

## **THE EFFECT OF THE SUB-PRIME CRISES ON WORKPLACE SAFETY IN HUNGARY BASED ON A PRIMARY RESEARCH**

### **Ágnes Csiszárík-Kocsir Dr.Ph.D.**

Associate Professor, Óbuda University – Keleti Faculty of Business and Management,  
H-1084 Budapest, Tavaszmező u. 17., Hungary,  
kocsir.agnes@kgk.uni-obuda.hu

### **Mónika Fodor Dr.Ph.D.**

College Senior Lecturer, Budapest Business School, Faculty of International Management and Business  
H-1165 Budapest, Dióssy L. u. 22.-24., Hungary,  
fodor.monika@kkfk.bgf.hu

### **András Medve Dr.Ph.D.**

Professor, Óbuda University – Keleti Faculty of Business and Management,  
H-1084 Budapest, Tavaszmező u. 17., Hungary,  
medve@uni-obuda.hu

### **— Abstract —**

Following the eruption of the greatest crisis in the new millennium, the crisis has spread worldwide at a record pace including every economy, region and has left all of them ruined. The crisis, thanks to the global money markets, has reached the whole world, each of its sectors and players. One of the largest loser of the crises was the household sector, because the companies' first step was the drastic cutback of the number of the applied workforce. The workplace safety decreased significantly in 2008 and 2009 based on this. The aim of our study was to analyze this effect with a different age, sex and educational level based on respondents' personal perception by a primary questionnaire research.

**Keywords:** global crisis, national crisis, workplace safety, primary research

**JEL Classification:** R 29

## **1. REVIEW OF LITERATURE**

The credit crunch that originated in 2006 from the United States of America reaching its peak by 2007 took a lot of 'tolls' all over the world. By that time the

amount of credits taken by the Americans had exceeded 13,000 billion USD (Király – Nagy – Szabó, 2008). Unfortunately, this amount was not only concentrated in the hands of the so-called positive debtors as there were a lot of such debtors who were regarded as problematic, i.e. sub-prime even when asking for loans. The amount of credit itself would not have meant an immediate problem if the real estate market had not started its unexpected, dramatic decline in parallel. Due to bad debt and the problems of macro economy more and more American financial institutions became insolvent. Losoncz (2009, p. 9) in his paper interpreted the emerging crisis mainly as a bank crisis rooting in the banking system that first appeared as lack of trust and later took the form of a liquidity crisis and credit crunch. The demand for credit dramatically risen in the 2000's was coupled by new financial products and mortgage portfolios described with different mathematical formulae by the banks in the background. As mathematical constructions were very well planned and practically non transparent and they could also be rated as excellent investment opportunities by credit assessors, they proved to be attractive investment forms for every region of the world.

This appetite for credits have spread over every regions of the world and Hungary was not exempt of it. The appetite for credits was partly increased by the credit products offered by the banks since through their investments huge amount of money was obtained then offered to the players of macroeconomics for the purpose of increasing consumption and fixed assets. At the turn of the millennium the banks already covered the great credit demand with new financial products and mortgage bonds packed into portfolios comprising of various mathematical formulas. Because the mathematical calculations were extremely complex and practically unclear but at the same time regarded as an excellent investment opportunity by the credit qualifiers therefore they proved to be as an attractive investment by every regions in the world. Consequently almost every players of the money market bought some of these mathematical calculations, merely 39% was purchased by the Europeans (Király – Nagy – Szabó, 2008). These resources enlarged the money supply and artificially increased the demand for credits demand worldwide.

The credits were given abundantly both to the creditworthy and not so credit worthy debtors. However it appears as if the system has forgotten the risk of subprime debtors for a moment! These credits are considered as good investment until the coverage behind is stable, however as the crisis began in 2006 and the

housing market shrank, the interests soared which resulted in the great increase of the credit charges.

