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MAIN INDICATORS OF THE BULGARIAN LABOR MARKET AFTER EU ACCESSION

Assoc. Prof. Dr Veneta Hristova

Assoc. Prof. Dr Petya Petrova

St. Cyril and St. Methodius University of Veliko Turnovo, Bulgaria

Summary: Labor market is one of the most sensitive markets in the economy and therefore one of the dynamically changing one. EU Accession of Bulgaria (2007) has brought a significant change in its state. This paper researches and analyzes some of the key indicators, that have an influence over its status and perspectives after 2007. Using data from Bulgarian National Statistical Institute and EUROSTAT is presenting an information about main indicators such as GDP, inflation, investment activity, foreign investment level over a ten-year period (up 2007 to 2016) identified as essential for the Bulgarian labor market. By comparative analysis are defined the key trends of its development over the period and evaluated their relevance to those in the EU member states. There are indicated the problems related to the labor market and its remuneration in Bulgaria, the main steps for their solution and marked the perspectives for their development.

Keywords: labor market, Bulgaria, employment, activity, wages

Introduction¹

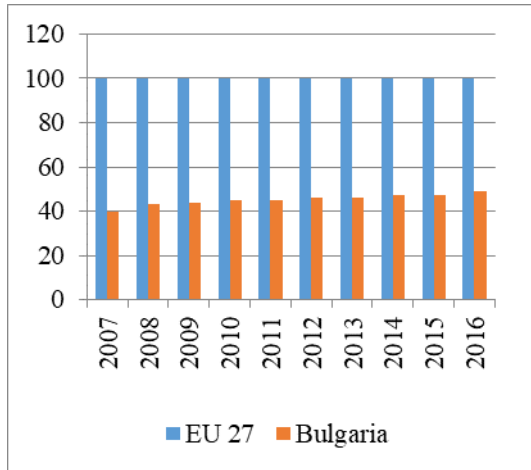
In recent years global labor market developments have gone through significant transformations in due to the invasion and coming dominance of new technologies in all business fields and the consequent need for employers and employees/ workers to adapt to the digitizing environment if they want to remain competitive. Parallel to this main trend after EU Accession in 2007 Bulgarian labor market is also facing the trends in the community. The Accession to the EU's common labor market intensifies some of the negative trends in Bulgaria. It defined even more

¹ The authors' participation is as follows: Assoc. Prof. Dr Petya Petrova – introduction and part 1., Assoc. Prof. Dr Veneta Hristova – part 2 and conclusion.

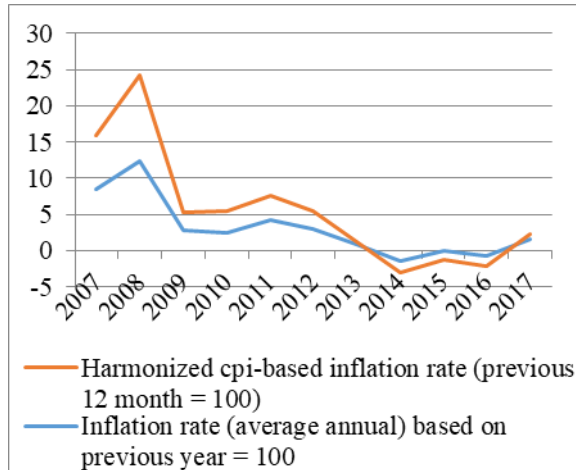
the challenges by placing us of the last few places among the other countries on most of the key indicators. This paper considerate some of the main indicators affecting the labor market in Bulgaria since 2007, on this basis are characterized the key impact parameters to improve its overall condition. Used output data is from National Statistical Institute and EUROSTAT, as well as information published in strategic government documents.

1. Macroeconomic framework of development of Bulgarian Economy

The Accession of Bulgaria to the common European market “catch” her in a situation of privatized property of the large industrial enterprises, imbalance in relations and relationships in the economy, with still establishing entrepreneurial culture, structural labor market mismatches, currency board and relative macroeconomic stability. On other hand accession gives the feeling of optimism in a significant part of the Bulgarians - hopes for rapid economic revival, rich EU funds entering into all spheres of the economy and increased opportunities for travel, work and business. Unfortunately, shortly after 2007 the global financial and economic crisis started and inevitably reflects on the results generated by the Bulgarian economy. The gross domestic product (GDP) of the country is significantly lower than the average European levels for the period, but has risen gradual despite the worsened environment (see Figure 1). Inflation processes are also stabilizing rapidly. Against the backdrop of past inflation parameters, those after 2007 are at very low or negative levels even in recent years has been seen a trend to deflation.. This is a circumstance, which characterized in addition the stability and predictability of the environment in Bulgaria. One of the main positive indicators of the environment is the low tax burden on businesses, which makes the country attractive for investment. At the same time, the worst whip remains bureaucracy, corruption and the hard-working judicial system, which in turn restricts free entrepreneurship.



GDP in EU 27 and Bulgaria for the period 2007-2016 (by base EU 27 = 100)

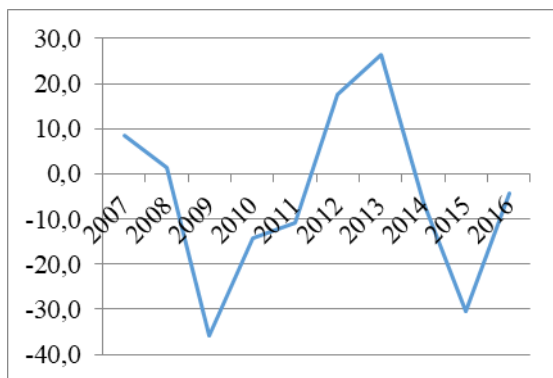


Inflation rate (average annual) based on previous year = 100 and Harmonized cpi-based inflation rate (previous 12 month = 100) for 2007 – October 2017

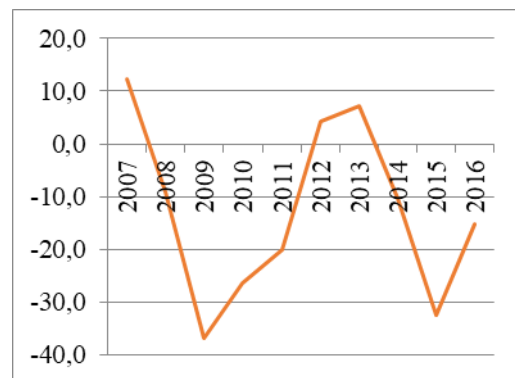
Source: National Statistical Institute

Figure 1. GDP and inflation data

Investment activity in industry remained in a fluid state/unstable over the reviewed period, with predominating negative expectations. Total acquisition cost of tangible fixed assets on an annual basis confirmed the trend and marked a significant decline from € 15 million in 2008 to just over € 8 million in 2016. (see Figure 2)



Expected investment growth (EIG) in industry (in the current year compared to the previous year); total for the country to March

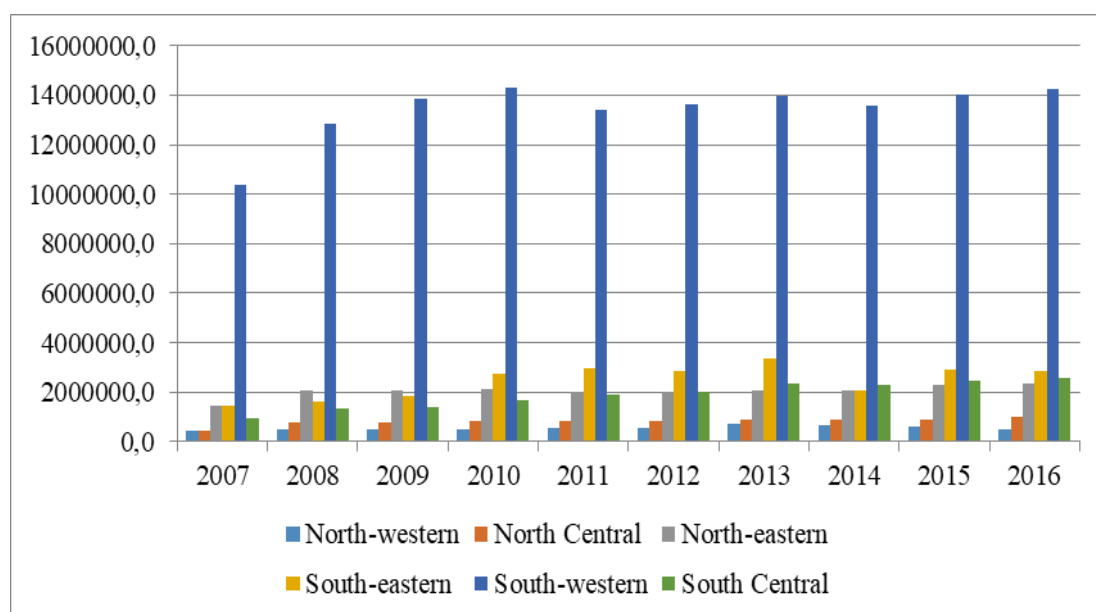


Expected investment growth (EIG) in industry (in the current year compared to the previous year); total for the country to October

Source: National Statistical Institute

Figure 2. Investment activities at industry

In contrast to investment activity, are seen positive trends in the volume of foreign direct investment, which for a period of ten years marks a growth of just over 20%. The investments are mostly carried out in the Southwestern region, where the capital of the country is located. In other areas, volumes of foreign direct investment are at least ten times lower, and in the poorest region of Europe - the Northwest - they are almost 30 times less than its neighboring Southwestern region. Investments are mainly in the sphere of construction, real estate and trade. (see Figure 3)



Source: National Statistical Institute

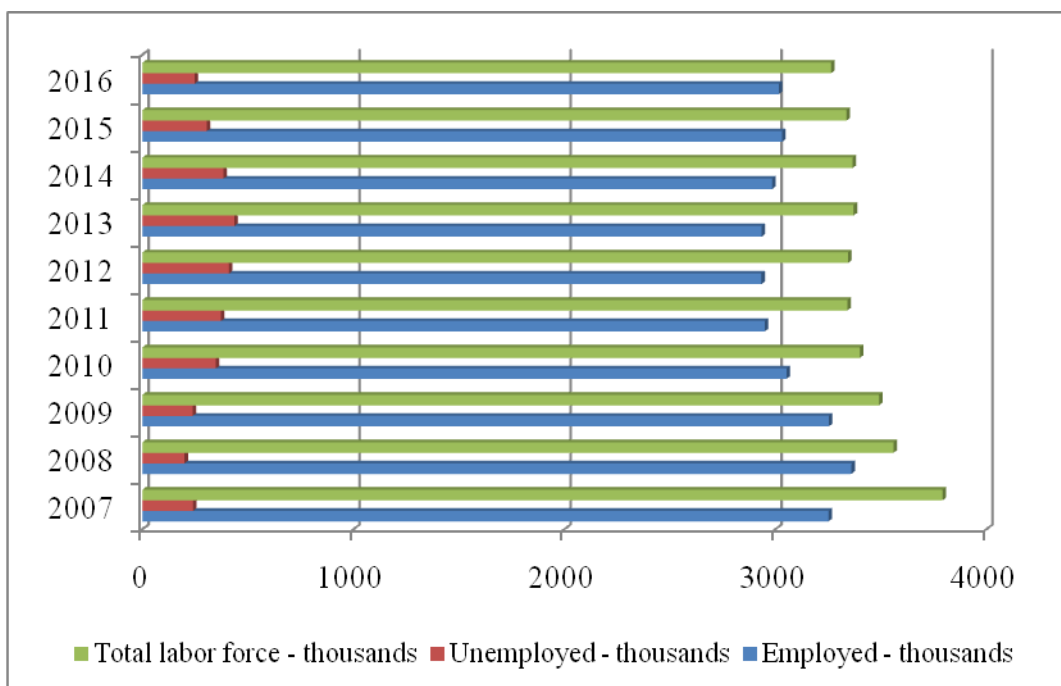
Figure 3. Foreign Direct Investments (FDI) by regions in Bulgaria
(in thousands euro)

Summarizing the macroeconomic indicators of Bulgaria in reviewed period after EU Accession shows relative stability. They are influenced by the general trends of downturn/decrease resulting from the impact of the global financial and economic crisis that cover the world in 2008. There are seen a significant increases in the volume of foreign direct investment, a gradual recovery of economic activity in the different sectors, but still positive trends are generally absent.

2. Bulgarian Labor Market – key trends

Against the background of these robust macroeconomic data, the information on the labor market is not so positive. As a whole, the total labor force is gradually

decreasing, as is the share of employed persons - in 2016, less than in 2007, and the total workforce declined by around 500,000. Unemployment in the analyzed period is characterized by sensitive fluctuations, with the highest absolute levels in 2013 - 436,3 thousands, almost twice as high as in 2007. In 2016, unemployment has returned to its levels since the beginning of the period of our accession to EU, but it has completely different parameters. There are serious tendencies of deepening structural unemployment, more and more often the labor market is lacking "the right" employers for the business, and the "leakage" of trained workers and specialists to the economies of the European countries leave the labor market in Bulgaria in very unbalanced form.

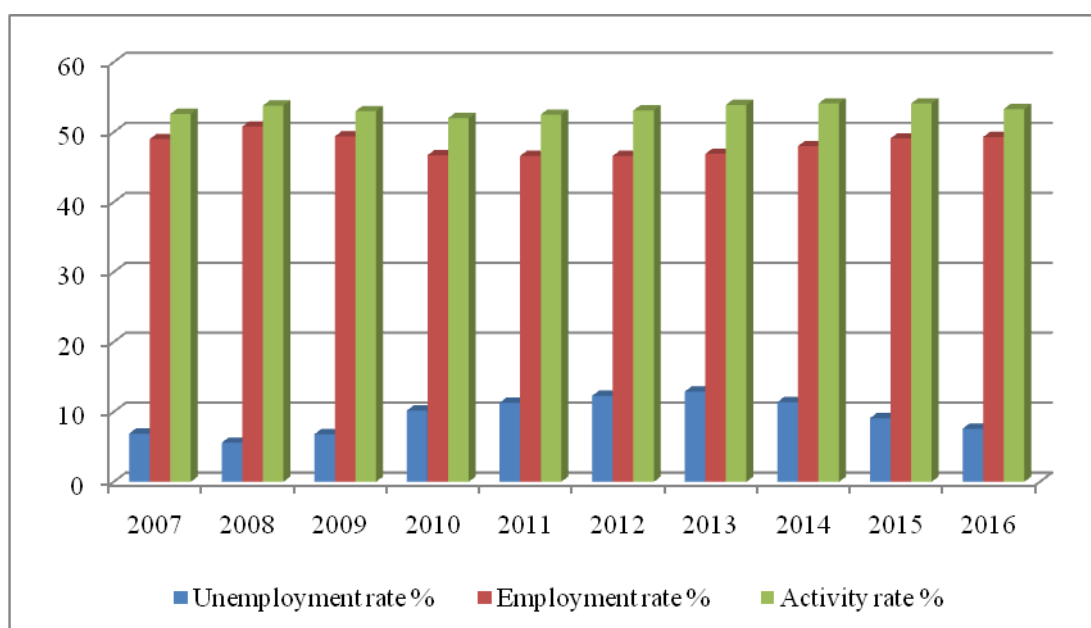


Source: National Statistical Institute

Figure 4. Bulgarian Labor force parameters for the period 2007 - 2016

Specific employment rates, unemployment and the level of activity of the population are given in the following figure. It is clear that unemployment levels are rising sharply after 2008, reaching their peak in 2013 - 12.9%, and then moving downwards by 7.6% in 2016. It is noteworthy that the average unemployment rate in the EU27 is higher than in Bulgaria in the period 2007-2009, but in 2010-2014 the trend is the opposite - unemployment rates are at least 1% higher in Bulgaria in the EU27. The last two years of the analyzed period indicate again that the unemployment rates in Bulgaria are below the EU average. Behind these figures, however, is a very

serious problem: the Bulgarian labor market continues to plunge into profound structural problems. Structural unemployment does not meet an adequate political solution in our country, and even the opposite - thanks to the measures taken in the educational sphere, these problems are greater. Much of the reasons for the ongoing structural crisis in the labor market lie also in outdated labor legislation, which frequent and chaotic changes only temporarily mask the problem solving, but do not actually contribute to making significant progress.



