

THE EFFECT OF THE ECONOMIC CRISIS ONTO THE FOOD CONSUMPTION BASED ON A TWO-ROUND QUESTIONNAIRE RESEARCH

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— Abstract —

From the effects of the economic crisis several studies and papers were born. All writings agree in it, that the crisis affected the corporate and the domestic sphere equally. They argue about, whether the effects of the crisis were over already or not. The income decrease caused by the crisis felt by the people differently, according to their income situation, their qualification, their age and their gender as well. The aim of a present study is to introduce the effects on the demand of the consumer goods, according to a two-round questionnaire research made in 2010 and 2013, and to reveal the inner contexts of the decisions with the help of mathematical, statistical methods.

Keywords: *crisis, consumption, households' share*

JEL Classification: G 01

1. REVIEW OF LITERATURE

The causes of the crisis and their predictability have been widely discussed by economists. It is common in these discussions that they do not discharge the responsibility of banks, which appears with different emphasis, together with the role of the demand side, i.e. households and consumers. Besides the responsibility of both demand and supply sides there are theories which mention the role of governments and supervisory institutions as well. There are opinions which state that economists were unable to predict the effects of the oversized and early consumption which already began in several countries of the world, especially in the US, but also in Europe, in the early 2000s (Kolozsi, 2013). However, a number of well-known experts, among others Roubini, Stiglitz, and much earlier, Minsky, have dealt with the background of crises. If decision-makers had listened to them a little better, the crisis would not have had such a global size as the crisis of 2008. We need to mention one of the several classic theories, which was formed by Hyman Minsky.

According to the Minsky theory all crises has seven well discernible stages and declares that crises have a lot in common in many aspects (Askaboutmoney.com, 2008). The stages of crises:

1. Displacement: All crises begin with a trouble so there is something uncommon happening in the market (economic-political change, decrease in the rate of interest). This change can affect any sector of the economy.
2. Prices start to increase: As a result of the change prices are bout to rise in the affected sector. At the beginning the economic players can hardly feel price rise but if this effect is there to last, the players' attention is caught.
3. Easy credit: High prices themselves are not enough to create a bubble so it needs a kind of „fuel”: easy credit. If the participants of the financial sector did not heat the situation with their easy credit, the affected sector would return to the ordinary state. Easy credit attracts players from outside who join this affected segment of the economy in the hope of making more profit.
4. Overtrading: As a result of easy credit markets start to grow dramatically that is reflected in greater trading and scarcity in some cases. Prices start to rise that induces huge profit making on the supply side. Consequently, the sector attracts more external participants and prices will become uncontrolled. The rising pace of price increase attracts more and more careless and greedy

- participants to the market. As fire needs more wood to burn better, bubbles also need more outsiders.
5. Euphoria: The bubble created this way cannot grow further. Experts can see the coming crisis and warn the others but the participants do not want to listen. Prices will soar further and speculation starts. Speculators know that prices cannot go up forever but they deny it to attract more outsiders. Speculators will remain in the market till the situation seems to be stable but they exit before the bubble bursts and the „less knowledgeable” players will be stuck inside.
 6. Insider profit taking: Certain players gain huge profit in the making of the bubble but others will fail. „Insiders” will come out in silence with their pocket filled, which signals the beginning of the end.
 7. Revulsion: Revulsion can be evoked by several factors: the profit line in the sector declines dramatically, unexpected bad news and euphoria will immediately turn into revulsion. The sector is „in flames” and everybody escapes. Revulsion comes, prices decrease, profit rates go down and it is the end for easy credit. Losses pile up, everybody escapes but there is no way out.

Minsky with his theory formulated the paradox of bubble theory (Shostak, 2007): everybody knows that the combination of easy credit, over-demand and euphoria will sooner or later become lethal. However, America falls in the trap from time to time so starting from the supply bubbles to the real estate bubbles we could meet a lot of types of bubbles so far. As it can be seen, the stages listed above can be traced from point to point even in connection with the present-day subprime crisis. In our opinion, if the monetary and fiscal decision-makers of those days had studied Minsky's theory, they could have seen the signs which were the precursors of the crisis way before 2007 and 2008. These could have been explained scientifically with the help of this theory. The telltale signs were not only visible by Minsky's theory and Roubini's predictions, who later proved to be right in every respect (Mihm, 2008), but also according to the values of Case-Shiller index (Shiller, 2006). However, there have been heated discussions about the visibility, type, and the root causes of the crisis ever since.