Bélyácz – Pintér (2011) regards the most important factors (but not limited to) of the present crisis:

- change in the form of credits,
- bubble formation then bursting of the bubble,
- excessive leverage,
- undervaluing the risks,
- asymmetric information flow,
- lack of transparency,
- inadequate control mechanisms,
- misleading accounting practices.

Soros traces the reasons for the crisis visible even in 2007 back to three mistaken measures and likens it to bursting a super bubble (Soros, 2009, pp. 130-131):

1. long-lasting and dynamic credit expansion,
2. globalised financial markets without borders and
3. not regulated financial markets that gives ground to novel financial constructions.

Lentner – Szigeti – Borzán (2011) highlights the role of the following interest groups in terms of the outbreak of the financial crisis and escalation in the financial markets:

- banks and other banking businesses on the supplier side,
- borrower’s business, households on the demand side,
- the Government, the Central Bank and the authority body which all have regulatory role.

Quoting Soros, due to the global financial markets and the significant amount of mortgage stock, Europe also felt the first impacts of the crisis in 2008. The financial players were compelled to suffer huge losses deriving from their portfolio. Besides, it also gave a headache to the states, companies and households given their enormous debt in foreign currency denominations (Muraközy – Muraközy, 2008). Indebtedness in foreign currency made the countries even more exposed due to the constant exchange rate fluctuations so countries with debt in foreign currency became strongly affected by the ongoing impacts of the crisis as

a consequence of their connection to international financial markets. The financial crisis gave a good reason to define the responsibility of the financial firms also. In Hungary, besides the factors listed above, the responsibility of the banks in the development and deepening of the crisis is obviously a question to be answered. In order to solve the situation in the near future, the banks would do well by educating the citizens financially and having a sustainable and predictable credit policy besides maintaining the stable money supply of the national economy (Borzán – Lentner – Szigeti, 2011). Apart from the responsibility of the banks, the subsystems of the general government need to be mentioned – especially the local governments that show example already for years through their attitude aiming at the debt spiral by jeopardising the supply of public goods (Kovács, 2011). In our country the scenario was similar and the impacts were felt by all the economic sectors especially by the households to a great extent. In some industrial branches the workplace safety did not change in a merit (Kovács-Pató-Szabó, 2012), but the change touched the most of people very seriously

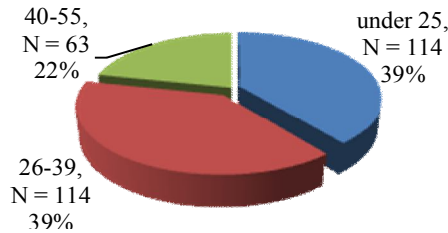
## **2. MATERIAL AND METHOD**

Our quantitative research<sup>1</sup> was carried out on the basis of the national survey that was conducted in 2010 and 2011 when the impacts of the global crisis became obvious and experienced. The research was conducted through a pre-tested standardised questionnaire compiled by us and written responses were collected. The questionnaire did not include open questions where respondents could select answers provided by the researcher to make the process of analysis better and easier. Furthermore, care was also taken to avoid such questions that would reduce or impair the willingness of the respondents to answer or would violate their personal rights. Answers were sought to such questions that were not covered in details by the press or media so we mainly relied on the personal opinions and experience of the respondents. It was also our objective to incorporate such questionnaires in the sample that could convey information for the researcher on the basis of valuable experience. To sum it up, a relatively wide range of respondents by age, position and qualification were preferred to be subject to analysis. The composition of the sample is illustrated by the figure below.

---

<sup>1</sup> The title of the research and names of researchers: Dr. Ágnes Csiszárík-Kocsir – Dr. Mónika Fodor (2010): Questionnaire on the impacts of the crisis (Dr. Csiszárík-Kocsir) and its implications on institutional catering (Dr. Fodor).

**Figure-1: The composition of the sample by age, N = 291**



Source: own research, 2010-2011.