Source: National Statistical Institute

Figure 5. Unemployment, employment and activity rates for Bulgaria

Despite the obvious positive trends in reducing unemployment and increasing employment, the problem of trained specialists is becoming more and more important. Combined with demographic trends and increased emigration, this issue will stay key in the coming years. More and more Bulgarian entrepreneurs cannot find for a very long time the suitable for their vacancies specialists and for 2-3 years part of this imbalance begins to gradually fill with the import of labor from outside.

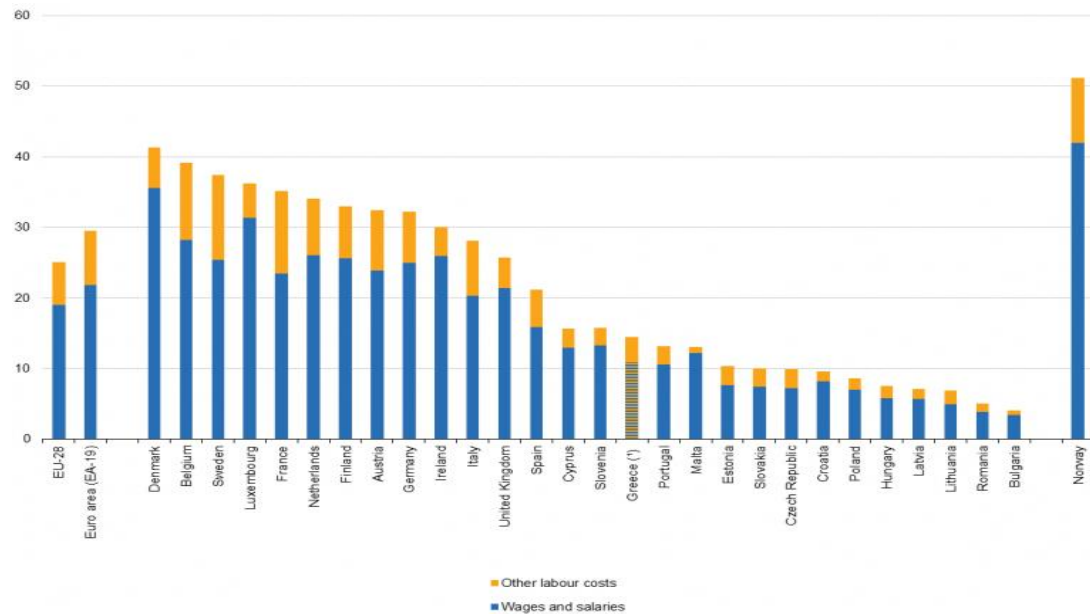
Another significant problem is the income of the employees in our country. Their dynamics is evident from the table below, but however much their overall increase is far from the employees' income in EU. It is also noteworthy that there is a significant difference between the incomes of men and women as it is steadily over 500 € for the period under study. In 2015, women's pay in the EU28 is about 16%

lower than that of men, with the smallest differences being seen in Luxembourg, Italy, Romania, Belgium, Poland and Slovenia. The largest pay gap was registered in Estonia (26.9%), the Czech Republic (22.5%), Germany (22.0%), Austria (21.7%) and the United Kingdom (20.8%) and Bulgaria in this ranking occupies an intermediate place. Existing differences are due to differences in the economic activity, difficulties arising from the reconciliation of professions and positions with responsibilities in the family, the work of women on part-time contracts, and the persistence of direct discrimination.

Table 1. Average Nominal Employees' Salaries (in leva)

Year	Total	Male	Female
2007	5167	5629	4693
2008	6538	7161	5884
2009	7309	8073	6532
2010	7777	8614	6953
2011	8230	9123	7354
2012	8773	9784	7772
2013	9301	10320	8291
2014	9860	10966	8762
2015	10535	11784	9286
2016	11539		

The current wages situation in the country vis-à-vis payments in the EU is also evident from Fig. 4, where Bulgaria continues to have the lowest levels in 2016. Average hourly labor costs in Bulgaria are about 4.4 € at an average level of EU28 of about 25 €. This average, however, contains significant differences between EU Member States as hourly labor costs vary between € 4.4 in Bulgaria and € 42 in Denmark (see Figure 4), and even higher) in Norway - € 50.20.



Note: Enterprises with 10 or more employees. NACE Rev. 2 Sections B to S excluding O. Provisional data.
 (*) 2014. Only the total labour cost is available.
 Source: Eurostat (online data code: lc_lci_lev)

Source: Eurostat

Figure 6. Estimated hourly labour costs for the whole economy in euros, 2016
 Enterprises with 10 or more employees

This substantial difference in the employees incomes can also be traced through comparisons with the minimum wage in Bulgaria and EU: while in Bulgaria it is 184 € in 2015, in Belgium is 1501 €, in Germany, Ireland and France - over 1400 €, and in Luxembourg - 1922 €. In the countries of the former Socialist bloc, the minimum monthly payments are also higher than those in Bulgaria: the Czech Republic and Hungary - 332 €, Poland - 409 €, whereas only in Romania - 217 € the value is close to that in Bulgaria.

One of the key labor problems in the country continues to be labor productivity, although at the end of the period there is a positive change in this direction. Labor productivity in EU per employee has increased in real terms between 2006 and 2016 in almost all countries, with declines in Greece, Italy, Croatia, Luxembourg and Finland. Over the same period, the largest increases (in percentage) in two of these measures of real labor productivity were reported in Bulgaria, Slovakia, Lithuania and Latvia.

Table 2. Real labour productivity, 2006, 2011 and 2016

Source: Eurostat

	(thousand EUR per person employed)			(EUR per hour worked)		
	2006	2011	2016	2006	2011	2016
EU-28	50.5	51.8	53.2	30.1	31.4	32.7
Euro area (EA-19)	56.5	58.0	59.2	34.9	36.5	38.0
Belgium (*)	72.4	73.5	74.7	46.0	47.2	48.2
Bulgaria	8.0	9.6	10.5	4.9	5.9	6.4
Czech Republic	26.8	28.7	29.7	14.9	15.9	16.8
Denmark	75.4	76.5	78.1	51.8	53.2	55.3
Germany	57.0	57.8	58.5	40.0	41.5	42.9
Estonia	22.0	23.8	24.3	11.0	12.4	13.1
Ireland (*)	74.4	80.1	106.5	39.6	47.0	61.1
Greece	45.2	41.5	40.5	21.3	20.3	19.9
Spain	47.1	51.5	53.3	27.4	30.0	31.5
France	66.3	67.9	69.4	43.9	44.2	47.4
Croatia (*)	25.0	23.5	23.3	.	12.1	12.8
Italy	59.7	58.4	57.1	32.9	33.0	33.0
Cyprus	42.0	42.0	42.1	22.9	22.8	23.5
Latvia	17.2	19.8	21.2	9.0	10.1	11.1
Lithuania	18.0	21.3	22.7	9.6	11.5	12.1
Luxembourg	105.6	99.5	104.0	68.0	65.7	68.7
Hungary (*)	20.9	21.4	21.4	10.5	12.1	12.1
Malta	.	.	.	.	.	.
Netherlands	64.1	65.4	68.2	44.8	46.0	47.5
Austria	64.5	64.9	64.6	37.0	38.7	40.3
Poland (*)	18.4	21.6	23.6	8.9	10.6	11.5
Portugal	30.5	32.8	33.1	16.2	17.6	18.0
Romania (*)	11.2	12.5	15.7	6.0	6.6	8.7
Slovenia	32.3	33.5	34.8	19.4	20.1	20.7
Slovakia	24.5	28.5	30.6	13.8	15.9	17.6
Finland	66.4	66.3	65.1	39.2	39.9	39.5
Sweden	71.1	72.7	75.9	44.5	44.5	46.8
United Kingdom	56.8	56.9	58.2	34.1	34.6	34.8
Norway	116.6	110.3	113.8	81.8	77.1	79.9
Switzerland (*)	91.8	92.5	92.0	55.5	57.1	57.9
The former Yugoslav Republic of Macedonia	8.6	9.0	.	.	.	.

Note: based on chain linked volumes, index 2010 = 100.

(*) Per hour worked: 2015 instead of 2016.

(*) 2011: break in series.

(*) 2015 instead of 2016.

(*) 2016: break in series.

Source: Eurostat (online data codes: nama_10_gdp and nama_10_a10_e)

The migrant process of the young Bulgarians, as well as the processes of NEETs, continues to be the most significant labor market problem. Young Bulgarians, increasingly driven by the desire for well-being and social inclusion, emigrate to those economies whose income levels are higher than those in the country of origin. Since, as noted in the previous paragraphs, Bulgaria has steadily occupied the most recent income levels in the EU, each country has a much greater attractiveness to work than its native. For the period 2010-2016, the mechanical emigrant turnout is negative, as in 2016 it is nearly 10000 people. According to surveys, emigrant Bulgarians are mostly educated, women and start work quickly after emigrating.

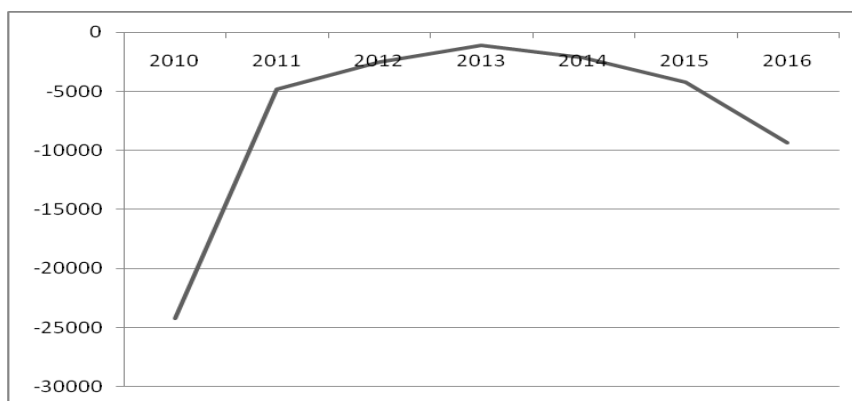


Figure 7. External migration in Bulgaria

Conclusion

From what has been said so far, it is clear that the main indicators of our labor market show seeming tranquility, but reality is far from that. The past decade as EU accession country has not brought the Bulgarians the job they want, security and prosperity, but rather the opposite - employment insecurity, increased emigration and even more fierce decomposition of society. The perceived labor market policies have so far produced modest results, and low levels of unemployment are fueled by people who have no chance of finding a job with their current qualifications. Bulgarian entrepreneurs continue to pay a little, but require too many of the employees, as a result of their long-term efforts, young people do not remain in our companies. Bulgarians still feed EU economies with their cheap labor, but gradually settle their lives outside, create families abroad and raise children. With the continuation of this policy, our only way out will be to “hire” labor market from outside.

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Reflections on a Quarter of a Century of Labor Market research within the INCSMPS¹

Cristina LINCARU²³, Speranța PIRCIOG², Draga ATANASIU²

Abstract

The National Scientific Research Institute for Labor and Social Protection – INCSMPS – in short the Institute, celebrated in 2015 the age of 25 years, years of continuous activity in the field of social and humanist sciences. Axiomatically, the problems of transition economy and transition to a new growth model by Krelle (2000) targets “structural change, allocation and the distribution, the output of economy and the quality of life of its citizens”. On these economic system changing background, coupled recently with transition towards knowledge economy in a globalized world, **the role and mission of the Institute in regard to labour market is strongly linked with the transition management problems towards a sustainable model of economic growth, similar with the values of developed countries.** This role and mission of the Institute is sustained both by its regulatory trajectory and by its multidimensional scale of research domains, exceedingly dynamic but simultaneously highly specialized. The INCSMPS’s profile is shaped on the main regulation documents defining its organization and functioning during, 1990-2016 period. Our reflections are limited only to the Labour market department research activity, department that catches the process of economic transition/s from Romania in a multidimensional scale perspective. Issues related to problems that measure the importance of the field were addressed: *Core dimensions of the labour market* (theory, policies, strategies, regulations); *Individual and holistic analysis of the growth economic factors* (Demographic, Labor, Productivity, Knowledge TFP, Land, Capital, Information, etc.); *Mechanisms of implementation* (Functioning, Sustainability, Economic, Social and Environments objective implementing, Efficiency, Competitiveness, Technological progress, The production of the New, Management micro, Processes and evolutions, etc) and *Instruments of measurement, monitoring, evaluation* (Statistique, Sociology, Econometrics, Algorithms. The authors concludes that the Institute is the guardian of the **sustainable growth, signaling by specific means, the challenges that arise in redefining some dimensions of the labor market.**

Keywords: Labour market, employment, labor force, employment policies

Author’s/Authors’ Affiliation

^a - National Scientific Research Institute for Labor and Social Protection - INCSMPS, Bucharest, Povernei 6-8, Bucharest, Sector 1, Romania, 010643 Romania

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² Author’s: National Scientific Research Institute for Labor and Social Protection - INCSMPS, Bucharest, Povernei 6-8, Bucharest, Sector 1, Romania, 010643 Romania !

³ Corresponding author. Email: cristina.lincaru@yahoo.de !

1. Introduction

The **National Scientific Research Institute for Labor and Social Protection – INCSMPS** – in short the Institute, celebrated in 2015 the age of 25 years, years of continuous activity in the field of social and humanist sciences. The Institute is now a national R&D institute, a distinct entity in the **Romanian Research and Development System of National Interest**, “functioning as public right unit with juridical personality”⁴.

Among the rich spectrum areas of research (*Labour market, Lifelong learning, Human resources management, Social policies and social phenomena, Socio-human aspects involved in the process of change, modernization and integration of Romania in the European structures, Strategies and models of socio-economic development nationally, regionally and on activities of the national economy, Macro and microeconomic management*) activities we limit our insight only to the **labour market domain development, as one of the mark label of the Institute**. Now times, in the landscape of research-development and innovation actors from Romania INCSMPS is unique by its complex profile. (Box 1):

Box1.

The R & D and Innovation System (RDI) in Romania comprises 263 public RDI organizations and about 600 enterprises. Of the public organizations, 56 are publicly authorized universities, 46 are national research and development institutes (43 of which are MCI coordinators) and 65 are research institutions and centres of the Romanian Academy. The National Innovation and Technology Transfer Network (ReNITT) comprises 50 specific organizations: Technology Transfer Centres, Technology Information Centres, Technology and Business Incubators, 4 Science and Technology Parks.

Source:<http://www.research.gov.ro/ro/articol/4481/sistemul-national-de-cercetare>,
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INCSMPS as a growing and living organism develop this profile is the result of an evolutionary process, strongly linked with the post Decembrist history of Romania. Due of its uniqueness is difficult to be compared.

Over 25 years the Institute confirmed the **vow towards to serve the scientific truth** following academic paths and proved to be efficient in a capitalist market, developing both **cooperation and competitive**, learning the exercise of liberty (Boaz, 1997, p. 531) in a globalised research market framework.

