

NATIONAL UNIVERSITY OF PUBLIC SERVICE

Doctoral Council

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**CHALLENGES OF ECONOMIC SECURITY IN THE WORLD OF
GLOBALIZATION TODAY**

PhD Thesis Author's Review

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DESCRIPTION OF THE SCIENTIFIC PROBLEM

The world financial and economic crisis in 2008 made millions of citizens of many countries aware that at least as serious threats affect their daily life from economy as from military, political, or environmental dimension. Yet the research of security in economic dimension - especially in our country – is not emphasized so significantly as it should be in comparison with other areas of security studies and economics framework.

What kind of impact has the globalization on economic security of each country is also the question that has been raised frequently nowadays. Another important question is whether the danger derives from the activation of each risk that has been intensified or still being intensified based on the globalization trends, that is, whether is likely that more and more countries will increasingly be forced to face serious economic problems? Or, on the contrary, the globalization has no significant impact on economic security; crises have always been, and always will be, and does their resultant lay in economic necessities? In my dissertation, I have looked for the answers for these questions.

Summarizing these experiences and thoughts, *I have defined the scientific problem in a way that is suitable for a complex subsystem-level analysis and measurement of economic security, since today a mathematically manageable system of indicators has been definitely missing from disciplines of security studies in Hungary.* The aim of my research is to fill this gap. I have examined global processes taking place worldwide and their impacts on economic security of national economies from the perspective of security studies and defense economics intelligence. In my dissertation, I have tried to embrace the questions of economic security as much as possible within the framework of regulation.

OBJECTIVES

Before the research my target was to achieve the following results:

1. Using the evolutionary development of the economic security term, I produce a system that faithfully maps the interpretation of risks associated with the operation of the economy on national economy level. The primary task of my research is to accurately define the economic security system and its components.

2. I define the metrics and indicators with which the level of economic security and vulnerability of a country, that is, the activation risks of factors that threats security, can be determined. Though the subjective sense of security is accepted, I feel to define metrics indispensable and necessary, because the interpretation of the security concept is impossible without the existence of exact clues. In economic and other dimensions of security, it is important that we are speaking about security not only through words, generally, but via existing indicators with which the state of the security can be determined. To have the indicators that indicates if the danger of activation risk is increased in any field of our economic security. In Hungary no work has revealed and summarized these indicators. These indicators should be established for investigating each subdivision of the security level of economic security, and for determining the general state of economic security. During my research I have completed both tasks.

3. I examine the impacts of globalization processes on economic security. Investigating the whole data of all countries in the World would exceed the scope of my research. Thus, I would like to give an approximation to the results by selecting and analyzing two extreme groups of countries, the most and the least developed ones, from which I can draw conclusions on economic security impacts of globalization.

HYPOTHESIS

The existence of economic security means the insurance of the normal operation of an economy. An economy working in a normal manner is capable of producing the usual quantity and quality of goods for the society, or otherwise meeting the demands in the period of crisis. That this distribution of goods produced and in what manner, and who and how to benefit from it, is rather a social or political issue. Consequently, social issues should not be integrated into the issue of economic security. Thus, my first hypothesis is that *social security is not part of the area of economic security* although there is a strong correlation between the two areas.

My second hypothesis is to *identify those indicators with which both the situation of economic security and the risk level of its individual subareas can be generally measured.*

The third hypothesis of mine is that *globalization processes have a significant impact on economic security of each country, whether it is the most, or the least developed country.* During globalization, the interdependence of national economies has significantly increased, and consequently I suppose that the danger deriving from the activation of economic security risks has been increased in all areas of economic security.

RESEARCH METODOLOGY

As the first phase of my research, I have studied the national and international scientific literature dealing with security in a broader sense, as well as economic and social security as its specified area. In addition, I have also examined scientific works, specially professional journals, related to the specific parts of my research area. I have consulted national experts of economic security, such as the professors of the university to which I belong. According to their recommendation and the orientation of domestic disciplines, I have approached my scientific work from the mindset and system of the Copenhagen school. I have built up the model of economic security accordingly. The logic in the model and system provides the essence of my whole research.

I have extended my knowledge of mathematical modeling by studying the related economic and econometric literature. I have received a great help for my work and preparation from econometric experts. This way I have successfully collected and created indicators for measuring economic security.