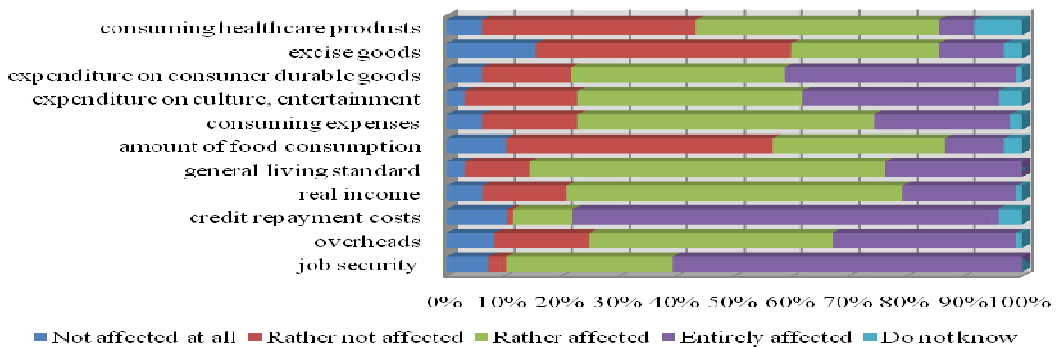
In the first part of the questionnaire an answer was sought what impacts the crisis brought for the respondents, i.e. what has changed in their living conditions. The results and conclusions were analysed by means of basic statistics and cross tab analyses. The questionnaire was processed by SPSS (Statistical Package for Social Sciences) 14.0 and Microsoft Office Excel 2007 programmes. In total, 400 questionnaires were distributed, 61 of which were not returned, 48 were partly filled in so altogether 291 of them could be assessed.

### 3. RESULTS

The questionnaires were directed at examining the extent to which 'ordinary' people were affected by the crisis regarding job security, growing overheads or changing expenditure on healthcare products among others. The responses are illustrated by Figure 2.

**Figure-2: The interpretation of the impacts of the crisis on the entire sample**

(N = 291, measurement: interval scale)

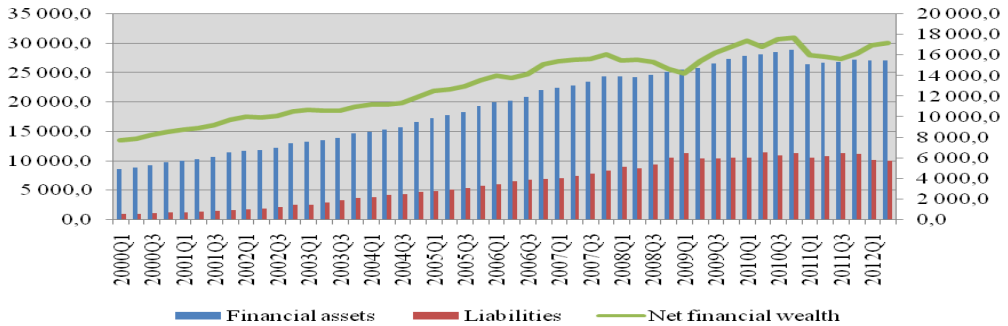


Source: own research, 2010-2011.

### **3.1. The connection between the households' net financial wealth and the workplace safety**

Based on the above figure it has to be said that the interviewed respondents mostly experienced the impact of the crisis in connection to occupational safety and loan repayment costs. Concerning the loan repayment costs, the credit boom in Hungary should be remembered which started in 2004. In the years preceding the crisis, the excess liquidity appeared all over the world including Hungary making the credit supply cheaper and abundant. Just as Figure 3 shows, the ample liquidity resulted in the continuous growth of the liabilities of households since the turn of the millennium. This was not an issue while the value of financial wealth (deposits, securities and other financial commitments) possessed by the households increased in parallel with the value of the liabilities. This connection is clearly shown in the value of net financial wealth which increased steadily until the first quarter of 2008 by 1-5% on average each quarter. As the crisis passed through Hungary and the loan repayment costs soared to the skies, the households lost significantly some of its wealth. It is obvious from Figure 3 that the financial wealth also increased between the second quarter of 2009 and the third quarter of 2010 thanks to the government job retention measures as well as the salary equalization made because of the transfers. Thereafter, however the studied data started to decrease again. Nevertheless, in the last 3 quarters (up to the first quarter of 2012), we can witness the first signs of positive developments. Based on the data of the National Bank of Hungary, the household debts have started to decline and so far proved to be persistent. Based on the data of the National Bank of Hungary, the household debts started to decrease continuously and so far proved to be permanent. The following factors played and plays an essential role in the decrease of household debts: the tightening of credit conditions, the taking of consumer credit loans made more difficult, the increase of the minimum value of private financial participation required for housing loans on the consumer side, the debtor protection, the difficulty to sell securities, the eviction moratorium and the tightening of the foreign currency lending options on the bank side.