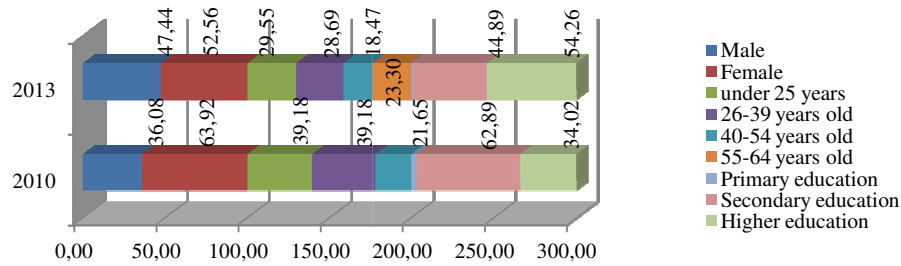
The effects and consequences of the crisis are extensively covered and dealt with in economic literature. There are several interpretations of the concept and the definition of the crisis and still, none of them could fully characterize neither the bubble burst in 2008 nor the path leading to it. Perhaps the most obvious

definition for the description of it was given by Árvai – Vincze (1998) ” when it occurs, even the blind can see it ”. Our question is what can we actually see and what can be done at that certain time. In order to answer this question it is essential to review the following most important crisis definitions.

2. MATERIAL AND METHOD

Our quantitative research was made as a nationwide survey during the autumn and winter of 2010, and also in the spring of 2013 when everyone had met the effects of the world crisis or experienced them personally. The research was carried out with the help of a standardised, pre-tested written questionnaire, which did not contain open questions to which the respondents could answer using their own words, due to the diversification of the sample. Therefore, for better assessment, the questionnaire only contains closed questions to which respondents can choose replies previously defined by the researchers. Furthermore, we ensured that there are no questions that impede or jeopardise the intentions of the respondents to answer them or that there are no questions that violate their privacy rights.

We tried to get responses to questions which have not been analysed by daily press and the media, so they were based on the respondents’ personal opinion and experience. We also attempted to include questions which convey information for the researcher based on substantial experience, therefore we addressed respondents on the basis of a relatively wide circle according to age group, occupation, and education. We obtained the results and conclusions using basic statistics and cross-table analysis. The questionnaire was processed with the help of SPSS (Statistical Package for Social Sciences) 14.0 and Microsoft Office Excel 2007 programmes. In the first survey in 2010 we have distributed 400 questionnaires altogether, out of which 61 were not returned, 48 were returned incompletely, therefore were not to be evaluated, so altogether 291 questionnaires have been processed. In the second survey in 2013 our method was not print or paper-based but was conducted online using the opportunities offered by Google. In the second survey 352 questionnaires have been processed. The composition of the sample is demonstrated in the following table.

Figure-2.: The composition of the sample

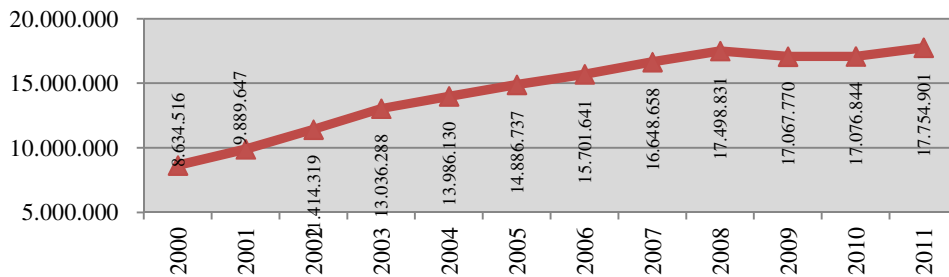
Source: own research 2010 (N = 291), 2013 (N = 352)

3. RESULTS

3.1. Consumption of households in Hungary

The following graph illustrates the consumption of Hungarian households. As it can be seen, after the millennium households increased their consumption year by year, at current prices, by nearly one hundred billion forints a year. There could be observed a slight decrease in the growth of consumption in 2006, when the increase of consumption was only 81 billion, compared to the previous year. After 2006 the increase of consumption stayed at a level of 80-90 billion forints. We have to point out that in year 2009, i.e. the year after the crisis, when restrictions were made, consumption fell back by an unprecedented 43 billion forints. This fact is also remarkable because since the millennium there had not been a drop back in consumption. It can be seen that if the income of households decreases due to loss of workplaces, decreasing real wages, or rising costs of utility bills and mortgage instalments, consumption will also decrease. The situation improved in 2010, if not as spectacularly as before the crisis, as consumption increased only by a modest 9 billion forints at current prices. The reason of this is that there were governmental measures taken to decrease the burdens of both employees and employers, keeping jobs and the value of real wages.