As the next part of my research, I have studied the opinions of international, world economy and politics organizations, experts from supranational institutions and national specialists about globalization. Using this knowledge, I have specified the globalization processes to be examined.

To analyze the impacts of globalization processes on economic security, I have used databases of supranational institutions (UN, WTO, IMF, WB, OECD, and so on). In addition, I have collected the data set that are important for me and I have analyzed them using statistical methods.

DESCRIPTION OF THESIS SECTIONS

In the first section of my thesis, I have built up the model of economic security; I have determined and defined its subsystems. I have analyzed the relationship of subsystems based on circular causality, the chaotic dynamics of activation of risks, and the relationship between world economic interdependences and economic security. I have interpreted the social dimension of security. I have separated the social security from the issue of economic security.

In the second section, I have collected and created indicators suitable for measuring the security level of subsystems. I have looked for simple indicators that can be used for at least basic-level analysis of economic security in each economy of the world. After that I have selected 7 indicators and converted them to dynamic indices. Using these dynamic indices, the activation process of risks can be monitored and predicted.

In the third section, I have examined the effects of globalization processes on economic security. Specifically, I have analyzed the following effects:

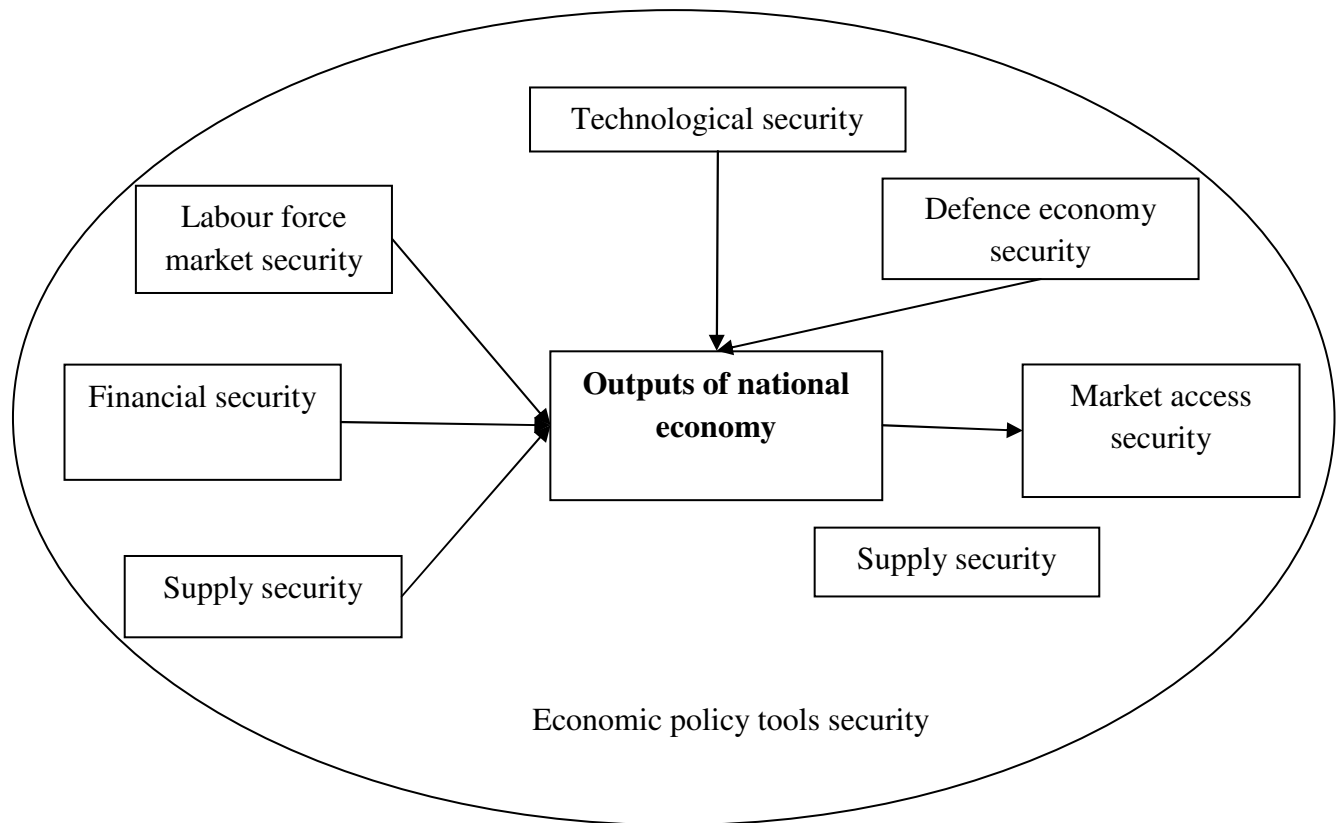
- decreasing trade barriers and increasing trade in goods and services on the supply and market access security,
- increasing capital flows on the security of financing and economic policy assets and margin,
- accelerating technology flows on the market access security,
- and increasing labour flows on the labour force market security.