**Figure-3: The net financial wealth of households and its composition in billion HUF between 2000-2012 (quarterly, non-consolidated stocks)**

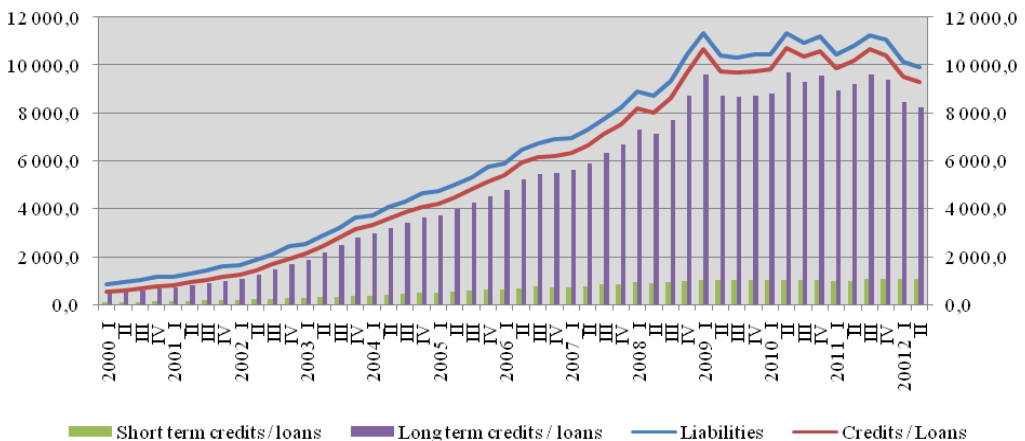


Source: own compilation based on the data of the National Bank of Hungary, 2012.

A further study on the dependence of the households on current income reveals that it also depends heavily on the length of external resources. The longer the household indebtedness exists and the longer it is forced to calculate in its budget the loan repayment costs, the stronger its dependence will be on the current incomes.

Therefore loss of job is also dominant from this point of view.

**Figure-4: The liabilities, loans of the households on short and long term, billion HUF (quarterly, not consolidated stocks)**



Source: own compilation based on the data of the National Bank of Hungary, 2012.

If the credit situation mentioned above is further analysed, we can clearly see that the services of financial institutions include not only the property loans but the

consumer loans as leading ones. The consumer loans bring forward the planned future investments and the consumption. Therefore if we apply the basic macroeconomic relations of the four sectors model to the Hungarian economy ( $Y = C + I + G + + [X - IM]$ ), it can be said that the Hungarian economy had already used up the first three components of the equation well before the breakout of the crisis (Lentner – Kolozsi – Tóth, 2010), so the stimulation of the economy could not be expected from either the government nor the household or the corporate sector, the only solution was to open towards the rest of the world.

The dependence of the households' indebtedness and current operation is shown from the point of view of the exchange rate changes. From the turn of the millennium, but especially from the EU accession the rise in foreign currency loans is strongly observable. The greatest risk of the foreign currency loans is the exchange rate risk which most of the households did not calculate at the time of borrowing.