The Institute specificity is furthermore given by the subtle balance between **theoretical and applicative** instruments, the **responsibility and the commitment** towards the policies and law processes and developments (inputs, monitoring, outputs, projections, strategies), the

⁴ <http://www.research.gov.ro/ro/articol/4481/sistemul-national-de-cercetare>

multiscale (micro, mezzo, macro and even global) level of analysis, in multidimensional **profiles** (socio- economic characteristics, in space and time). The human capital of highest level of education, with a large diversity of domain of education and specialisation working together was able to develop “additive, interactive, and holistic” (Choi, 2006) **multidisciplinary, interdisciplinary and transdisciplinary research instruments, methodologies** by case (projects, events, objectives, etc.) (Concepts in the sense of Kokemuller; Teinaki, 2011)

No the last, INCSMS is an active knowledge economy agent, producer of high value added, member in knowledge networks, holistic integrator of social, economic and environment dimensions in a sustainable way, promotor of the highest cultural values as a mark for Romania’s specificities and correspondingly for humanity.

2. The INCSMPS’s profile shaped by the main regulation documents

The act of birth was signed in Government Decision (GD) **124 from 10 February 1990** under the name Institutul de Cercetare Științifică în domeniul Muncii și Ocrotirii Sociale - Institute for Scientific Research in Labour and Social Care, under the subordination the National Commission for Labour Protection (Comisiei Naționale pentru Protecția Muncii). Following the link with the Social Protection, the Institute name is changing the “Care” in the “Protection” becoming “Institute for Scientific Research in Labour and Social Protection-INCSDMPS”.

The Institute (INCSDMPS) is reorganized by GD **1305/9.12.1996** as a National Institute under the coordination of Labour and Social Protection Ministry with the name “**National Institute for Scientific Research in Labour and Social Protection – INCSMPS**”. Article 1 / 1305/1996 Regulation states that the **Institute functioning is According to the model of Autonomous Regies**, according to Law no. 51/1996. Abrogated by the Ordinance 57/2002

The back bone of the Institute is defined by this Act of Establishment in the **Article 3** regarding its Object of activity. The Institute has as Object of activity “theoretical and applicative studies and researches in fields of **national interest** regarding **human resources management, social development and social protection** in Romania”. Also, its object of activity is described as standardized profile as: *CAEN code 7220, UNESCO⁵ code 5302.02 Economic science/Econometric / Econometric models*. Among its first 6 departments is founded the **Demography, Labour Market, Prognosis and Strategies Department**.

GD1773/21.10.2004 in the Art. 1 (2) changes INCSMPS functioning model according to GO 57/2002 approved through L324/2003, where the new model is based on “**economic gestion / administration and financial autonomy**, calculates the amortisements and conduct its accounting in an economic mode”.

INCSMPS was re-accredited as INCD based on the **ANCS Decision no. 9634/14.04.2008**, distinct unit of the National RDI of national interest.

⁵ <http://skos.um.es/unesco6/530202>

In 2015 INCSMPS pass under the coordination of ANCS based on HG 27/14.01.2015⁶ art. 10 and nominated in the 3b Annex. Financing source is, according to Government Ordinance no. 57/2002, approved with modifications and Approved with amendments and completions by Law 324/2003. GD 26/14.01.2015 (revoke the GD 185/2013) stated that National Education Ministry is the “state authority for R&D, according to GO 57/2002, modified and improved by L324/2003

Decision 9261/09.06.2016 of the National Authority for RDI (ANCS) regarding the **Certification of INCSMPS** for 5 years as RDI unit was evaluated by the Consultative collegium for RDI, and also published on ANCS site⁷.

Based on the “Art. 5. OUG 96/8.12.2016 INCSMPS, found under the coordination of ANCSI passes starting with 15.01.2017 under coordination of **Labour and Social Justice Ministry**, ministry working as state authority which assures the coordination for government strategies and policies implementation in the field of work, family, social protection and aged persons”. This change was made in the context of functioning modification of The Ministry of National Education and Scientific Research through the GD 44/2016 and of the ANCS through GD45/2016.

3. Problems of transition economy and transition to a new growth model

At the risen of transition economy, the labour economy emerges as science in Romania. The changes from central planning to free markets stand up new problems for countries experienced this process. Among the problems specific to each transition economy as Romania faced were: the changes of legal system centred towards individual property rights, the moral hazard with its consequence of developing inefficient employment, the appearance and rising of unemployment, lack of entrepreneurship and skills, the opening to global markets and interest to attract foreign capital, increasing inequalities and polarities, etc. (based on economicsonline.com.uk).

Krelle (2000) points that “transition from a planned to a market economy implies an important change of the structure of production, i. e. a reallocation of resources which takes time and induces sufferings for some people”. Also Krelle focused under the new growth model shaped by the “perfect competition, full information and freedom of action in concluding contracts in mutual interest” there should be changes in multiple plans like the “structural change, allocation and distribution, the output of economy and the quality of life of its citizens”.

⁶ GD 27/2015 regarding the “organization and functioning of the National Research Authority Science and Innovation - ANCS”

⁷ <http://www.research.gov.ro/uploads/sistemul-de-cercetare/incd/decizia-9261-2016.pdf>

Koldko (1999) points that “strong institutions can liberalization and privatization put emerging post-socialist markets on the path of sustainable growth”. (Box 2)

Box2

Eastern European common eight elements are of key importance that are linked with **institutional arrangements**:

1. The lack of organizational infrastructure for a liberal market economy;
2. Weak financial intermediaries unable to efficiently allocate privatized assets;
3. A lack of commercialization of state enterprises prior to privatization;
4. Unqualified management unable to execute sound corporate governance under the conditions of a deregulated economy;
5. A lack of institutional infrastructure for competition policy;
6. A weak legal framework and judiciary system, and a consequent inability to enforce tax code and business contracts;
7. Poor local government, unprepared to tackle the issues of regional development;
8. A lack of non-governmental organizations (NGOs) supporting the functioning of the emerging market economy and civil society.

On this economic system changing background, the role and mission of the Institute in regard to labour market is strongly linked with the transition management problems towards a sustainable model of economic growth, similar with the values of developed countries.

The complexity of these problems represents in some measure the domain of activity of the institute in general but with pre-eminence define the activity of Labour market department.

4. A quarter of a century of labour market research within the INCSMPS – remarks from the (new) growth model perspective

The Labour market department research activity catch the process of transition from Romania in a multidimensional scale. Among the main dimensions were covered:

- **Core dimensions** of the labour market (theory, policies, strategies, regulations),
- Individual and holistic analysis of the **growth economic factors** (Demographic, Labor, Productivity, Knowledge TFP, Land, Capital, Information, etc.)
- **Mechanisms of implementation** (Functioning, Sustainability, Economic, Social and Environments objective implementing, Efficiency, Competitivity, Technological progress, The production of the New, Management micro, Processes and evolutions, etc) and **Instruments of measurement**, monitoring, evaluation (Statistique, Sociology, Econometry, Algorithms). (Fig.1)

Our hypothesis is that the labour market” understanding” evolves from the tangible dimensions (core dimensions law regulation, economic labour price – wage, etc., basic social protection – unemployment benefit) towards more intangible dimensions (education, skills, management, knowledge). **Our reflections follows mainly the publications that marks a significant expanding given by the novelty of the research domain that defines the labour market.** Also, these selected cases that illustrate the diversification and specialisation of research activity is the result of the framework described by the Project - seen here as the source of the scientific academic publications in the large scale dissemination framework. The reverse way is also active, from a good article is springing a new Project. This evolutionary perspective of the labour market understanding in the research activities in this the labour market department considers that the advance is result of both mechanisms Projects and (Academic) Publishing in a continuous chain Project – Publications – Projects – Publications, etc.

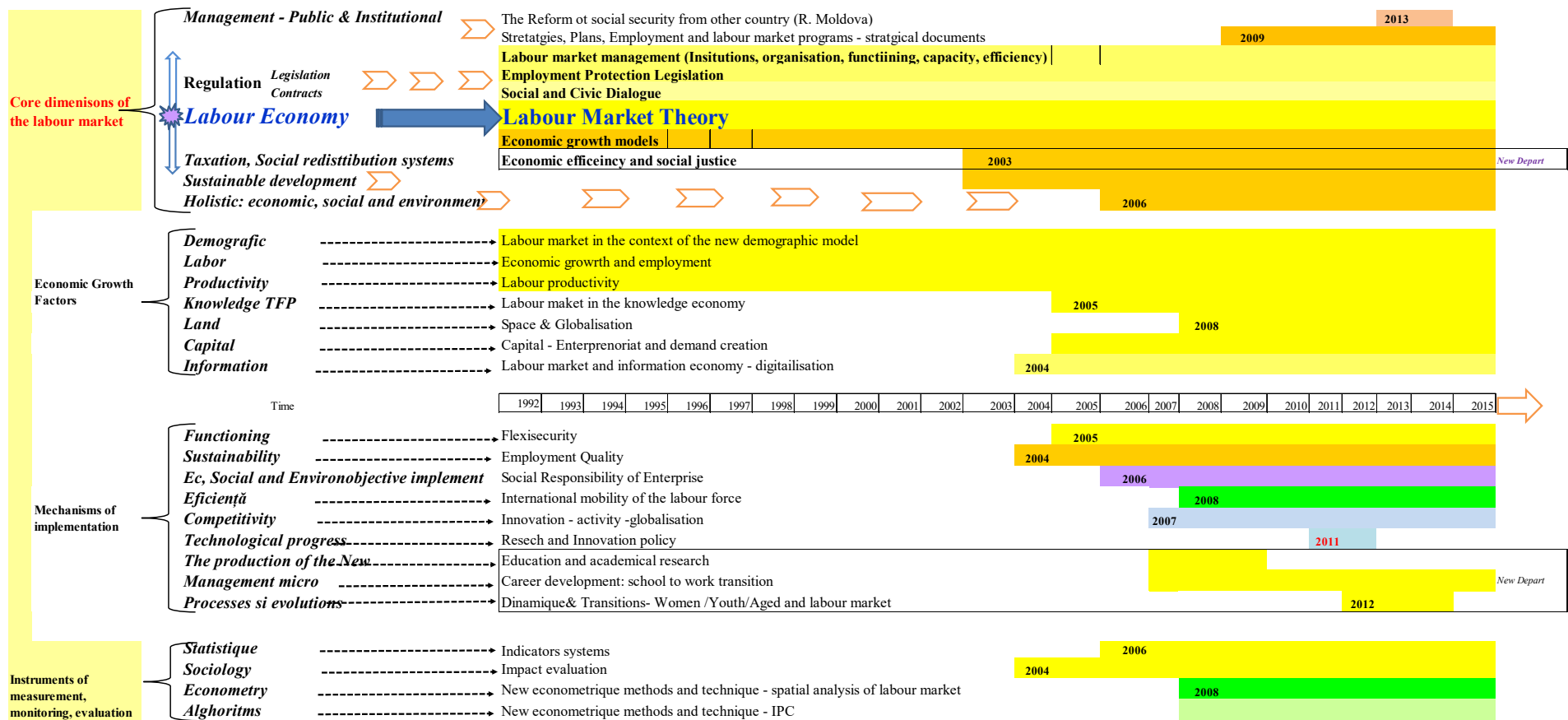
These criteria limits strongly the information’s regarding the profiling of research production in the first decade (1992-2002) of the Institute existence. Or in other words the scientific a research activity was at first silent and present more in the Projects than in publications. Another factor that explains our border line of 2003 is given by the large use of Internet in 2005, following its commercialization and good access in Romania since 1997. Next to technological progress we have also to mention the globalisation phenomena market by Romania’s entrance in the EU in 2007, accelerating the internationalization of labor market research in department, process in development.

4.1. Core dimensions of the labour market (theory, policies, strategies, regulations)

Among the core dimensions of the labour market research activities developed in the Institute we present a small selection with the purpose to emphasise the inflection points in the scientific domains trajectories realised mainly in the labour market department from the Institute.

- *theory*

Professor Răboacă (n. 6 march 1935 - d. 20 january 2008), Romanian school creator in the field of labour market, connect the Romanian school of labour economics with the main themes debated at international level. Among his contributions, we mention some step stones to the labour market core theory: the Romanian labour market and sustainable development (Răboacă, 2003c) coupled with the problems of the economic efficiency and social equity.



Source: Author's work

Fig. 1 – A quarter of a century of labour market research within the INCSMPS

The market economy (Răboacă, 2003b) based on the importance of education on the labour market in knowledge society (Răboacă, 2003a) – represents some of the most visionaries and actual works of the Professor. Other confirmed theories in time were: “New demographic model and its implications” (Răboacă, 2004), followed by the “Coordinates of the labour market in the knowledge society” (Răboacă, 2005a) and not last by the “GDP evolution and its determinants during 1989-2001” (Răboacă, 2005b)

Lincaru (2008) analyses the labour market in Romania on the background of accession and integration process in European Union, event market at 1st of January 2007.

Ciucă et. al. points in 2009 some perspectives regarding the labour and the labour market in the line with theoretical critical thinking launched by Răboacă during 1990-2008. This approach is continued by “Labour market structural and functional integrator of the new paradigms induced by the **knowledge economy** in both the scientific research dimension and in labour market dimension” (Lincaru 2013a).

- *Policies, strategies, regulations*

Social dialogue – one of the oldest core team of department with high importance in the first decade of Institute existence was referenced with the project “Social agreements on the enterprise restructuring” in 2001. One extraordinary event in 2011 on the labour market regulation was brought by **the Law of 62/2011 of the Social Dialogue** and its expanding to civil dialogue. Starting with 13.05.2011, repeal the following normative acts : The employer's law 356/2001, The law of the trade unions no. 54/2003, the Law no. 130/1996 on the collective labor contract, the Law no. 109/1997 on the organization and functioning of the Economic and Social Council, the Law no. 168/1999 on solving of labor conflicts, the Decision no. 369/2009 on the establishment and functioning of the social dialogue commissions at the level of the central and territorial public administration. In 2012, on this background of redefining social dialogue legal framework in Romania was developed the LIBRA Project, coordinated by Tiraboschi, Let's Improve Bargaining, Relations and Agreements on work and life times balance, project finalised with an final report presented to EU Commission (Tiraboschi M., coordinator, 2013), the Romanian chapter was reported by Lincaru & Ciucă.

Following 2006 is starting to make steps towards holistic approaches of economic, social and environment, **including space in analysis**. As response to Muntenia's Region demand Lincaru et.a. (2009) makes some contributions to The Regional Action Plan for Employment and Social Inclusion and The Plan for Implementing the Regional Action Plan 2009 - 2011, The South Muntenia Region. This collaboration was fruitful and finalised with a pioneer publication in spatial analysis with the article Lincaru et.al (2011c). In the case of South

Muntenia the geographical distribution of unemployment was analysed at the lowest administrative level – at NUTS 5 level equivalent with LAU2 (local administrative level).

School to work transition sprung as a core research domain since 2008, next becoming as autonomous department. Process of transition from school-to-work: generator for the initial stage of path dependence in career development was an RITA project under EU Commission FP6 Programme which treated the problem of youth mobility in European space, finalised with a paper by Lincaru et.al. (2008).

Key follow up to these events was the starting of the **spatial analysis of the labour market** shaping research field **since 2009**. The first Nucleu project was „Models and spatial econometric techniques to analyse regional labour markets, focused on fostering inter-regional competition”. An academic result of this project was the paper analysing the Regional Development and Diversity/Variety of Firms (Lincaru et.al., 2010). In 2014 was made another step in the direction of consolidation the labour market indicators profile in space, fact supported by the project PN 420118 Nucleus Research Program: Spatial distribution of labour market indicators in the context of cohesion policy, 10.2014-12.2014.

One measure of the maturity and scientific power of the Institute is reflected by the the EMPLONET Transnational partnership to promote employment - structural Project coordinated by Ciucă (2011-2013). Among the regulation type results of this project is the **Government Decision 1071/2013. On the approval of the National Employment Strategy 2014-2020 and the Action Plan 2014-2020**. Strategic Development Prospects for the Labor Market In Romania, as Introduced by the Europe 2020 Strategy, (Ciucă et.al., 2010) published in 2010 in Romanian Journal of Economic Forecasting, one of the most prestigious Romanian Academic Journals.