In addition, I have also examined the mechanism of actions derived from the increasing role of supranational organisations and transnational corporations.

SUMMARIZED CONCLUSIONS

During defining the economic and social dimensions of security, I have concluded to the followings results. Economic security as condition can be interpreted that the activation risk of factors and processes threatening the normal economic operation and sustainable expansion is not higher than the normal range. Consequently, the economic policy assets and organisations can perform their tasks using normal algorithms and methods and a higher level of state (economic policy) intervention is not required.

I have defined the following subsystems as economic security components:



Regarding defining subsystems, the supply security means the security of supply chain operation, that is, the possibility to access to the material inputs and services required for operating the supply and service process. In addition, it means the delivery of produced goods and other assets (for example, money) necessary for the operation of the economy to their users (residents, producers, government units, allied forces, foreign customers, and so on) with less risk than the normal level and in an appropriate time and way.

The existence of financial security means that the national economy is able to obtain savings enough for financing possible budget deficit and national debt and for maintaining production and service processes of national economy from capital and money markets.

Thus, the reproduction and existence of well educated labour forces, with which output levels of national economy can be sustained and expanded, can be considered as the part of labour force market security.

The technological security is determined by securing a technological level required for sustaining and expanding the national economy output in a stable way.

The security level of defence economic is defined by the adaptation ability of the national economy operating during crises period.

The security level of market access depends on the skills of national economy companies to sell their products and services on the internal or world market.

The security level of economic policy tools depends on how much the economic policy of a certain country is able to bias the security level of the other subsystems of economic security with different fiscal, monetary, and other assets (for example, communication, diplomacy, and so on).

I have explored two fundamental subsystems of the social dimension of security. One of the subsystems, called overall social subsystem, is dealing with the security of potential involvement into the social success, production, decision, and redistribution scheme. The other subsystem, called individual social subsystem, also known as subsistence security, is connected to the factors of existential security that are not directly dependent on the control function of the state.

In the second chapter I have examined what kind of index-numbers are suitable for measuring the security level of subsystems. I have examined each subsystem of economic security. I have selected the following indicators:

In the supply security domain I have considered the following indicators useable:

$$\text{import dependency} = \text{value of import} / \text{value of GDP}$$

$$\text{import energy dependency} = \text{energy imports (PJ)} / \text{energy used (PJ)} - \text{energy exports (PJ)}$$

$$\text{geographical diversification of production} = \text{number of enterprises in examined branch or sector} / 1000 \text{ people}$$

$$\text{geographical diversification of production} = \text{number of manufacturers in the branch} / 1000 \text{ people}$$

$$\text{geographical diversification of production} = \text{number of manufacturers receiving a predefined percent (threshold) larger portion from the total production} / \text{total number of manufacturers in the branch}$$

$$\text{geographical diversification of production} = \text{value of production of manufacturers receiving a predefined percent (threshold) larger portion from the total production} / \text{total production of the branch}$$

The role of financial security is a quite important factor of economic security and can be easily characterized by the following indicator:

$$\text{net lending (borrowing) position of the economy} = \text{value of net lending} / \text{value of GDP}$$

Although the function of labour force market security is quite stable in most of the countries, examination of security processes on short-, middle-, and long term can be really useful in this domain too. Thus, I have suggested the following indicators:

*qualification level of labour force =
number of active population who have at least secondary school or vocation school
certification / total number of active population*

*structural qualification level of labour force =
number of workers employed in examined branch / total number of workers*

*balance of labour force market = number of immigrants in active age – number of
emmigrants in active age*

*structural qualification level of emmigrants =
number of emmigrants who have at least secondary school or vocation school certification /
total number of emmigrants*