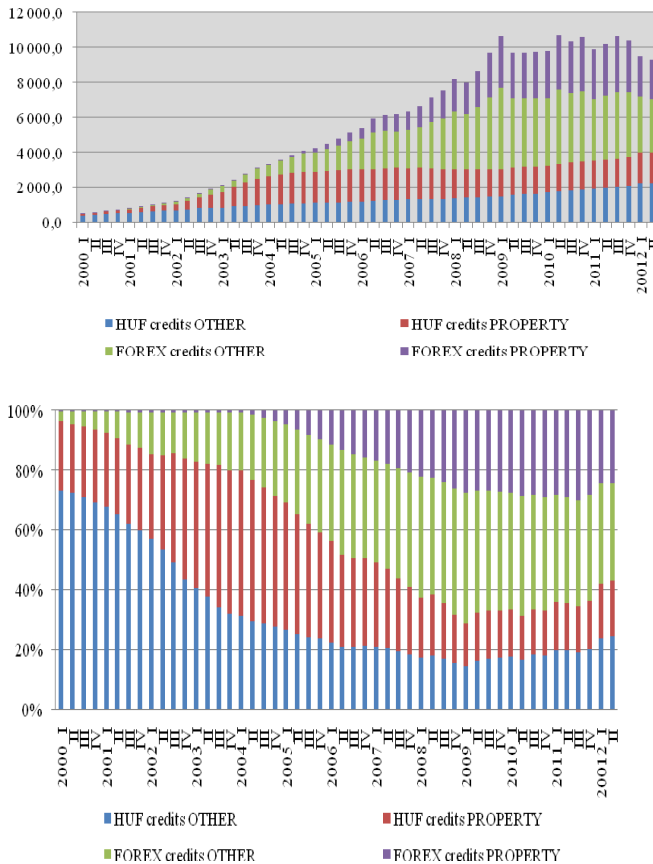
Beside the repayment amount which is not fixed (and can exceed three times the initial repayment amount sometimes) we have problems with the changes of the loan composition, meaning that since 2004 other loans appear more and more strongly, of which the consumer loans have the biggest part. All that is mentioned above is illustrated in details by the figures below.

The financial situation described above shows that the majority of the households is able to pay the repayment amounts of the borrowing only in the case of a secure job and salary.

In a double-income family where the family have at least a home loans and another consumer (car) credit, the loss of job could have drastic consequences. If, beside the loss of one of the earnings in the family, we consider the extent of the borrowing, possibly taken in foreign exchange, by which it has become more expensive, then the consequences are catastrophic to the family (eviction, deterioration in quality of life). This and the possibility of the loss of job are in themselves are destructive. We intended to assess these affects with the survey research which results are published below.



**Figure-5:** The loan of the households in HUF and in foreign exchange, types, in billion HUF and in % quarterly non consolidated stock

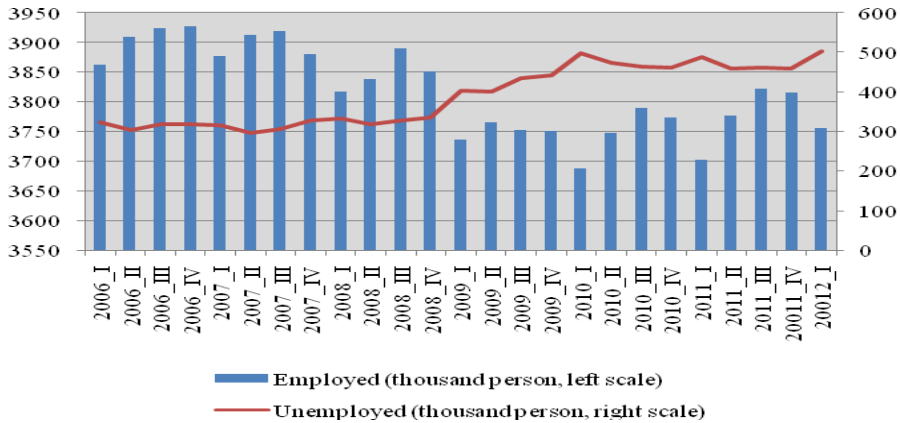


Source: own compilation based on the data of Hungarian National Bank, 2012.