Another research direction started from practice with follow up in theory was **the youth employment problem** signalled since 2012. Under the sectoral program of Labour Ministry (MMFPS) Lincaru et.al. ended the impact of policies over the youth insertion on the labour market in Romania. Lincaru & Ciucă edited and published in 2014 the “Youth and the Labour Market in Romania”. This book was published under international umbrella of ADAPT – Labour Studies Book, series conducted by Tayo Fashoyin and Michele Tiraboschi, in the prestigious Cambridge Scholars academic publishing house.

Emphasizing labor market challenges in the new circumstances induced by the knowledge economy on the background of huge demographic unbalances, we highlight the new research domains developed recently and their promoters: the evolution of medium and long term occupations (Pirciog and Militaru), active aging (Tudose), employment in the innovation process (Pirciog), employment in rural areas (Paşnicu) and not only.

4.2. Individual and holistic analysis of the growth economic factors (Demographic, Labor, Productivity, Knowledge TFP, Land, Capital, Information, etc.)

Atanasiu (2006) promote a new approach of treating the growth economic factors from the demand side though the **CSR – Corporate Social Responsibility**. This new topic was strongly confirmed by time as a sustainable pathway, a back bone for the modern management which integrates in a holistic manner the human activity, in socio- economic action, assuming its impact over environment, internalising the externalities. This knowledge spiral was initiated with the Project "Developing the concept of corporate social responsibility in Romania, within a European context" coordinated by Atanasiu, during 2006-2007. We associate as off-spings from this projects the "The Importance of Corporate Social Responsibility in the Knowledge Society (Atanasiu et.al, 2006), Risk prevention through corporate social responsibility, (Ciucă et. al, 2007b), The evaluation of the main characteristics of the CSR (Corporate Social Responsibility) in Romanian firm (Ciucă et. al, 2008). CSR research was pushed next towards nuances given by spatial heterogeneities, with full exploitation of the intangibles like: Cultural industries, regional networking NUTS 1, NUTS 2 (Ciucă et.a al, 2009a) CSR practices and the "cultural or creative industries" development, in Romania at regional level (Ciucă et. al, 2009b), CSR in the creative ecosystem of the region. Profile for Romania (Lincaru et.al., 2009), this first cycle being finalised with "Internal dimension of Corporate Social Responsibility (CSR) and training, a sustainable support" (Ciucă et.a al, 2011). The CSR boom in research production was valued in starting the second cycle of CSR, stage marked by the Nucleus Project: "CSR relationship with employment development programs at Community, national and regional level" developed during 01.2012-05.2012.

Since 2006 is announced the importance of "The development of the Renewable Energy Sector –Source for more and better jobs" (Lincaru, 2006) represents another confirmed domain of research in the Department, continued after 2012 with Projects and books by Ghinararu, Ghenadie, Chiriac.

International mobility of labour force enters in 2008 as research domain with the project PNCDI 2, during 2008-2010. "International circulation of the labour force from Romania to the EU level, The Romania Integration Impact over the labour force flux. Romania – EU", With Lincaru responsible for INCSMPS partner. This topic treats the labour force from many perspective demographic from the spatial mobility across Europe but also considering other drivers like salaries heterogeneities, technological intergenerational changes. We mention some academic publications like: Age-specific gross worker flows as reflex of technological change effect on intergenerational mobility as element of management strategy building (Lincaru et.al., 2011a), Gender differences in gross worker flows (Lincaru et.al., 2011b),

Alternative method of Gross worker flows measurement - Study case Romania, (Lincaru et.al., 2011d) , Gross Worker Flows Estimation At European Level," (Lincaru et.al., 2012) .

The synergy of factors economic, social and environment was first announced by Răboacă (2003c) and continued by Lincaru (2006) pointing the potential for creating jobs for the renewables. Following the partnerships with INOE 2000 were developed 2 projects, project that enlarged the horizon of research in the department. In 2009 LIDAR teledetection method – Foresight exercise resulted the paper ”LIDAR’s Open source: Instrument for ecological and socioeconomically factors synergy achievement”, (Lincaru et.al., 2014c). The second Project: DYNAHU „Dynamic interaction between human and natural components based on the synergy of ecological and socio-economic factors in fast urbanization” PNCDI II (2012-2016) was the most prolific and braking frontiers one! The tendency identification of overall clustering of registered unemployment at territorial administrative unit level - UAT2 in Romania (Lincaru et.al., 2014b), Periurban Areas and Population Density Clustering Model, (Lincaru et.al., 2014d), The Townsend Deprivation Index Variation As Indicator Of Periurban Areas Development, (Lincaru et.al., 2015).

4.3. *Mechanisms of implementation (Functioning, Sustainability, Economic, Social and Environments objective implementing, Efficiency, Competitiveness, Technological progress, The production of the New, Management micro, Processes and evolutions, etc)*

Flexicurity as idea was bring to Department first in 2005 and then spread with high speed in Institute by Malden et.al. (2005) and consolidated in 2007 by the paper ”The concept of FLEXICURITY and the youth perspective on the labour market” (Ciucă et. al, 2007a) In this case we find again the situation when from an paper is developing an project, but here 2 projects one coordinated by Pasnicu (PNCDI) and the other by Ghinararu (2009-2012). Ghinăru, coordinates the POSDRU/63/3.2/S/41637 “The response of the Romanian labour market to the crisis: increasing the flexibility and adaptability of enterprises and enhancing the safety of workers”.

Innovation enters in 2006 as research domain bring by Atanasiu in the Department with the Project ”Scenarios of forecasting Romanian economy departments and branches with innovative potential, in perspective of 2020” in the CEEX Program framework. Atanasiu et.al. (2009) evaluates the „The innovation potential and the innovation impact in Romanian firms”. Interactive long term collaboration with Triple Helix Research Group and EU Commission in view to Support to the Monitoring and Analysis of Knowledge Triangle Policies in Europe for Romania (Lincaru, 2011-2012), support to analysis on the way research and research systems are regulated in the EU Member State, facts for Romania (Lincaru, 2011), Monitoring European Trends in Social Sciences and Humanities – country validator (Lincaru, 2011), support to Regional Innovation Monitor (Lincaru, 2012).

Strategical perspectives higher education and labour market – expert consultation (Lincaru, 2009) in Strategical Projects for Higher Education. Mladen (2010) coordinated The

Development of Interdisciplinary Academic Research Aimed at Enhancing the Romanian Universities' International Competitiveness.

One good example of **mechanisms of implementation of EU policies in R: Moldova** is the Project ID No. P120913, Technical Assistance to support Reforms for Introducing Activation Elements into the Social Aid Social Program, project funded by the World Bank during 12.2012 – 06.2014 period with coordinator Ciucă. The stages of this project covers a large spectrum of activities like: institutional analysis, activation interventions design, resources request dimension, etc. This type of project illustrate an complex response offered by Institute in the process of exporting consultancy in packages at demand of beneficiary, simultaneously respecting confidentiality clause, respectively with no reflex in the Research production (article, papers or books).

4.4. Instruments of measurement, monitoring, evaluation (Statistique, Sociology, Econometry, Alghoritms)

Ciucă (2004-2005) consolidate the thesaurus of instruments and methodologies destined to **impact evaluation** with the World Bank project "The Impact of Active Labour Market Programmes within Transition Economies". Main off-springs of this projects was the "Impact of active policy measures on employment in Romania" (Ciucă et.al, 2005a), the impact of Employment Labour Protection over the general employment performances for the labour force (Ciucă et. al, 2005b), Employment and Productivity – Their Contribution to Economic Growth (Ciucă et. al, 2006).

Pirciog consolidate the thesaurus of instruments and methodologies destined to **prognosis and forecasts on short and medium term of the demand of labour**. This family of instruments is the most complex and used one from the very begging to overall transversal labour market domains, regardless topic. This is the manifestation of the Economic science/Econometric / Econometric models standardised profile of Institute. In over 25 years of activity Pirciog developed in specialised methodologies (macro econometric models of forecast of system type and panel) and surveys in firms. The high frequency and large amplitude of research projects induced the crystallisation of a **specialised teams** in both areas cybernetic systems and survey design and interpretation, mostly in "Employment projection and skills shortage, projection of labour demand and employment forecasts" research domains. Recently, Militaru join into the Labour Market department, collective of salaries covering the "Income in employment". All these core econometric modelling were found in projects funded by World Bank, National Plan of R&D, Programme CEEEx, Structural Programme, The Sectoral Plan of R&D of ANCS. The stability of these R&D activity allow the provision of a continuous information flow towards the decision makers regarding the policy of vocational training and education, the basis for the programming of the actions regarding the employment policy,

Cătănciu consolidate the thesaurus of instruments and methodologies destined **to analyse the salaried persons and firms at micro and macro level by economic activity, in sectoral perspective**. This continuous investment in programming, algorithms, shaped the most conservative "wing" of the Institute, nowadays structured as independent Department.

The **quality of employment** research domain starts in 2004 from an article "The information of quality – premise for a quality employment" (Lincaru, 2004) and was followed by the Project "System of indicators: Employment quality evaluation methods". funded from Program Nucleu, coordinator Lincaru C. during 2005-2007. On this topic were some articles that looks at the employment of quality as a security source (Lincaru. et.al., 2006), employment stimulation factor for young people (Lincaru et.al., 2006) and an success factor for increasing the innovation potential at sectoral level (Lincaru et.al., 2008) .

Ghinararu (2006-2007) coordinates the "**System of Indicators for Social Protection**", financed by the World Bank (through contract no/ 17/25.05.2006 BIRD #4616 RO) for the Ministry of Labour, the compendium was based on ESSPROS Manual (1996).

Lincaru et. al. (2008-2011), responsible from the INCSMPS partner in the project ECOMA, the Analysis of Factors and of the macroeconomic knowledge based dynamics using econometric techniques and processing information worked to adapt PCI – independent component analysis algorithms (Fast ICA) on labour market. One result of this project was Finding Underlying Factors Using The Independent Component Analysis On Labour Market – Application On Unemployment Rate In Monthly Variation, (Lincaru et.al. 2013b).

5. Final remarks

Institute is the guardian of the sustainable growth. Mapping continuous over the knowledge frontier, Institute preserve the labour market's in its „essential true" regardless new background and drives factors (globalisation, technological progress, high human capital deficits, etc). More, there are identified new interactions, institute fixes some milestones in "unknown land". This milestone marks both extensive domains, fully consolidate by deep drilling with new and appropriate instruments, intensive exploitation of concepts, applications and dynamics approaches, producing knowledge for excellence.

Yes, it is almost impossible task to catch the "spirit" of the Institute. It is certain that its unique coordinates are at the crossroads of fundamental with applicative research, supporting national interest in a global world. All these traits explain its atypical profile of a „Wise chronicler involved in civitatem vita".

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FLEXICURITY IN RESPONSE TO THE NEW LABOR MARKET ARCHITECTURE

Ioana Coralia Zavera, PhD student
The Bucharest University of Economic Studies

Abstract. Flexicurity, which has become a key element of European labor law policy, seeks to establish a harmony between flexibility and social security, providing what is best for the "two worlds." The European employment regulation was considered too strict by policy-makers, which led to policy recommendations to promote a more flexible labor market. The diagnosis has also been confirmed internationally in the period following the 2008 economic crisis. High protection on the labor market is now considered harmful and also responsible for the increase in precarious jobs, as well as increase in social costs. Debates should turn away from the deregulation and re-regulation of inclusive labor market measures and focus on regulation as an important mechanism to ensure a level playing field between capital and labor but also between workforce groups. Moreover, segmentation of the labor market, seen as a significant division between secure and insecure jobs, is linked to issues such as macroeconomic efficiency, workers' welfare and repercussions for social cohesion. Therefore, the present paper aims to analyze the role of flexicurity as a direction in restoring the employment policy order.

Introduction

In a period dominated by globalization, both workers, companies, industries, governments, and European Union as a whole face a double bond or have two-way expectations. On the one hand, there is an acute demand for labor market flexibility, increasing employment and work organization, and on the other hand, there is a strong demand to ensure the safety of employees, especially of vulnerable groups.

These two-tier requirements, have been included in the European Union policy since 1993 in the *White Paper on Growth, Competitiveness and Employment* and explicitly formulated in the *Green Paper - Partnership for a New Labor Organization* in 1997, which states that "for employees, management, social partners and decision-makers, the key is to strike a balance between flexibility and security."

This binomial, flexicurity-security¹ was included in a series of EU Summits (Essen, 1994; Amsterdam, 1997, Lisbon, 2000), becoming one of the targets of the European Employment Strategy and a major challenge of the European Social Model². In fact, the European Union's mission, as formulated in Lisbon, clearly reflects the ambition to increase flexibility and security, aiming to "become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and better social cohesion."

¹ Wilthagen, T. (2002), *Managing Social Risks with Transitional Labour Markets*, Labour Markets, Gender and Institutional Change. Essays in Honour of Guenther Schmid. Cheltenham: Edward Elgar, pp. 264-289

² Klosse, S. (2003), *Flexibility and Security: A Feasible Combination?*, European Journal for Social Security, 5, 3, pp. 191-213

Achieving a balance between flexibility and security is particularly evident in the European Employment Strategy. At the same time, there is a new connection or a new paradox that reflects the traditional capital-labor link. Taking into account the performance and growth objectives, but also competitiveness, it is clear that greater flexibility and a labor market are needed³, while security is viewed from the perspective of a social policy that emphasizes the importance of maintaining social cohesion within society⁴.

The prospects of the European Union in creating and maintaining a balance between flexibility and security are optimistic. From the perspective of European Commission on industrial relations, “all Member States have tried to improve labor market flexibility by increasing employment and vocational training policies, and modernizing the way the labor market works means striking a balance between flexibility and security, which is reflected at Community level in the framework agreement concluded by the social partners on part-time work”⁵.

However, there are studies that convey some pessimism about the new compromises in bargaining flexibility. Based on a comparative study, Ozaki claims that “labor market flexibility has led to a significant erosion of workers’ rights in core areas that address employment and income safety and stability in living and working conditions. As for the compromises resulting from the negotiation of flexibility, there was no attempt to change the paradigm of economic and social policy.”⁶ So, taking this new relationship into account, decision-makers, trade unions, employers’ organizations need new patterns and concepts to harmonize incompatible goals designed to increase flexibility and security.

Flexicurity - vector of integration

Flexicurity is indeed a catchy term, which requires a further definition in order to apply it in the decision-making process. It is therefore a strategy that deliberately attempts to increase flexibility in the labor market, work organization and labor relations, on the one hand, and on the other, increase security (employment and social), especially for vulnerable groups⁷. The presented definition focuses on synchronization, coordination and vulnerable groups. However, a labor market strategy cannot be considered a form of flexicurity with just two elements over a certain period of time, and flexibility

³ European Central Bank (2002), *Labour Market Mismatches in Euro Area Countries*, Frankfurt

⁴ Laeken Declaration of 15 December 2001 on the future of the European Union

⁵ European Commission (2000), *Industrial Relations in Europe 2000*, Luxembourg

⁶ Ozaki, M., ed. (1999), *Negotiating flexibility. The role of the social partners and the State*, International Labour Office, Geneva

⁷ Wirthgen, T.; Rogowski, R. (2002), *Legal Regulation of Transitional Labour Markets*, The Dynamics of Full Employment: Social Integration through Transitional Labour Markets, Cheltenham: Edward Elgar, pp. 233-273

policies are usually launched to adapt the labor market, but also social security arrangements, and institutions considered too 'strict' or protective, thus hindering economic development and competitiveness.

Flexicurity therefore acts in the direction of promoting more open, responsive and inclusive labor markets, so that segmentation is no longer a problem⁸. The term refers to both employed and unemployed population. In order to reduce the gaps between Member States, but also to accelerate the integration process, it is intended to create better opportunities, economic incentives and support measures to have easier access to work or steps to help inactive people, unemployed, those who have undeclared or unstable jobs in finding a stable and legally safe job⁹. In the context of the Fourth Industrial Revolution, it is important to support all those who have a job in order to be able to work, to advance and to face the vertical and horizontal transitions, from the workplace and between jobs.