*structural qualification level of immigrants =
number of immigrants who have at least secondary school or vocation school certification /
total number of immigrants*

I have characterized the technological security by the following indicators:

productivity = value of GDP / number of work hours

*relative value of money spent on research and development =
value of research and development spending / value of GDP*

According to the references, the level of defence economy security can be supremely approached by the following indicators:

nominal price production of defense industry

*relative value of defense industry's production =
nominal price production of defense industry / value of GDP*

*rate of resources used for production by the state =
number of workers employed by majority state-owned companies / total number of workers*

*rate of resources used for production by the state =
value of inventory stocks of majority state-owned companies / inventory stocks' total value in
business sector*

*relative value of state-owned companies' outputs =
added value of majority state-owned companies' production / value of GDP*

*ratio of GDP and defence economy demands from the cumulated ones from requirements
during the economic crisis*

The security level of market access can be represented by the following indicators:

$$\text{export dependency} = \text{value of export} / \text{value of GDP}$$

$$\text{change in global competitiveness position} = \text{change of real unit labour cost} / \text{change of productivity}$$

And finally, the security level of economic policy tools can be characterized by the following indicators:

$$\text{government budget position} = \text{public revenue} - \text{public spending}$$

$$\text{relative government debt} = \text{value of government debt} / \text{value of GDP}$$

$$\text{inflation} = \text{GDP deflator}$$

For the possibility of rapid and overall examination of the economic security level, I have selected some indicators from the above mentioned ones according to the following aspects:

1. Indicators should be easily prepared.
2. Each subsystem has to be characterized with minimum one indicator.
3. The chosen one should be able to adequately measure the security level of the subsystem.

Also, we need to prepare dynamic index-numbers because only these are suitable for measuring processes. Economic cycles influence the values of the indicators. Among these cycles, the Juglar-cycle produces the most significant bias. For decreasing its effect, I have suggested the following dynamic index-numbers measuring over a time interval of 8 years:

- *Economic openness*: is the data of foreign trade in the current year correlates to GDP comparing with the average of the examined period of 8 years
- *Import energy dependency*: is the data of energy balance in the current year comparing with the average of the examined period of 8 years
- *Net lending (borrowing) position of the economy*: is the data of net lending position in the current year comparing with the average of the examined period of 8 years
- *Balance of labour force market*: is the data of labour force market balance in the current year comparing with the average of the examined period of 8 years
- *Ratio of GDP and defence economy demands from the cumulated ones from requirements during the economic crisis*: is the data of the current year comparing with the average of the examined period of 8 years

- *Change in global competitiveness position:* is the change of labour force cost in real unit over a period of 8 years comparing with the change of productivity over the same time interval
- *Relative government debt:* is the data of the current year comparing with the average of the examined period of 8 years

In the third chapter I have examined the effects of globalization processes for OECD and LDC economies and tried to draw universal conclusions. During my research I have achieved the following results:

Due to globalization, nowadays an ordinary country needs to perform 30% more international trade to reach the same economical production than 50 years ago. Consequently, it can be declared that *globalization processes increase the risks also in the domain of supply and market access security all over the world.*

Via financial security, the growing value of capital flow can produce the following positive effects on economic security: Insufficient internal savings can be completed via portfolio and credit flow. Besides this, the growing and accelerating direct investment flow makes it possible for economic policy to increase capital inflow with raising the competitiveness of the economy. This is the job creating effect of globalization.

Via financial security, the growing value of capital flow can produce the following negative effects on economic security: Due to the available cheap external portfolio and credit inflow, the internal saving rate can significantly decrease which can cause a rapid and deep recession if external sources are exhausted. In addition, the growing and accelerating direct investment flow makes it possible for the capital to leave the country easily in case of decreasing competitiveness of economical environment. This is the job decreasing effect of globalization.

Examining effects of growing and accelerating capital flow for net lending (or borrowing) position of both country groups, I have drawn the following conclusion: *generally globalization has not got significant effect on net lending (borrowing) position of economies.* This is however principally formed by economic cycles and local or worldwide crises.

I have examined the effects of growing and accelerating capital flow in connection with economy policy assets security too and I have taken the conclusion that *accelerating capital flow decrease the external lag of the economy policy.* On the one hand, it could be positive in a sense if correct and right decisions are taken, positive consequences come out faster. On the other hand, negative effects of mistakes also would become more serious. Moreover data shows that growing and accelerating capital flow does not have an effect on increasing unequivocally the relative government debt.