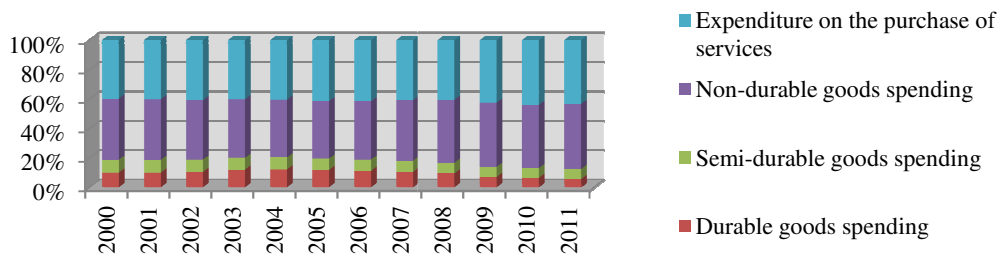
Figure-3.: The real consumption costs of households, at current prices, in million forints



Source: own compilation (2013), based on the data of the Central Statistical Office

If we examine household costs further we can see that there were significant structural changes as an effect of the crisis. The amounts paid for durable consumer goods decreased considerably from the 12.1% peak of 2004 to 5.6% in 2011. The situation was the same with semi-durable products. The consumption of non-durable products, that is food products did not change considerably in comparison with the complete consumption costs, as consumption costs decreased, food products fell back proportionately. It is an interesting fact that the ratio of services, including banking services could increase even in the years of the crisis, opposed to durable and semi-durable consumer goods., as is shown in the following figure.

Figure-4.: The ratio of consumption costs of households

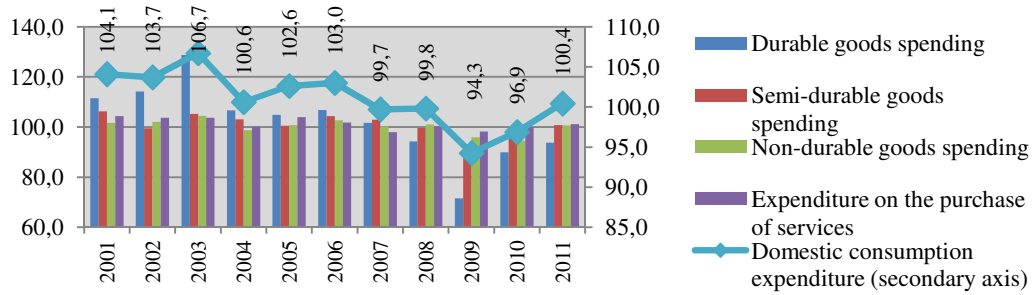


Source: own compilation (2013), based on the data of the Central Statistical Office

If we examine the volume index of consumption costs we can get a closer picture about the changes which were brought about by the effects of the crisis. The

largest decrease can be seen in the year 2009 again, when the consumption of all products fell back considerably. As can be seen, 2010 was the year of recovery, and the consumption of products and services remained at the level of the previous year only in 2011 (except for durable products, which had a further decrease):

Figure-5.: The ratio of consumption costs of households



Source: own compilation (2013), based on the data of the Central Statistical Office

3.2. The effects of the crisis on consumption according to the study

Let us show the results of our study with the above macro-data in mind. As mentioned in the methodological part, we conducted our research in two circles, in 2010 and 2013. The aim of this study is to show the result of a part of our research, the changes in the consumption of food, according to average citizens. We tried to see with the help of calculating Pearson’s Chi-square if there is a statistically proven correlation among the gender, age, educational level and their consumption of food. The following table shows the results:

Table-1.: The values of Pearson's Chi square test according to food consumption and characteristics

	Gender	Age	Level of education
Research of 2010	0,0509	0,0007	0,0001
Research of 2013	0,0093	0,0001	0,3119

Source: own research 2010 (N = 291), 2013 (N = 352)

As it can be seen there is a visible correlation between the age and level of education of the results of 2010. In order to discover inner correlations we calculated the values of corrected standardised residuals, according to which we experienced the following correlations. Among the respondents who are under 25 and mainly students who are not at work yet felt in greater proportion than expected that their food consumption had absolutely been influenced by the crisis. It is interesting that the following young age group of 25-29-year-olds, who have jobs and and regular income felt, above the expected value, that the crisis had rather influenced their food consumption, however, less than expected felt that the consumption of these products had completely changed. Older respondents also felt the mainly negative effect of the crisis on food consumption in a greater proportion than expected. If we examine the 2010 sample according to level of education it is another interesting fact that in the case of those with secondary education more respondents than expected felt that the crisis had absolutely changed their food consumption. It was the opposite in the case of those with higher qualifications. The reason can be found in differences of wages. While in the case of those who have secondary school degrees a few thousand or ten thousand forints difference has a significant effect on the household budget, this is not experienced with the considerably higher salaries of those with tertiary education.