Moreover, flexicurity does not refer only to a single labor market, to a single active life model or to a single policy strategy, but needs to be adapted to concrete situations of each Member State. A balance between the rights and responsibilities of all parties involved is necessary. With common principles, each Member State should develop its own flexicurity models.

Taking into account the experience of the European Union and the need for an integrated approach, in order to achieve a high degree of flexicurity it is necessary to fulfill the following conditions:

- ✓ the possibility of making work contracts and forms of work organization more flexible, so as to avoid the phenomenon of discouraging and withdrawing low-skilled workers from the labor market, while at the same time professionally trained people be able to adapt faster;
- ✓ improving the content and forms of lifelong learning, as prolonging the duration and improving the quality of vocational training systems lead in the long run to increase activity rates and reducing gender discrimination. This stimulates the creativity of human capital and investment in it;
- ✓ active labor market policies can help increase labor mobility, significantly reducing the cost of social protection through passive methods of mitigating imbalances in the labor market;
- ✓ modernization of social protection systems can contribute to the activation of labor supply by avoiding the poverty trap, by supporting reconciliation between work and family life. An active person with a good physical and mental condition will be more likely to be employed by a firm

⁸ Stanef, R., et al. (2012), *Lifelong learning a way to reduce development gaps between rural and urban areas*, Procedia - Social and Behavioral Sciences 46, pp. 4508-4512, Barcelona

⁹ Wilthagen, T.; Tros, F. (2004), *The Concept of "Flexicurity": A new approach to regulating employment and labour markets*, Sage Journals, Vol 10, Issue 2

because he works with a higher return.¹⁰

Flexicurity and improving quality of life

In many countries of the world, educational standards and life expectancy are improving, allowing millions of people to overcome poverty and penetrate the global labor market. Once with the phenomenon of aging population spread across Europe at a rapid pace, most of the countries enjoy growing young populations, being considered markets of the future. Therefore, the standards of global prosperity and demographic change impose economic and social imbalances in Europe, driven by the phenomenon of globalization and industry 4.0. There are questions as: How can high wages and complex social systems be supported when economic actors produce similar goods and services but at lower costs? How does wealth generate, attract investment and manage resources so that it can respond to growing demands and expectations and provide a better way of life to future generations? The answer is still the same: prosperity will arise with the production of goods and services at a higher price than those produced elsewhere. The economy has evolved towards the development and delivery of innovative products and services with a high added value. Also, the concern for the welfare state has grown, providing stimulus for social innovation. But the question is whether social systems are prepared for new challenges. It is important to remember that educational standards have not decreased. At formal education level, in Europe, the same abilities are passed on to the same or slightly increasing number of students. And international comparisons show that basic skills do not alter, but states are rapidly improving their educational performance, and the result lies in placing Europe at the center of the global education package.

Questions also arise on EU measures to invest in human capital education, which alongside education is the center of the knowledge economy. The level of education and skills contribute to achieving social cohesion, prosperity and sustainability. Europe has been a pillar of education performance and a model for other countries, but developments in recent decades have led to a fall in resources, both material and financial, a reduction of the responsibility of schools and universities, and of attention to regions that are rapidly evolving into education systems. European Union has set 5 ambitious targets - on employment, innovation, education, social inclusion and energy - to be achieved by 2020 through Europe 2020 Strategy. Each Member State has set its own targets, so concrete actions at the EU and national level are at the core of the strategy. So smart growth refers to improving

¹⁰ Chenic, A.Ș. (2013), *Aspecte ale flexicurității pieței muncii în modelele mediteranean și anglo-saxon*, Economie teoretică și aplicată, Volumul XX (2013), No. 4(581), pp. 65-80

performance in: education (encouraging people to learn, study, improve and adapt their skills); research & development (creating new products and services that generate growth and jobs and respond to social challenges); digital society (using information and communication technologies).

Education and training in the development of flexicurity in the labor market and the EU strategy encourages Member States to work together and learn from each other. The long-term strategic objectives of education policies are: bringing lifelong learning and mobility into the realm; improving the quality and efficiency of education and training; promoting equality, social cohesion and active citizenship; increasing creativity and innovation, including entrepreneurship, at all levels of education and training. EU-level activities are developed to respond to different levels of education - expanding opportunities for learning mobility or strengthening partnerships between education and training institutions and society; promoting multilingualism, innovation, creativity and adoption of information and telecommunication technology.

Available sources argue that improving flexicurity in the labor market and adapting to different jobs related to transferability of skills is a problem that has not received sufficient attention and for which there is little information available, which leads to limited interest.¹¹ The description of processes, practices and methods designed to improve labor mobility through skills and their transferability is based on both the relevant literature and the results of an EU survey, along with practical examples. Methods of promoting labor mobility used by educational institutions include: self-knowledge, career counseling, assessment centers, coaching, mentoring, IT applications etc.

Education is, therefore, one of the main engines that causes labor market imbalances and leads at the same time to the segmentation of the labor market.

Segmentation of the labor market: an ongoing challenge

When talking about the segmentation of the labor market, it is about the division of European markets between safe and insecure jobs, a division institutionalized by the creation and expansion of non-standard forms of promotion, in particular temporary employment.¹² No static analysis is required. A labor market is segmented if there are significant barriers to mobility. A large number of fixed-term or part-time workers is not a problem as long as there is a high mobility of secure jobs. However, segmentation occurs if workers feel 'caught up' in unstable and insecure jobs interrupted by periods of unemployment.

At the beginning, segmentation was seen as a consequence of employers' strategies for

¹¹ Angelescu, C. et al. (2012), *Providing labor market flexicurity and quality of life through better education and professional training*, *Procedia - Social and Behavioral Sciences* 46, pp. 4560-4566

¹² Marx, P. (2015), *The political behaviour of temporary workers*, Palgrave Macmillan, Basingstoke

strengthening socio-cultural divisions.¹³ Since the 1990s, the dominant perspective has been to explain segmentation as a result of labor market institutions. Labor protection legislation has been considered a barrier to the labor market.¹⁴ The reason is that employers anticipate business costs, which stimulates the employment of a large number of temporary workers. The opposite reasoning that labor protection deregulation could reduce segmentation and insider-outsider divides is reflected in current policies. It is important to note that segmentation problems lie in two major areas: macroeconomic efficiency and worker welfare.

Regarding the macroeconomic effects, there are indications that an increase in temporary employment has made difficult an increase in productivity (as labor investment is not encouraged) and has not led to an increased employment (because secure jobs are being replaced by temporary jobs).¹⁵ Also, job insecurity and temporary contracts, in particular, hamper the health and well-being of workers.¹⁶ The stress caused by such social problems not only causes health problems but also affects other aspects of people's lives, including cognitive skills, family formation and parenting.¹⁷

Another problem that arises is the incapacity of European welfare states to prepare workers who do not have a stable job. Political representatives from countries with a strong labor market segmentation tend to create social policies in an exclusive way¹⁸, which means that employment structures and welfare state institutions become stronger by generating disadvantages in the labor market. Such dualism is opposed to the notion of flexicurity, which has been promoted for some time by the European Commission. So, the welfare state compensates disadvantages of the labor market and facilitates mobility. While literature on the political economy is skeptical about the prospects for modernizing social security systems in line with flexicurity¹⁹, there is little evidence of further concerns about this. However, the crisis has highlighted the insufficient protection of temporary workers in many countries, and efforts are needed to improve it.

¹³ Doeringer, P.B.; Piore, M.J. (1971), *Internal labor markets and manpower analysis*, Heath Lexington Books, Lexington

¹⁴ Bentolila, S. et al. (2012), *Reforming an insider-outsider labor market: the Spanish experience*, IZA J. Eur. Labor Stud. 1(1), pp. 1-29

¹⁵ Boeri, T. (2011), *Institutional reforms and dualism in European labor markets*, Handbook of Labor Economics, Elsevier, Amsterdam

¹⁶ De Cuyper, N. et al. (2008), *Literature review of theory and research on the psychological impact of temporary employment: towards a conceptual model*, Int. J. Manag. Rev. 10(1), pp. 25-51

¹⁷ Mani, A. et al. (2013), *Poverty impedes cognitive function*, Science 341(6149), pp. 976-980

¹⁸ Palier, B.; Thelen, K. (2010), *Institutionalizing dualism: complementarities and change in France and Germany*, Politics Soc. 38(1), pp. 119-148

¹⁹ Rueda, D. (2014), *Dualization, crisis and the welfare state*, Socio-Econ. Rev. 12(2), pp. 381-407

Conclusions

In industrial relations and labor law, both European and national, a new concept has emerged. There are voices stating that the new report is nothing but a manifestation and a modern formula of the traditional relationship between labor and capital, dressed in ideological and rhetorical words as ‘balance’, ‘reconciliation’ and ‘adaptability’ that inappropriately suggest compatibility or coexistence²⁰. At the same time, new concepts, policies and strategies have developed and continue to develop that deal with connections empirically tested. But there are also voices opposing the thesis that the European social model needs development, improvement and consolidation to form a counterweight to the European monetary and economic model, which is a sufficient reason to devote a research agenda to new concepts, such as flexicurity. The issue of the influence and impact of different forms of coordination and the relationship between national and international learning processes on flexicurity is also crucial from an academic perspective. The question arises as to whether employment systems develop on several levels to ensure both flexibility and security.

There are also challenges in terms of political and economic feasibility of reforms. Firstly, political preferences matter. If segmentation is addressed by reducing the social rights of the ‘insiders’, it may be difficult to form democratic majority for such proposals. Moreover, the extension of social protection for vulnerable workers could meet resistance from the low-risk majority with the high costs of these reforms. Secondly, macroeconomic and budgetary constraints play an important role. In some countries, demand for labor is insufficient to provide safe jobs for all workers.

Progress is needed in flexicurity, lifelong learning and mobility, which contribute to the implementation of strategies, development of national qualifications frameworks at European level and flexible learning arrangements.

By improving the quality and efficiency of education and training, all citizens should be able to acquire key competences and all levels of education and training must become more attractive and effective. Promoting equality and social cohesion should enable all citizens to acquire and develop the skills and competences needed to enter the labor market, as well as to promote intercultural dialogue. So it is important that policies pursue the formation of the four deliverables when they consider a successful human capital strategy – create, attract, keep and activate it. Two conditions are necessary for funding: sufficient, efficient and well targeted and governance that ensures transparency.

²⁰ Eichhorst, W. et al. (2017), *Labor market reforms in Europe: towards more flexicure labor markets?*, Journal for Labour Market Research

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ANALYSIS OF THE ATTITUDE OF MOLDOVAN EMPLOYED PEOPLE TOWARDS THE ONGOING REFORM ON ABOLISHMENT OF EMPLOYMENT RECORD BOOKS

COLESNICOVA Tatiana, PhD, Associate Professor, National Institute for Economic Research of the Academy of Sciences of Moldova

CIOBANU Mihail, scientific researcher, National Institute for Economic Research of the Academy of Sciences of Moldova

Abstract. *Currently in Republic of Moldova there are discussions yet on abolishing or keeping employment record books. Since 1999 an electronic register works that contains the main information of employment record books. Recently a law was adopted that makes employment record books not mandatory anymore from 1 January 2019. Even though the employers were asked for their opinions on digitalization of employment records, surprisingly, but the employees weren't asked for their opinions, even though the employment record book's owner is the employee and there is the work experience. There are fears of employees that their data on work experience may be stolen or lost. In this paper are discussed the results of a recent survey done on employees to ask their opinions on abolishment of employment record books. The results showed that there are fears of different kind in population that the reform might not go as was intended. It's recommended taking in consideration the fears of employees, by realizing a careful, gradual reform, taking in consideration individual cases.*

Key words: employment record book, electronic register, monthly printed report, employees, reform, Republic of Moldova, survey.

ANALIZA ATITUDINII PERSOANELOR ANGAJATE DIN MOLDOVA ASUPRA REFORMEI CURENTE CU PRIVIRE LA ABOLIREA CARNETELOR DE MUNCĂ

COLESNICOVA Tatiana, dr., conferențiar cercetător, Institutul Național de Cercetări Economice al Academiei de Științe a Moldovei

CIOBANU Mihail, cercetător științific, Institutul Național de Cercetări Economice al Academiei de Științe a Moldovei

Adnotare. *Actualmente în Republica Moldova există încă discuții despre abolirea sau păstrarea carnetelor de muncă. Din 1999 un registru electronic funcționează, care conține informația de bază din carnetele de muncă. Recent, a fost adoptată o lege care stipulează că carnetele de muncă nu mai sunt obligatorii din 1 ianuarie 2019. Chiar dacă angajatorii au fost întrebați despre părerile lor despre digitalizarea înregistrărilor cu privire la experiența de muncă, surprinzător, dar angajații nu au fost întrebați despre opiniile lor, chiar dacă posesorul carnetului de muncă este angajatul și acesta conține experiența de*

muncă. Sunt temeri ale angajaților că informația lor despre experiența de muncă poate fi furată sau pierdută. În acest articol sunt discutate rezultatele unui chestionar recent efectuat în rândul angajaților pentru a-i întreba despre opiniile lor cu privire la abolirea carnetelor de muncă. Rezultatele au arătat că există temeri de diferit fel în cadrul populației precum că reforma poate să nu decurgă după cum s-a intenționat. Este recomandat să se ia în considerare temerile angajaților, realizând o reformă atentă, graduală, luând în considerare cazurile individuale.

Cuvinte cheie: carnet de muncă, registru electronic, raport lunar tipărit, angajați, reformă, Republica Moldova, chestionar.

Introduction

Employment record books were used in Republic of Moldova since USSR and are still currently in use. From 1999 onwards besides work experience they included the data about employee's social insurance contributions. Since this year personalized accounts of pension rights of citizens were introduced and an electronic register was created that contains the information on work experience and social insurance contributions from 1999 onwards. The information on work experience and social insurance contributions before 1999 is confirmed by employment record books, but from 1999 onwards it can also be confirmed by electronic register. From 2008 the electronic register also contains the information on wages. Besides that, the register includes information on: name and address of employee and his/her ID number, company's name, monthly data employment's period, monthly salary, the category of insurance, function of the employee, calculated and paid social insurance contribution by employer and employee, number of working days on week, sick leave. From introduction of electronic register it was used in parallel with employment record books, thus the information provided doubled. There were discussions and working groups on abolishing employment record books, but a decision on how to proceed wasn't taken.

Review of previous studies and publications

The issues concerning employment record books have been discussed by some Western scientific researchers mostly from a historical point of view (Baudelet I., Dewerpe A., Le Crom J.-P., Leboutte R. and others) and by current researchers from ex-USSR countries mostly occasionally and from practical reasons (Abramova E.V., Arhipov V.V., Ershov P.P., Farion K.Yu., Filipova I.A., Kamaltdinova R.M., Martyanov A.V., Men'shova V.N., Novaya I.A., Piskaryova Yu.M., Roshtchin B.E., Semenihihin V.V., Setdarova L.B., Stupak I.M. and others). Problems concerning employment record books are discussed and legal solutions are given in national scientific and practical journals like: *“Кадры и заработная плата”* (HR and labour remuneration), *“Contabilitate și audit”* (Accounting and audit), *“Бухгалтерские и Налоговые Консультации”* (Accounting and Fiscal Consultations) and others, that contain special headings with practical questions and answers.!

International experience revealed that in many European countries employment record books are unknown from times long past when work experience was written on paper form. From the countries that abolished them can be mentioned: France (1890), Denmark (1921), Germany (1967), Italy (1997), Latvia

(2002), Slovenia (2009), Estonia (2009), Georgia (2009), Romania (2010), Tajikistan (2012), Azerbaijan (2014), Armenia (2016). All CIS countries used employment record books since Soviet times, some of them already abolished them, others plan to abolish (Ukraine, Russia), yet other countries don't plan to abolish them anytime soon (Belarus, Kyrgyzstan, Kazakhstan).