### 3.1 The changes in workplace safety based on the education of the respondents

In the first part of the questionnaire an answer was sought how the crisis affected the respondents with different levels of education. The crisis had multiple impacts on households but one of the most general and obvious impacts is the sudden and dramatic rise in the cost of loan repayment and the drastic fall in the number of jobs (Csiszárík-Kocsir et.al, 2011.). The repercussion of these effects resulted in decreasing living standards and well being and curbing consumption.

**Figure-6: Changes in the number of employed and unemployed between 2006-2012**

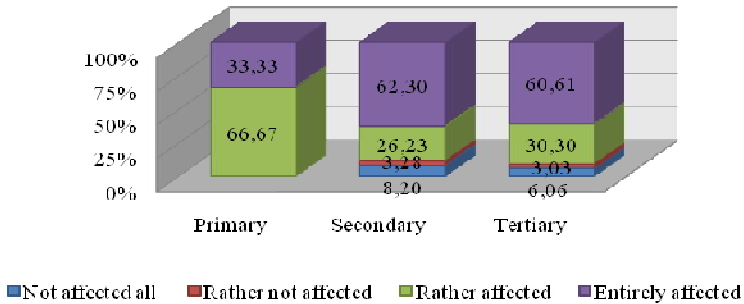


Source: own compilation based on the data of the Central Statistical Office, 2012

The decrease in job security was mostly experienced by those with elementary education where unemployment rate is the highest. Regarding those with higher education the chances of losing a job were also high as 91% of the respondents that belong to this segment were partly affected while only 89% of those with secondary education were involved in this issue.

Most enterprises tried to manage the negative effects of the crisis that instead of mass redundancies they were about to make a compromise, i.e. by reducing either the working hours or payment. Changes in real income also made an impact on all the respondents with elementary education. Again those with secondary education were the least affected although their proportion can be regarded high as the real income of three quarters of them decreased to a slighter or greater extent. Surprisingly, the real income of 82% of those with higher education decreased, which illustrates that employers were committed to finding alternatives to maintain the relatively low level of salaries for those with secondary education even if it meant curbing higher payment.

**Figure-7: Changes in job security by education**  
 (N = 291, cross tab analysis, measurement: interval scale)



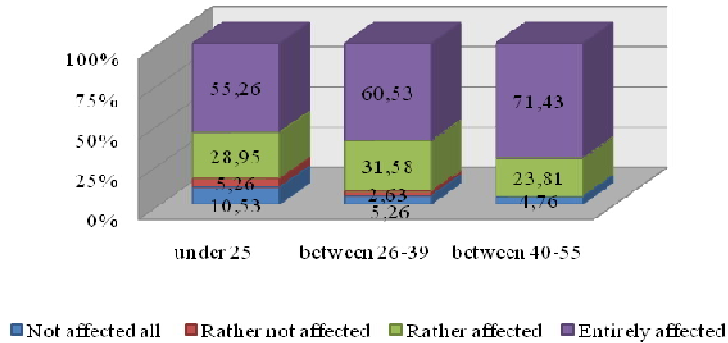
Source: own research, 2010-2011.

Like in the case of the previous two factors, the increase in loan repayment costs was also experienced by all the three sectors to a slighter or greater extent. In this case also it was those with elementary education who were the most affected but the increasing burdens also had a great impact on the other two groups, as well. The interesting fact in the sample is that respondents who did not have loans and as a result, opinions either on this impact were only present among those with secondary education. The decrease in general living standards was also experienced by all respondents with elementary education. On the contrary, the segment of those with secondary education was the second in the rank as nearly 64% of them have experienced or currently experiencing a reduction in the living standards. Those with higher education were affected to a slighter extent but even in this case three quarters of the sample were affected.

