality of life. To a great extent the employment contributes to these, because the suitable rate of employment results not only satisfaction of local residents, but it involves economic development.

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Author addresses

URBÁNNÉ TREUTZ, Ágnes, PhD Student, Gödöllő
E-mail: tr.agnes@gmail.com

Lector: Dr. PAPP János, Szent István University Gödöllő, Hungary