In 2015 a group of Moldovan researchers from NIER in collaboration with German economists from German Economic Team Moldova with the support of American Chamber of Commerce in Moldova did a survey between employers and HR officers to see their attitude towards abolishing employment record books. The results have shown that most of them were in favor of abolishing them [3]. Surprisingly, but the employees weren't asked for their opinions on this. Recently, a law was adopted that provides the abolishment of employment record books from 1 January 2019 [2]. That being said, the employer isn't obliged to keep the employment record book, nor the employee is forced to present it to the employer when he/she is employed [1]. Before the reform is complete it's needed to see the opinions of employees, their suggestions and fears to be taken in consideration to prevent or address forthcoming problems, so the reform may go smoothly and with less risks.

Data, methods and main results

To identify the opinions of employees on the reform of employment record books a survey was created in August 2017. 265 employees participated in the survey from districts of different regions of Moldova, such as: Stefan Voda, ATU Gagauzia, Cahul, Rezina, Briceni, Straseni, Ialoveni; municipality Chisinau. When asked if they know about electronic register of National House of Social Insurance (CNAS) 66.2% of the people said they knew about it. When people were asked if they can access electronic register 64.6% of the people said they never accessed it, while only 32.3% could access it without difficulties, 3.1% needed the aid of other people (relatives, friends etc.). From the ones who knew about the register 48.8% of people never accessed it, 46.5% of them could access it without difficulties, 4.7% of the ones needed the help of other people. By sources of information, 41.5% of employees were informed about electronic register from their workplace, 36.6% - from mass-media, 12.2% - from relatives, 9.8% - by studying independently, 4.9% - from CNAS Offices. From those who accessed the electronic register 62.5% said that most of the time they accessed it from home and 37.5% - from the workplace. 52.3% people said they were informed about abolishment of employment record books, from which 62.9% said they learned of it from mass-media, 20% - from their workplace, 11.4% - from their relatives, 2.9% - by studying independently, 2.9% - from NGOs (trainings, seminars). When asked if they agree that employment record books may be replaced completely by the electronic register 49.2% of them agreed, 32.3% disagreed and 18.5% didn't know or didn't want to answer. At the question if they agree that employment record books should be completely replaced by printed monthly reports (including salary; taxes; social, medical contributions) 44.6% agreed, 35.4% didn't agree and 20% didn't know or didn't have an answer.

In *Figure 1* and *Figure 2* are presented the share of employees with university studies as highest level of education attained who knew about electronic register of CNAS by sources of information and, respectively,

the share of employees with university studies as highest level of education attained who knew about abolishment of employment record books by sources of information.

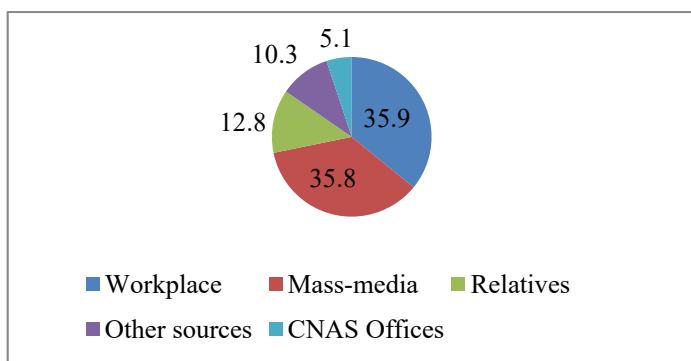


Figure 1. Share of employees with university studies as highest level of education attained who knew about electronic register of CNAS by sources of information

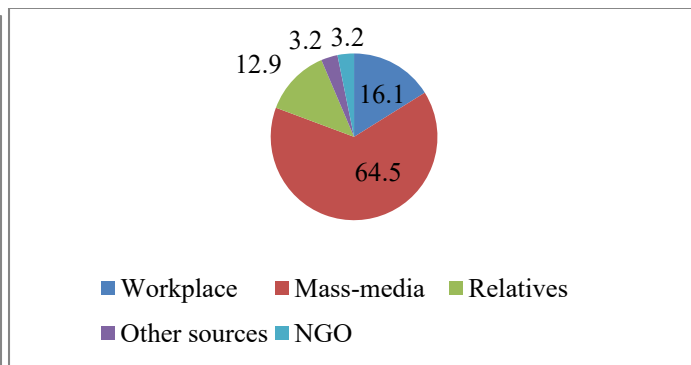


Figure 2. Share of employees with university studies as highest level of education attained who knew about abolishment of employment record books by sources of information

Source: elaborated by authors on the basis of survey data

It can be seen that the share of people that were informed about electronic register from mass-media (35.8%) and from the workplace (35.9%) is nearly the same. The majority of people were informed about abolishment of employment record books from mass-media (64.5%), while only 16.1% reported being informed about this from their job. The reason behind such a big difference in shares of mass-media can be the fact that currently this subject is discussed actively in mass-media. The relatives had nearly the same share in informing others about electronic register (12.8%) and about abolishment of employment record books (12.9%). Seminars offered by CNAS Offices accounted for 5.1% of informed people and seminars offered by NGOs – for 3.2%, the reason these shares are small may be that these sources in most of the cases are accessible to a small part of employees. Other sources like studying the laws independently, observing other countries experience accounted for 10.3% in informing people about electronic register, while only 3.2% - in informing about abolishment of employment record books.

Motives for keeping employment record books

People see the employment record books as being more secure than electronic register that is considered to be more vulnerable. Thus, doubling of information is considered for a higher security. A man from urban area, younger than 35 years and with university education says about the employment record book that is “*an extra guarantee of [information on] employee's experience in addition to the electronic register*” and [with the employment record book] “*the employees will have the information with them and won't depend on the electronic register and on the ones that will complete it*”. They fear the leak or loss of personal data from electronic register which without a paper version will not make up for it. A man from rural area, older than 50 years and with university studies gives an example for this - “*the recent hacker attacks on servers in Ukraine*”, yet he doesn't explain if there was a data leak or loss at all and what were its proportions.

Some people don't see the reason behind the proposal of replacing completely the employment record book with monthly printed reports. A woman from urban area, younger than 35 years old and with university studies sees the electronic register accounts as "*electronic employment record books*". She considers that once the employment record books will be abolished the employers will require pre-employment information which they see as being personal confidential information. The reason behind this fear may be the short work experience or too many changes of jobs of young employees that may fear the employer will be suspicious of their employment. That makes little sense since the electronic register may have the option to not show previous experience of the person to the new employer, an option that the employment record book doesn't have, yet forged employment record books may make up for that - a practice that justice system tries to combat.

Other people still don't have an opinion formed on the future of employment record books (to keep or not to keep?) or don't have any motives to keep them. The employment record book is also seen as an instrument that is keeping personal evidence, as a personal proof, or even as a history of employment like a museum piece, a personal biography of the employee that includes all changes in his or her activity. A woman from urban area with the age between 35 and 50 years and with university studies expressed that "[employment record book] *is convenient, as a document, to be kept in your work file or at home if you do not have a job - instead of monthly printed reports that would gather month after month*". A man from urban area older than 50 years with university studies thinks of employment record book as a testament to future generations - "*a personal document of activity must exist, even for our descendants it would be documentary information*". A woman from urban area with the age between 35 and 50 years that has only middle school studies admits that employment record book is more reliable, because it's a document and is signed and stamped, unlike the electronic register.

People, especially those older than 35 years are more conservative and don't want the employment record book replaced. A man from urban area older than 50 years with university studies doesn't believe in the good faith of the people who manage the electronic register - "*I want that no one can delete the data about me in the general register ... in our dishonest world, the employer can "buy" such deletion*". Another man from urban area older than 50 years with university studies expressed the same concern pointing to corruption - "*electronics is not reliable and in our country with the venality of everyone and everything you can't do such things at all [that is, replacing employment record books]*". A woman from the same category of age, area of residence and level of education said the same thing, underlining the key people responsible for this - "*I do not believe in reliability of electronics; the accountant may not work well or follow the instructions of employers that will harm his employees; more I trust paper versions of documents with seals and signatures*". People fear in case of errors or dishonesty no one will be held responsible and more than that, work experience data may be lost.

A woman from urban area older than 50 years with university studies besides unreliability of electronic means pointed to the necessity of employment record books when the employee migrates in a country in which employment record books are mandatory and another crucial aspect frequently not taken in consideration in

implementation of policies related to digitalization – small digital literacy of a significant part of population – “- *The unsatisfactory technical reliability of electronic means and from the point of view of the "human factor" and confidentiality; - It is advisable to see the document with records, stamps and signatures, which can be controlled. It is particularly important in the case if a person moves to another country where employment record book is a mandatory document; - There exists still a large proportion of people who not only don't have knowledge in the field of IT technologies, but even don't know how to use a PC and don't have experience in using it, for which even bank cards are "a mystery behind seven seals"*”.

Another woman from urban area older than 50 years with university studies told her own negative experience with electronic register, insufficient access to electronic means, disbelief in government institutions: “- *I had problems accessing the site (possibly because the system is not enough regulated); - At this stage in many organizations workers do not have access to electronic sources of information; - The level of distrust to the activities of state institutions remains [high].*”

Some people find difficult to answer what motives may be to keep employment record books. Others point to psychological causes (mentality of old people, personal use, the need of a tangible and verifiable proof without needing electronic means (“*what is in hand ... is proof*”), psychological comfort or just for any case).

A woman from urban area with the age between 35 and 50 years with university studies pointed to flexibility, clarity of data and status of studies in employment record books (“- *more flexible for both the holder and the employer; - more clearly [presents] the activity of the holder of the employment record book; - [it presents] the status of the studies carried out in case of a lack of diplomas*”).

A woman from urban area older than 50 years with university studies indicated to a difficult access to the register and the poor organization of database as motives to keep employment record books (“*a poorly organized database of the register leading to errors; complexity of citizens' access to personal information in the register*”).

Some respondents gave axiological arguments, being apologetic for the freedom of the individual (a woman from urban area with the age between 35 and 50 years with university studies - “*Stupidity or the desire to bring all individual documents into an electronic form to facilitate the control of the individual as a managed unit, i.e. another way to control a person.*”).

Some people recommended that electronic register and employment record book be used in parallel with monthly printed reports (a man from urban area older than 50 years with university studies - “[employment record books] *do not need to be replaced, it's best to send out printouts in addition to the employment record books and I'll know how much I have on my account, how honest the manager [employer] is*”; another man from urban area older than 50 years with university studies - “*I don't see motives for replacement of the employment record books ... but I would agree to receive monthly printed reports to see how honest is my employer*”).

A woman from urban area with the age between 35 and 50 years with university studies underlined the right of the employee to decide when he/she won't need the employment record book (“*I would like it to be double (on-line and physical) [record] until the holder decides that doesn't need it.*”). Even some younger

people said that employment record books shouldn't be abolished, but to be as a backup alternative alongside the electronic register (a woman from urban area younger than 35 years with university studies - *"I have no idea, it could be a backup alternative, but not totally to be replaced."*).

Motives for abolishing employment record books

People point to abolishment of employment record books to be more convenient; to save paper, money and time for buying them, to simplify document flow, to put less work on the employer that currently needs to include data in the electronic register and also in employment record books (double work), thus boosting flexibility, work efficiency and operativeness, since people would have access to the register database 24/24 for free and from any place (a woman from urban area with the age between 35 and 50 years with university studies - *"Maybe there will be more transparency in completing the [electronic] employment record book. It wouldn't be so easily to falsify the data in the [electronic] employment record book. I would have access to my [electronic] employment record book anywhere in the world and whenever I want."*). They also say that would lead to lesser bureaucracy and thus more transparency (a woman from urban area younger than 35 years old with university studies - *"It would reduce the bureaucracy that exists and it would be simpler to get various information about the contributions you have"*).

Others consider employment record books to be a relic of the past, a formality, something that is easily falsified and there's a need for digitalization, for e-governance to keep up with modern standards (though some people recognize the involved risks) and, probably, make more transparent the taxing wages (a woman from urban area with the age between 35 and 50 years with university studies - *"Once there is the Electronic Register, with complex information, and for 17 years all the info is in the database, it would be useless to rely on employment record books printed 10-15 years ago, where only the date of employment and dismissal from a function are written; the paper employment record book has become a formality; those who have 3-4 employment record books and more at different jobs, having the main job in different institutions - will not be able to continue doing so; the taxation process from salary will be more transparent (I hope)"*); a woman from urban area older than 50 years with university studies: - *"I do not see any motivation to keep employment record books. This was [in] the last century! You can complete with data and save it on electronic media on monthly basis."*, another woman from urban area older than 50 years with university studies: *"This is the correct and inevitable choice in accordance with international rules of document circulation."*; a woman from urban area with the age between 35 and 50 years with university studies - *"We live in the digital world, it's easier this way. Although there is a risk that data may be falsified through unauthorized access."*, a woman from urban area older than 50 years with university studies: *"complexity of filling employment record books; duplication of information provided that the qualitative register management is maintained"*).

Other people didn't want to answer or found difficult to answer what the motives to abolish employment record books could be, some didn't find any motive at all (a man from rural area younger than 35 years old with university education - *"[the employment record books] are totally useless"*) or were indifferent to this (a woman from urban area younger than 35 years with medium specialized secondary education: *"There are no*

pros and cons either. It doesn't play a role for the position I have", a woman from urban area younger than 35 years with high school education: "I don't have a formed an opinion in this respect").

A woman from urban area younger than 35 years with university education has conflicted views on keeping or abolishing employment record books seeing its advantages and disadvantages (*"On the one hand, I do not agree with the replacement of the [employment record] books for the reasons I have outlined in the previous question ["[T]he electronic register does not seem so safe. It often happens that electronic information is lost for various reasons"]. On the other hand, the electronic register could facilitate the access to information for the worker and ease the process of collecting necessary documents for retirement")*).

A woman from urban area older than 50 years with university education was apologetic about abolishing the employment record books arguing in favor of the actual tendency of digitalization (*"I consider that all information on work of citizens should be kept and collected in the database on the computer and on the electronic medium. It's easier to work with a database on a computer, than with a dusty paper archive. You can quickly issue a certificate to the citizen and a copy of it. It has long been time to translate work with large information into new technologies. Why then people invented computers, electronic media, the Internet?")*).

A man from urban area with the age between 35 and 50 years with university studies pointed to people's stupidity, requiring a piece of paper to be recognized as being someone - *"Public stupidity and ignorance. Without a piece of paper you are ... and with a piece of paper you are a human [someone]"*.

Younger people saw the possibility of losing the employment record book (a woman from urban area younger than 35 years with university studies - *"For the data to be kept for a long period of time; not to lose employment record books and the emergence of later problems"*), another woman from urban area younger than 35 years with university studies - *"There will be no problems in losing your employment record book"*).

Some people saw in the electronic register an instrument that is updated (for example, a man from urban area younger than 35 years with university studies - *"Perhaps it is possible to obtain up-to-date information on the peculiarities of professional activity"*).

Other people see the reform of employment record books as a minor problem (for example, a man from urban area older than 50 years with university studies - *"There are many reasons [for abolishment of employment record books], but I do not think this is the main [problem] in the situation of the Republic of Moldova"*).

Conclusions and recommendations

From the results of the survey between the employees the following can be concluded:

- ✓ two thirds of the surveyed employees know about the employment register, in most of the cases being informed of it from their jobs or from mass-media, but two thirds of them never accessed the register;
- ✓ half of the surveyed employees were informed about abolishment of employment record books, from which most of them – from mass-media and from their workplace;

- ✓ opinions on the complete replacement of employment record books with electronic register and/or with monthly printed reports were mixed – around half of them agreed, while circa a third were against it;
- ✓ the most frequent motives given by people for keeping employment record books were: leak and loss of electronic data, tangibility of employment record books, a decentralized alternative to electronic register, poor digital literacy;
- ✓ the most frequent motives given by people for abolishing employment record books were: digitalization, accessibility, flexibility, transparency, operativeness.