### 3.2. The changes in workplace safety by age

The changes in job security were practically experienced by all age groups as all the respondents expressed their personal opinions and involvement in this respect. Considering the sum of the single segments as 100 % it can be seen that a great part (55-72%) of respondents were entirely affected by the loss of job security as an impact of the crisis. It can also be stated that 84% of the young under 25 years of age, 92% of those aged between 26 and 39 and 95% of the elderly experienced the uncertainties in job security.

**Figure-8: The impact of changes in job security in the single age groups (N = 291, cross tab analysis, measurement: interval scale)**

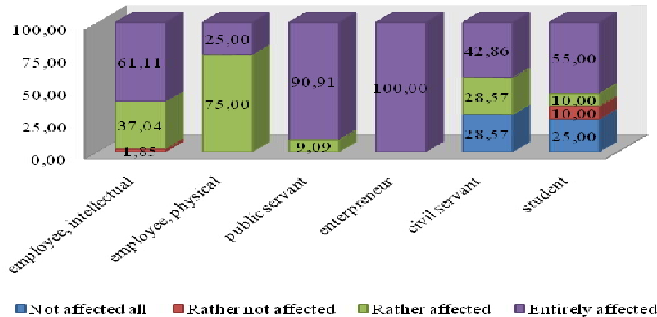


Source: own research, 2010-2011.

### 3.3. The changes in workplace safety by the occupation

Examining the development of occupational safety, it can be established that the Hungarian economy practically hardly has such segment where the employees can feel safe. The most vulnerable sector is the business sector which gradually – following the crisis – got into an increasingly difficult situation due to the uncertain economic environment, the loss of welfare and the disposable income scarcity. Following the crisis, the largest wave of bankruptcies after the EU accession started among the entrepreneurs which were reflected in the answers of the entrepreneur respondents also. The other, also endangered sector is the group of civil servants. In the management of the crisis the first measure of the Government was to reduce spending which could be carried out the quickest by cutting the labour costs and the capital expenditures. The staff of the public sector was started to be reduced, the vacant positions were eliminated and jobs were destroyed by the merging of the institutions. Therefore almost every respondents of this entrepreneur group (nearly 91%) reckoned that his or her job is in complete jeopardy. The interesting fact about the results is that the only group among the respondents where the crisis affected the occupational safety the least (25%) were the blue-collar workers, but this group was not fully exempt of the affect of the crisis.

**Figure-9: The impact of changes in job security by the occupation (N = 291, cross tab analysis, measurement: interval scale)**

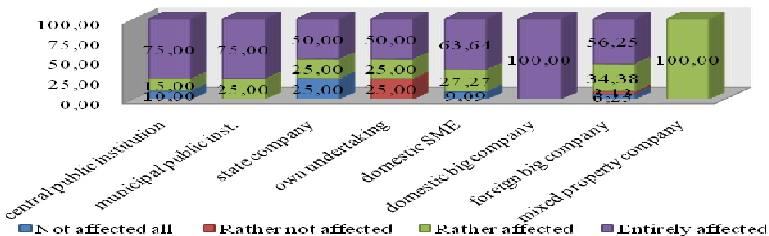


Source: own research, 2010-2011.

### 3.3. The changes in workplace safety by the workplace

The changes in occupational safety were analysed based on the workplaces. Among the respondents of those fully affected by the crisis was the group working at large enterprises owned by Hungarians who – almost without exception – are afraid of termination. The reason behind are that the domestic economy is largely dependent on the foreign markets as well as the corporate sector has lack of resources. An interesting result compared to the previous one is that the employees in the domestic small and medium-sized enterprises have experienced the mentioned affect to a much lesser extent as only 64% of the respondents regarded the situation so seriously. 75-75% of the employees in public institutions likewise had fears of being terminated; however among the workers of the public institutions financed by the Government were respondents who were not afraid of losing their job (10%). The respondents not afraid of losing their job were however only among those working in their own enterprises. A further interesting result is that the safest workplaces can rather be found in the foreign-owned companies

**Figure-10: The impact of changes in job security by the workplace (N = 291, cross tab analysis, measurement: interval scale)**



Source: own research, 2010-2011.