Regarding labour force market security, it can be concluded that *globalization did not reduce the labour force market security of the least developed countries in the past 50 years. However, the accelerated migration as globalization process facilitates and strengthens it in case of developed countries.* The positive effects of migration definitely appear in developed countries. (It should be noted that the labour force market situation will not be worse in the

least developed countries, since a significant part of the population has no resource for migration and the immigration laws have become more strict in recent decades.)

I have concluded that the accelerating flow of technology results in an accelerated productivity growth, and the convergence of an economy to the world leading economies can be much more successful. On the other hand, it is a thread, because technological illiteracy can be developed in such places where people cannot access it or the economy or society is unable to use it. This technological illiteracy is probably the most serious and dangerous process, and resulting in a permanent depression, low potential in economic growth and deep social crisis. Analyzing the productivity data, I have drawn the conclusion that *countries basically benefit from the advantages of the even faster and more free flow of technology according to their level of development*. This globalization process rather strengthens the economic security of the developed countries from the aspect of technological security and market access security.

I have investigated the effects of the increasing role of transnational corporations in connection with economic security and partly with social security. I have achieved the following results: Transnational corporations due to their price setting role can have serious impact on the economic security of a country through market access security. As the role of transnational corporations is increasing, the risks of market access security becomes higher. Thus, establishing a competitive economic environment becomes top priority. As China has enhanced its competitiveness by devaluation, the other countries can only reduce the social redistribution of earnings and labour force costs in real units in short term. On one hand, this can lead to wage desperation spiral. On the other hand, the impact in the developed countries is the cut of certain previously established welfare functions are discussed, while in the least developed and emerging countries is a significant slow down of the enhancement of welfare functions. *It can lead to an increase of social security risks* that regarding globalization processes certain countries can improve the ability of their economy to attract foreign investors by means of increasing the share of capital owners from the added-value using (economic) policy assets. This results in such competitive situation that can develop a descending redistribution and a real wage deflation spiral.

Finally, I have examined the effects of supranational organizations on economic security. I have concluded to the following results: Firstly, *over the past two decades the role of supranational institutions in the establishment of financial security of the world economy has not increased but rather decreased*. Secondly, *reducing the central budget funds directly from foreign trade together with significantly restricting the trade policy assets should be mentioned as the effect of globalization on economic security*. Thirdly, *supranational institutions have an indirect impact on also the market access security of an economy*. The WTO membership contributes in a small extent that the market access security of the national economies weakens in relation to the internal market, but increases in relation to the world market.

NEW SCIENTIFIC ACHIEVEMENTS

The scope of economic security has been reevaluated. Globalization brings national economies and their functional systems face to face new challenges. In my dissertation I have discussed these new challenges while explored and created the theoretical background needed for the research. In the course of my research work with having the available data

systematically analysed, I have obtained the scientific achievements summarised in the following theses:

1. I have built up the system-oriented concept of economic security and defined its subsystems. I have created a comprehensive view from the subsystems and their relationships. I have defined the matter of social security and verified my first hypotheses whereas the social security is not the organic part of economic security but rather belongs to the social dimension of security.

2. To verify my second thesis, I have collected and developed indicators with which the risk level of each subsystem of economic security can be measured.

3. I have created dynamic indicators with which the changes taking place in the general level of economic security can be indicated immediately. It is important that the activation of risks can be promptly recognized thus the economic policy and/or the security policy could make the proper decisions in due time. The dynamic indicators that I have developed have the practical applicability in this area.

4. I have demonstrated the effects of each globalisation process taken on the different subsystems of economic security. In this context, I have partly proved but partly disproved my third hypothesis. Considering the processes of globalisation in relation to the commerce, the risks appearing from the aspect of supply and market access security have strongly increased. However, there is no provable unambiguous connection between globalisation and increase of risks in case of neither the labour force market, nor the financial security. In the scope of technological security, the risk has been increased rather in the technologically less developed countries but in a significant degree.

RECOMMENDATIONS

I hope that with my research work I have succeed to call the attention to the importance of this area and many will feel like studying thoroughly with examination of economic security thus participating to a higher level of security of our country and society.