After analyzing the opinions of surveyed employees the following measures can be recommended:

- keep the employment record book for employees with poor digital literacy, thus making it optional;
- invest in the security of electronic register (for example, using blockchain technology for data decentralization);
- oblige the employee to verify on monthly basis the data from the register and its changes;
- digitalize of employment record book data on work experience before 1999;
- more seminars, trainings, information campaigns or other targeted measures that will boost digital literacy of people.
- the reform shouldn't be rushed; the replacement of employment record books should be gradual.

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Trends and perspectives of Bulgarian NEETs

Assoc. Prof. Dr Veneta Hristova

Chief Assist. Prof. Dr Vanya Dimitrova

St. Cyril and St. Methodius University of Veliko Turnovo, Bulgaria

Summary: One of the major problems of the present is young people who are not concerned with labor, employment or entrepreneurship. Unfortunately, this group of people in Bulgaria is a considerable part of working age people and despite the measures taken, they remain a major problem. The report outlines the main trends and perspectives for the Bulgarian NEETs and on this basis offer some directions for solving this problem.

Keywords: NEETs, unemployment, labor market, Bulgaria, activity

Introduction

At the beginning of 2013, the European Commission issued Communication COM (2012) 795 final¹, where the parameters of the European Action Plan, which has a subtitle with a clear message - to re-launch the entrepreneurial spirit of Europe. The document emphasizes that there must be more entrepreneurs in Europe in order to achieve economic growth and high levels of employment. At the same time, against the background of these outlined perspectives, the data on registered young people between 15 and 29 not employed, in the education system, or training form a new phenomenon - NEETs². By 2016 NEETs exceeded 11.5% of the population of the entire European Union, and Bulgaria has the highest levels - almost 1/5 of all young Bulgarians. This report studies key NEETs parameters by outlining the significance and trends of the environment for this young people in Bulgaria. Main directions are outlined to influence the NEETs growth restriction. As initial data, official statistical information from National Statistical Institute and EUROSTAT are used as well as information published in government documents and research conducted on this subject.

1. The demographic picture of Bulgaria – outlines and perspectives

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:en:PDF>

² NEET – not in employment, education or training

One of the fastest “melting” countries in the EU in recent years, without being caused by natural cataclysms, wars or epidemics, turns out to be Bulgaria. At the beginning of the transition, in 1989 our country had a population of almost 9 million, in 2000 it was just over 8.1 million, and 16 years later it was a million less. This demographic catastrophe began in the late 1980s and was caused by a number of complex factors, including the low birth rate, the drastically delayed economic reforms, the high levels of corruption impeding the free development of entrepreneurial initiative and others. By mid-2017, according to the Population Reference Bureau³ demographic data for Bulgaria show a deepening of unfavorable trends: on 1,000 there are 9 births and 15 deaths, high child mortality rates - 6.5%, 14% of the population are under 15, and 21% are over 65, and 73% of the population lives in cities and 204 inhabitants have at 1 sq. km. Population forecast for Bulgaria according to the National Statistical Institute shows the future in a catastrophic picture (Figure 1).

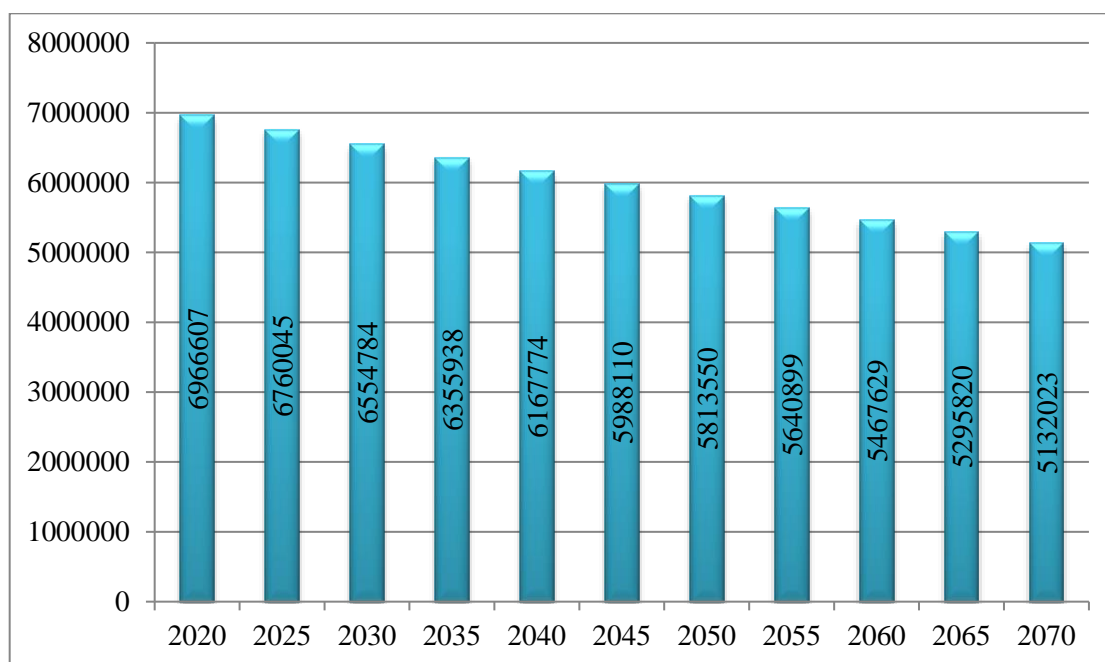


Figure 1. Population Forecast for Bulgaria (the realistic scenario)

The structure forecast for the Bulgaria’s population perspective 2020-2070 by working age status shows continuation of unfavorable trends of decline of young

³ <http://www.prb.org/>

population with nearly 400 thousands, a decline in the working population with approximately the same values and a gradual increase in over working age population.

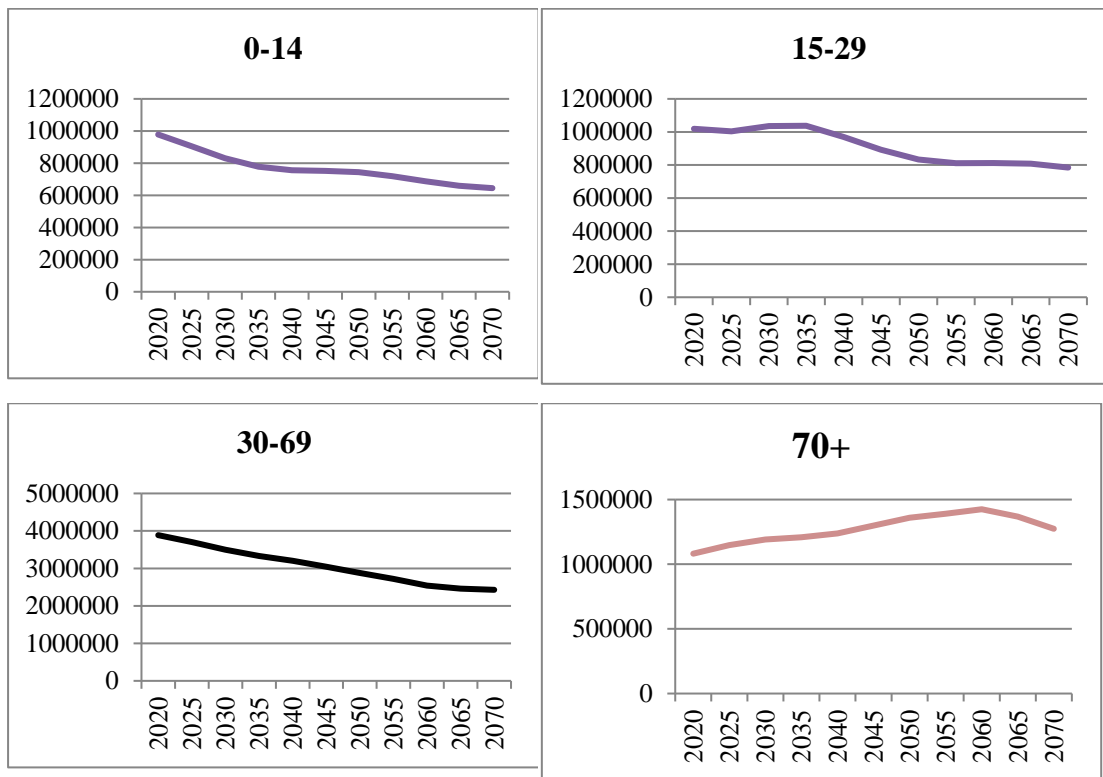


Figure 2. Structure forecast for the Bulgaria's population perspective 2020-2070

These very unfavorable future scenarios in structural terms are evident from the problematic proportions of the population groups shown in Figure 3: persons under and above working age are reduced for the last 16 years with about 300,000, and those in working age are most declining - by almost 450 thousands. Obviously, the lack of effective decisions in the demographic aspect is giving results, and analysts predict the continuation of these negative trends.

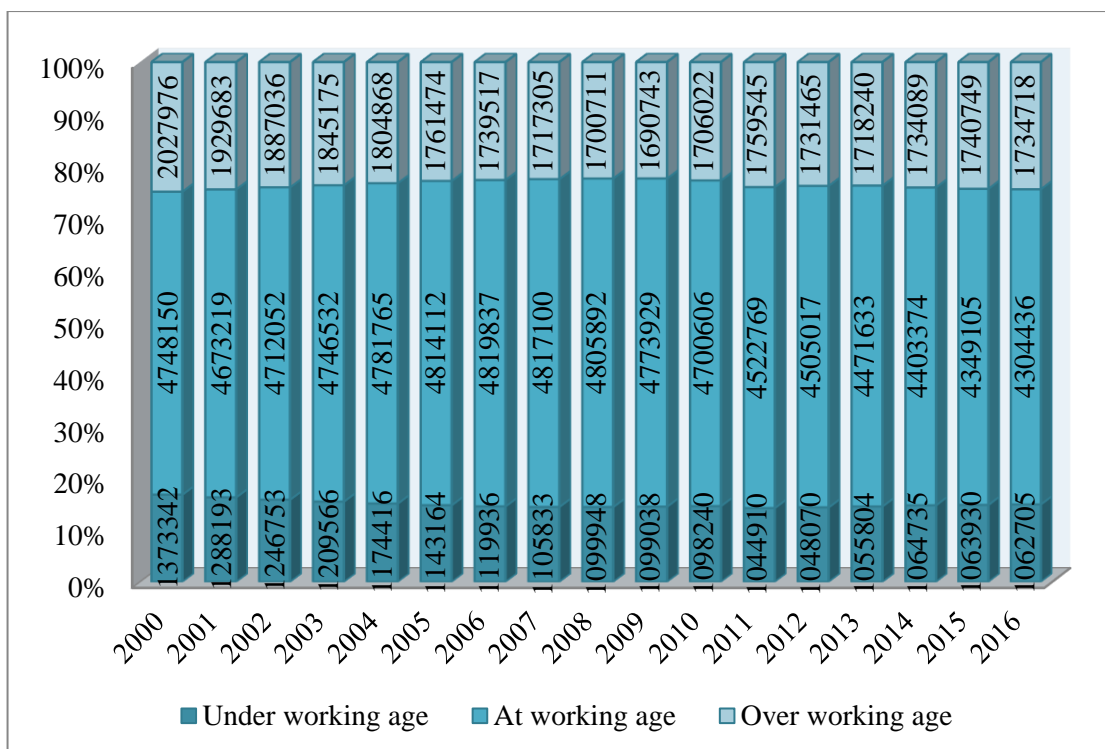


Figure 3. Structure of the population in Bulgaria for the period of 2000-2016 by working age status

The actual demographic picture for Bulgaria mid-2017 is outlining such main trends as:

- The population decrease process continues as well as population aging;
- The imbalance in the territorial distribution of the population is deepening;
- Reduction in numbers of live births and overall fertility rate;
- The number of deaths and overall mortality rate are decreasing;
- Reduces in child mortality;
- The number of civil marriages is reduced and the number of divorces increases;
- The expected average life expectancy is increased.

On this basis, there is another, much serious problem - growing group of young people who do not want to participate in the labor process no way.

2. Bulgarian NEETs

According EUROSTAT the indicator NEET corresponds to the percentage of the population of a given age group and sex who is not employed and not involved in further education or training. The numerator of the indicator refers to persons meeting

these two conditions: they are not employed (i.e. unemployed or inactive according to the International Labour Organisation definition); and they have not received any education or training in the four weeks preceding the survey. The denominator is the total population of the same age group and sex, excl. the respondents who have not answered the question 'participation to regular education and training'⁴. NEETs in EU became increasingly central to the policy agenda of the European institutions and from 2012-2013 a special set of measures and programs were developed to this very problematic group. As it is seen from the figure 4, their presence at the community is essential above 11% of the population in EU 28 as its raising from 11% to 13.2% in 2012 and then decreases to 11,5% in 2016.

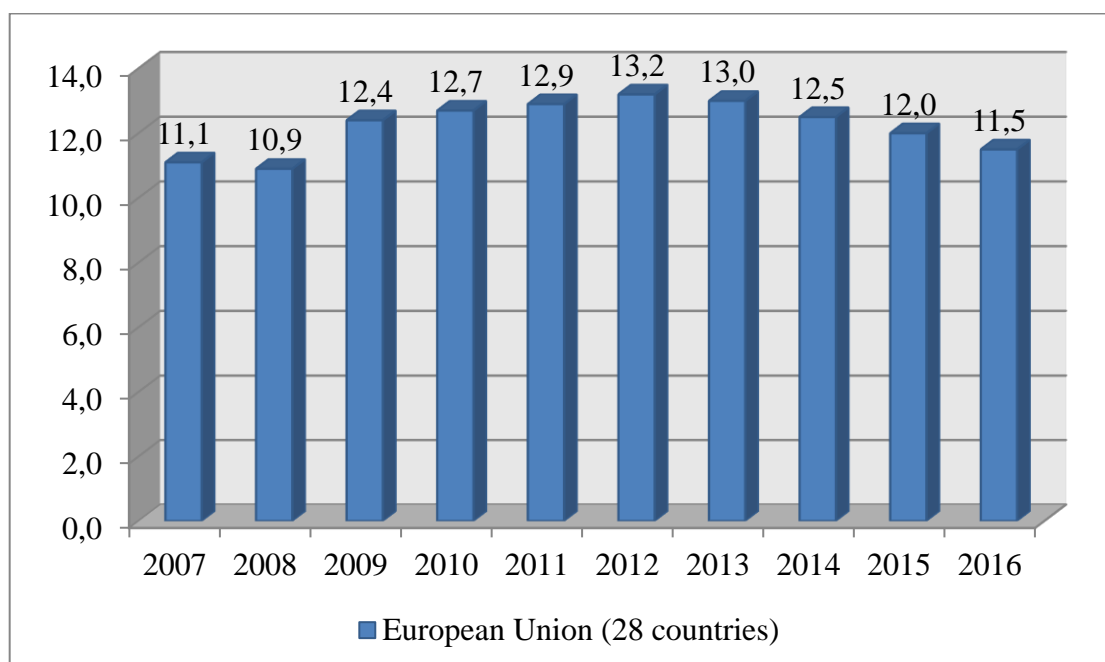


Figure 4. Percentage of NEETs in EU 28 of the total population

The problem with NEETs in EU 28 is very serious as Turkey and FYROM (not accessed in EU) for the last 10 years “hold” the first two places on this indicator. Besides them we can see that the next country is Bulgaria - accessed in EU in 2007. Probably as a positive sign might be reported that for the first time from 2007 - 2011 Bulgaria give Italy the championship after 2012. The countries not suffering from NEETs problems are Iceland, Netherlands, Luxembourg, Norway, Denmark, Sweden,

⁴ <http://ec.europa.eu/eurostat/web/products-datasets/-/tipslm90>

Germany, Czech Republic and Switzerland with values at or under 7% for 2016. It would be interesting to look more closely at the causes of these low levels of the indicator, suggesting that innovative training systems, which are paramount for almost all countries in this group, are at the heart of their current state.