Table-2.: The corrected standardized residual values according to the 2010 research

		Not effected at all	Not very much effected	Rather effected	Absolutely effected
Age	Under 25	0,10	0,27	-1,86	2,02
	25-39 years	1,28	0,27	2,08	-4,33
	40-55 years	-1,64	-0,64	-0,26	2,74
Qualifications	Primary	-1,03	1,24	0,23	-1,20
	Secondary	-0,35	-1,68	-1,78	5,16
	Tertiary	0,73	1,26	1,73	-4,82

Source: own research 2010 (N = 291)

According to the 2013 research there was a statistical correlation, based on Pearson's Chi-square between the gender and age of respondents. Examining the corrected standardized residual values it is a striking fact that men felt in a greater proportion that the crisis had not effected their food consumption at all. As

opposed to this, female respondents had experienced the contrary. Compared to the values of 2010 it is also remarkable that five years after the crisis respondents, and mainly those younger than 25 years old felt that the crisis had not influenced their consumption. More than expected thought that the crisis had not effected their consumption at all, and parallel to that they felt less than the expected value that it had changed. 25-39-year olds and the oldest, 56-64-year-olds thought in a considerably less extent than expected that the crisis had not influenced their consumption

Table-3.: The corrected standardized residual values according to the 2013 research

		Not effected at all	Not very much effected	Rather effected	Absolutely effected
Gender	Male	3,12	-1,42	0,47	-1,15
	Female	-3,12	1,42	-0,47	1,15
Age	Under 25	4,47	1,89	-2,20	-2,69
	25-39 years	-2,04	0,62	-0,25	1,04
	40-55 years	-0,35	-1,57	0,73	1,20
	56-64 years	-2,32	-1,26	1,97	0,69

Source: own research 2013 (N = 352)

4. CONCLUSION

We can conclude that immediately after the crisis, in 2010, examining the change of food consumption it can be stated that every segment of the research had felt the changes. It can be underlined that according to the corrected standardized residual values the most significant relationship was seen with those absolutely effected, compared to the expected values. The curiosity of the 2013 research is that five years after the crisis hit respondents do not feel that it has considerably influenced the amount of their food consumption, which is also shown by the residual values. Therefore, the principle that time heals has already been proven in 2013, since we do not see as a disaster what was leading the world towards a complete economic collapse some years before.

BIBLIOGRAPHY

- [1.] Askaboutmoney.com (2008): Hyman Minsky's universal framework for understanding all bubbles. <http://www.askaboutmoney.com/showthread.php?t=24601>, letöltve: 2008.03.12.
- [2.] Árvai, - Vincze (2001): Models of Financial Crises: Can They Explain the “Boom” of Financial Crises in Transition, in: Banking and Monetary Policy in Eastern Europe: The First Ten Years (edited by: Winkler, A.), Palgrave
- [3.] Bordo, M. – Eichengreen, B. – Klingebiel, D. – Martinez-Peria, M. S. (2001): Is the Crisis Problem Growing More Severe?, Economic Policy, Volume 16., Issue 36., pp. 51.-82.,
- [4.] Kolozsi, P. P. (2013): Monetáris politika, érdekcsoportok, pénzügyi válság, Pénzügyi Szemle, 2013/1. szám, 35.-52. pp.
- [5.] Mihm, S. (2008): Dr. Doom, New York Times, 2008. August 15, http://www.nytimes.com/2008/08/17/magazine/17pessimist-t.html?pagewanted=all&_r=0, downloaded: 12.12.2008.,
- [6.] Shiller, R. J. (2006): Irrational Exuberance, Crown Business, USA
- [7.] Shostak, F. (2007): The Hyman Minsky theory does not explain the current financial crisis, BrookesNews.Com, 2007.12.03. http://www.brookesnews.com/070312minsky_print.html, letöltve: 2008.03.04.