We can draw up as a recommendation that in our globalised world the more and more accurate research of the area of economic security would be very important with especial regard to our present's economic and increasingly social crisis. My work investigates economic security in general, therefore a more accurate research of different areas, just as well a detailed analysis of the situation of our country's economic security is necessary.

Due to the above mentioned, my research work is continuable and extendable in the following directions:

- developing and improving indicators for measuring the risk level of the supply security, the critical infrastructure and the potential of defence economy,
- creating a HDI-like complex mathematical indicator to present the general situation of economic security,

- developing a method to support the national decision making system with refining the introduced indicator-system weighted with Hungarian characteristic,
- investigating the mechanisms of actions starting in relation to the failure of some subsystems of economic security,
- examining the probable evolution of risks of some national subsystems of economic security in the future on the basis of the Hungarian characteristics and the futurology,
- developing indicators for measuring the social security,
- investigating the effects of the globalisation processes taken on social security in case of societies having the different state of development.

PRACTICAL APPLICABILITY OF THE RESEARCH RESULTS

Practical applicability of the research results appear mainly in the possibility to prevent the escalation of economic security problems. With the help of the developed system and watching the evolution of the indicators, it is possible to recognize the activation of the risks in due time. Therefore the necessary steps can be carried out in time and the effects described by chaotic dynamics can be evaded.

The results observed in connection with the effects of the globalisation processes taken on economic security also supports the forecast but the long-range forecast. With the help of these results, scenarios can be made about the probable future economic and social effects of the expending globalisation.

It is mentioned pointedly in the specialized literature that this theme is strongly under-investigated, so in my opinion, the results of my dissertation can also be useful in the course of education with especial regard to the area of administrative, security and military as well as economic education.

I would like to mention as an additional suggestion that it would be useful to deal with economic security professionally. So the (economical) politics would be worth considering to set up an organizational unit within the frame of the specialised ministry or the PM's bureau that could call the attention to the activation of risks in due time with the examination of processes, and indicators included in my dissertation and the extensive relationships of the economic (perhaps the social) security.

PUBLICATION NOTES

- 1. TAKSÁS B[alázs]:** Germany and France: backbone of Europe? – Questions of the European integration from the point of view of the different economical models (Hungarian)
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- 2. TAKSÁS B[alázs]:** Globalization and social security – Should we worry about a worldwide wage deflation process? (Hungarian)
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- 3. TAKSÁS B[alázs]:** Development disparities and asymmetries in global economy (French)
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- 4. TAKSÁS B[alázs]:** Europe: Which is the wright direction? (Hungarian)
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- 5. TAKSÁS B[alázs]:** Advantages and disadvantages of the accession to the European Monetary Union from the viewpoint of Hungary (Hungarian)
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- 6. TAKSÁS B[alázs]:** Crisis of the euro (?!) (Hungarian)
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- 7. TAKSÁS B[alázs]:** It isn't worth being liberal! - The French politics and the financial-economical world crise (Hungarian)
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- 8. TAKSÁS B[alázs]:** Economics of foreign exchange rates and the slump of the forint in 2008 (Hungarian)
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- 9. TAKSÁS B[alázs]:** How can be measured the quality of the defence service? (Hungarian)
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- 10. TAKSÁS B[alázs]:** How much music should we pay for? – The determinate of the defence service's value (Hungarian)
Bolyai Szemle, 2009. 4. sz. p. 45-54.
- 11. TAKSÁS B[alázs]:** Analysis of the Ministry of Defence's budget (2001-2008) (Hungarian)
Hadtudományi Szemle 2009. 1. sz. p. 87-96.
- 12. TAKSÁS B[alázs]:** Who pays for the music? – Questions about the defence's financing (Hungarian)
Bolyai Szemle, 2008. 1. sz. p. 93-104.

CURRICULUM VITAE

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Type of business or sector Tertiary education

Education and training

Dates 2007-2009
Title of qualification awarded Chartered economist on management specialization
University of Miskolc, Faculty of Economics
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János Bolyai
2002-2005
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University of Miskolc, Faculty of Economics

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Self-assessment

European level

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French

Reading				Speaking				Writing	
Listening		Reading		Speaking		Continuous speaking			
B2	Independent user	C1	Proficient user	B2	Independent user	B2	Independent user	B2	Independent user
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

Language exam

English: Advanced military combined language exam

French: Intermediate military combined language exam
Intermediate international relations combined language exam