#### 4. Conclusion

Based on the above results, it is true to say that the Hungarian economy has been greatly affected in several aspects equally by the impact and after-effect of the financial crisis. Beside the enterprises and the general Government, the households were also affected. The households became highly vulnerable in regard to the current incomes because of the loans taken. The loan taking of the households have brought forward their future consumption which coverage was made of the future current incomes. The wage and the transfers are also put on the revenue side of the households' invoice in the four- sector macroeconomic model. That is why we intended to analyse the dependence on incomes through the personal perception of safety at work. The conclusion which can be drawn based on the research results is that there is hardly any workplace, occupation or bachelor/master degree in the Hungarian economy which would exempt its employee or owner from the unfavourable affects. In many families losing job, however, means the final hit to the bottom and a sharp drop in welfare. Therefore the preserving of jobs and the effective and permanent increase of occupational safety is the common interest of society.

#### References

- [1.] Borzán, A. – Lentner, Cs. – Szigeti Cecília (2011): A pénzügyi vállalkozások felelősségvállalásának új dimenziói, *Economica*, Szolnok, pp 22.-30.
- [2.] Bélyácz, I. – Pintér, É. (2011): Egy különös pénzügyi válság rendhagyó tanulságai, *Hitelintézeti Szemle*, 2011/5. szám, pp. 465. – 480.
- [3.] Csiszárík-Kocsir, Á. – Medve, A. (2011): The conceptual interpretation of the sub-prime crisis according to age groups, occupation and qualification based on a questionnaire research, 2011 Global Business Conference (GBC), Sibenik, Croatia, 2011. september 21.-24., Institut za Inovacije,
- [4.] Király, J. – Nagy, M. – Szabó, E. V. (2008): Egy különleges eseménysorozat elemzése – a másodrendű jelzáloghitel – piaci válság és (hazai) következményei, *Közgazdasági Szemle*, 55. évfolyam, július – augusztus, pp. 573.-621.
- [5.] Kovács, G. (2011): Municipal bond boom in Hungary: focusing on the analysis of local financial management, In: Presented Papers from the 19th NISPAcee Annual Conference: Public Administration of the Future. Varna, Bulgária, 2011.05.19-22., Bratislava: NISPAcee,
- [6.] Kovács, Z. – Pató, B. – Szabó, L. (2012): Standardization of Logistics Job in European Union – Freight Forwarder, in Goran Vlastic, Jurica Pavicic, Josef Langer (editors), *Global Business Conference 2012 proceedings. To standardize or not standardize? September 19-22, 2012 pp. 155-161.*

- [7.] Losoncz, M. (2009): A globális pénzügyi válság újabb hulláma és néhány világgazdasági következménye, Pénzügyi Szemle, 54. évfolyam, 1. szám, pp. 9.-24.
- [8.] Lentner, Cs. – Kolozsi, P. – Tóth, G. (2011): A magyar válságkezelés sajátosságai és ellentmondásai, EU Working Papers, 2010/1., pp. 1.-15.
- [9.] Lentner, Cs. – Szigeti, C. – Borzán, A. (2011): New Dimension of Banks Social Responsibility, In: Szente V, Szendrő K, Varga Á, Barna R (szerk.) Abstracts of the 3rd International Conference of Economic Sciences: Sustainable Economics - Community Strategies, Kaposvár, Magyarország, 2011.05.19.-20. Kaposvári Egyetem,
- [10.] Muraközy, B. – Muraközy, L. (2008): Mi változott és mi nem? A lakossági devizahitelek és a hiteles politika, Hitelintézeti Szemle, 7. évfolyam, 6. szám, pp. 630.-646.
- [11.] Soros, Gy. (2009): A 2008-as hitelválság és következményei, Scolar Kiadó, Budapest.