Table 1. Top 5 in EU NEETs (EU 28) as percentage of total population

EU 28/TIME	2007	EU 28/TIME	2008	EU28/TIME	2009	EU28/TIME	2010
<i>Turkey</i>	39,2	<i>Turkey</i>	37,0	<i>Turkey</i>	34,9	<i>Turkey</i>	32,3
<i>FYROM</i>	33,1	<i>FYROM</i>	30,7	<i>FYROM</i>	27,7	<i>FYROM</i>	25,5
Bulgaria	19,1	Bulgaria	17,4	Bulgaria	19,5	Bulgaria	21,0
Italy	16,1	Italy	16,6	Ireland	18,6	Ireland	19,2
Romania	13,3	Spain	14,3	Spain	18,1	Italy	19,0
Croatia	12,9	Ireland	13,9	Italy	17,5	Spain	17,8
Slovakia	12,5	UK	12,1	Latvia	17,5	Latvia	17,8
EU28/TIME	2011	EU28/TIME	2012	EU28/TIME	2013	EU28/TIME	2014
<i>Turkey</i>	29,6	<i>Turkey</i>	28,7	<i>Turkey</i>	25,5	<i>FYROM</i>	25,2
<i>FYROM</i>	25,2	<i>FYROM</i>	24,8	<i>FYROM</i>	24,2	<i>Turkey</i>	24,8
Bulgaria	21,8	Bulgaria	21,5	Italy	22,1	Italy	22,0
Italy	19,6	Italy	20,9	Bulgaria	21,6	Bulgaria	20,2
Ireland	18,8	Greece	20,2	Greece	20,4	Croatia	19,3
Spain	18,2	Ireland	18,7	Croatia	19,6	Greece	19,1
Romania	17,5	Spain	18,6	Cyprus	18,7	Spain	17,1
EU28/TIME	2015	EU28/TIME	2016				
<i>FYROM</i>	24,7	<i>FYROM</i>	24,3				
<i>Turkey</i>	23,9	<i>Turkey</i>	23,9				
Italy	21,3	Italy	19,8				
Bulgaria	19,3	Bulgaria	18,2				
Croatia	18,1	Romania	17,4				
Romania	18,1	Croatia	16,9				
Greece	17,2	Cyprus	16,0				

Comparing Bulgarian NEETs with EU 28 ones, it is clear that the logically highest ones are at the height of the crisis - 2011 - 2013, after which a gradual decline occurs. Despite the favorable trend for the period, the levels of Bulgarian NEETs remain much higher than the average for the community and start generating negative effects such as higher levels of social assistance spending, reduced entrepreneurial initiatives, discouragement, apathy, and denial of participation in creating public goods.

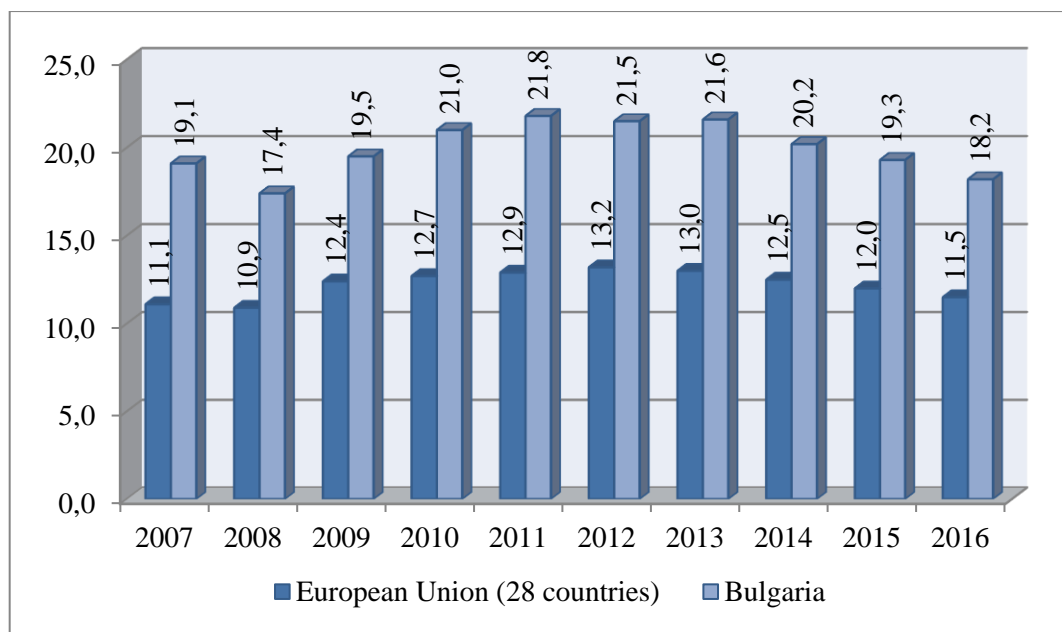


Figure 5. Bulgarian NEETs in EU 28 (as percentage of total population)

Traditionally, NEETs are characterized by higher levels among women and Bulgaria is no exception. The main reasons are the imposed traditions of early age among particular ethnic group, lower levels of education, family care and limited opportunities for part-time employment, etc. NEETs among women remained stable at levels around 20% during the period under review, while men were more likely to experience fluctuations, as the post-crisis trend tended to fall more severely. This again shows that special measures should be taken among women to limit high levels. According to the latest publication of EU in 2016 the profile of Bulgarian NEETs is completed as follows: 50% of them are low educated as most of them are due to family responsibilities (more than 30%), the majority of NEETs are inactive; about 80% are not registered with the public employment services and further receiving public help. The result is obvious: Bulgarian NEETs are in very high risk of social exclusion.

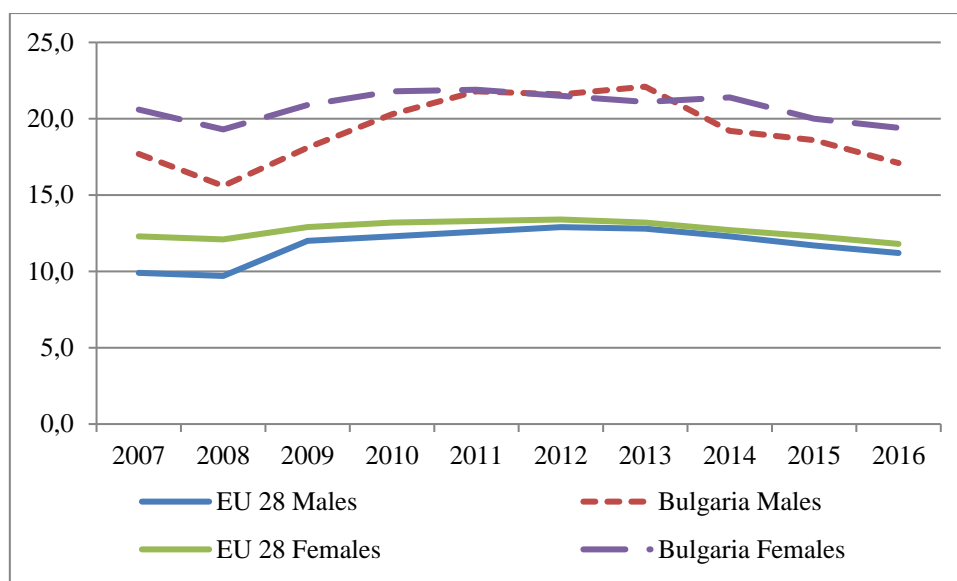


Figure 5. Male & Female NEETs in EU 28 and Bulgaria

Instead of conclusion – policy responses

The limitation of NEETs levels will obviously continue to be a key point in future labor policies in Bulgaria. Despite the fact that Bulgaria joins Youth on the Move (EC, 2010), introduces the NEET as key statistical indicator and participates in the Youth Guarantee Monitoring Framework, it will be one of the main problems to our country with the view of demographic trends described above. We believe that policy success strides towards NEETs should be: introducing a system for identifying NEETs, incl. early warning system; profiling the programs and measures in line with the various NEETs subgroups; stepping up entrepreneurship-oriented learning from the early stages, and intensifying the fight against corruption schemes that have a major impact on society's understanding of labor. An important focus should also be on educating and promoting social entrepreneurship among young people in order to meet the increased needs for our society.

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Development of the Advanced Manufacturing Technologies: Positioning of Europe in the Future

Andreeva E.L., Myslyakova Y.G., Ratner A.V.

Summary. The analysis of the trends of global industrial-technological development has shown the existence of qualitative transitions in technological development, presence of three groups of economies by combination of indicators of technological development, existence of various combinations of support for development of industries in national economies. The EU countries possess one of the leading positions, in particular, Germany. They have high global industrial competitiveness. The instruments of technological development are the instruments of stimulation of small innovative business activation and of own high-tech manufacturing. In Germany will be developed “the Industry 4.0”. However, to forecasts, European economies will cede their positions relatively to the economies of Asian-Pacific region, including of the developing. Already now the European economies cede them in the context of dynamics of some indexes of technological development.

Key words: advanced manufacturing technologies, qualitative transitions, European economies, developing economies, manufacturing competitiveness

The process of the new industrialization is one of the most pronounced and actively discussed trends in the world economy. The developed countries are characterized by the so-called policy of reshoring, which is being currently implemented by the USA. However, the slogan "Buy American", which reflects the search for public support of import substitution [6], was coined in the 1980s to protect the American market from Japanese companies.

In Europe, the begin of the industry revival after a long-propagated era of post-industrialization was marked by the communiqué "For the European Industrial Renaissance" published by the European Commission in January 2014, which envisaged an increase in the industry's share in GDP of the EU countries from 16 to 20% by 2020. It seems to be relevant to define what trends and results in the development of advanced manufacturing technologies are typical for European developed economies and how they are positioned relatively other economies.

Achievements and forecasts.

There're already achievements in the sphere of development of advanced manufacturing technologies. Half of the top 10 nations with the most industrial robots per 10,000 employees

belong to the European Union. Of the 22 countries with an above-average robot density, 14 are located in the EU [8]. The third place in the world is taken by Germany, where the national industry preserved better than in other European economies: the share of manufacturing in the structure of GDP is 22.4%, and the output of industrial products has increased by 23.5% over the past fifteen years (for instance, in Italy it has decreased by 11.1%) [5].

Modern technological development features three important qualitative transitions:

- from manufacturing as "production using human physical efforts" to "brainfacturing" as intellectual production, or "production using human intellect";
- from B2B, B2C to M2M and IoT concept (the Internet of Things);
- from the concepts "high-tech" and "low-tech" in the 20th century to the concept of advanced industries in the 21st century.

The Brookings Institution establishes the following criteria to refer to an industry as an advanced:

- an industry's R&D expenditure per worker must fall in the 80th percentile of industries or higher, exceeding 450 US dollars per worker;
- the share of workers in an industry whose occupations require a high degree of STEM knowledge (Science, Technology, Engineering and Math) must also be above the national average, or 21% of all workers [1. P. 2].

So, in the USA, to these criteria correspond 50 industries, of which 38 are manufacturing, and the rest represent sector of services closely related to the industry. The advanced industries sector employs 80% of the nation's engineers; performs 90% of private-sector R&D; generates approximately 85% of all US patents; and accounts for 60% of the US exports. One new job in the sector creates up to 16 additional jobs in other sectors [1. P. 3].

Therefore, the indicated peculiarities of the world technological development are of a fundamentally new, comprehensive and long-term nature, which allows the countries directing special attention to this issue so as to secure their leading positions in the world economy.

The development of advanced manufacturing technologies determines the global manufacturing competitiveness. The three leading countries in the 2016 Global Manufacturing Competitiveness Index (GMCI) are China, the USA, and Germany (table 1). In the forecast for 2020, the leaders will remain the same, though the USA will push China from the first to the second place. The composition of the five leaders in 2020 will not change much as well, yet India will edge out South Korea and move from the 11th position to the fifth. It is noteworthy that the ranks of the European countries are going to deteriorate (it's related on Great Britain, Poland, Sweden, Switzerland, Netherlands, being present in top-20 nowadays) except for the solid position of Germany and improved rank of the Czech Republic (by three points – to the 20th

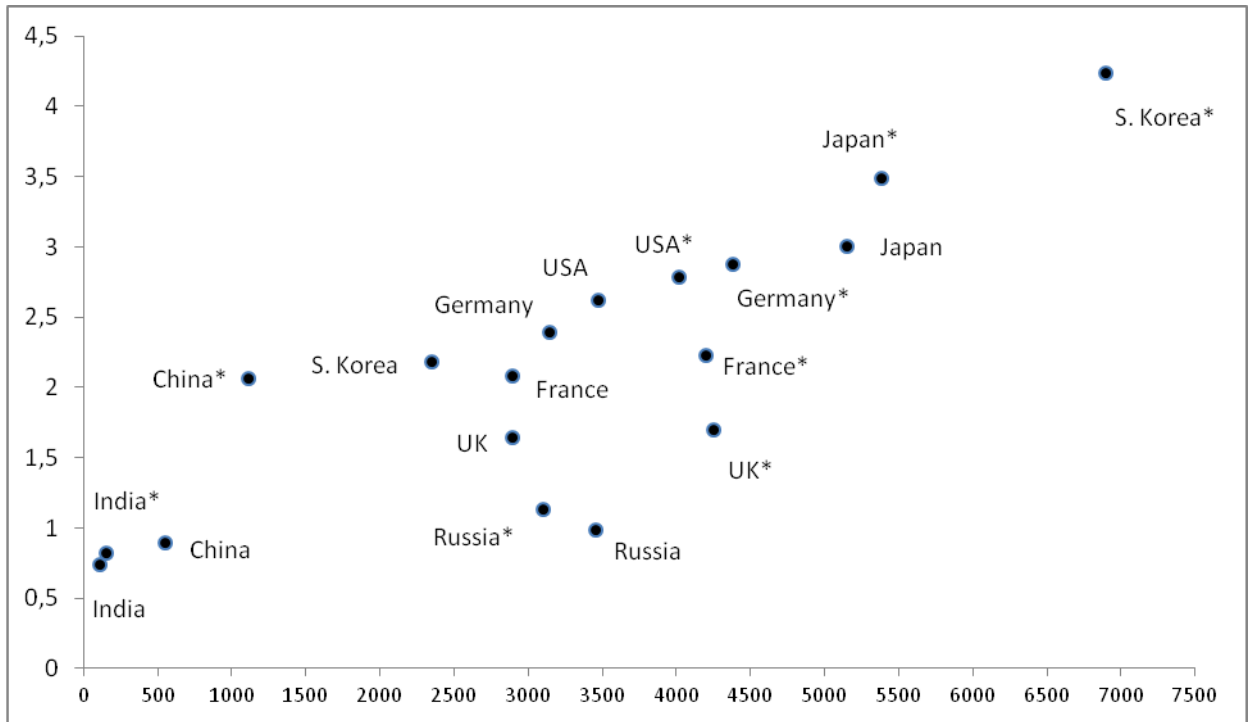
place). However, the positions of some developing countries are likely to become better, particularly, the ranks of Malaysia (13th place) and Indonesia (15th place) will grow by four points. Of the 15 leading countries in 2020, ten are located in Asia Pacific, three are from North America (the USA, Canada, Mexico) and only two originate from Europe (Germany and the United Kingdom, though the rank of the latter will deteriorate by two positions). At this, there is a direct correlation between a country's rank and its high-tech export. The countries, where high-tech exports account for more than a half of the total exports, are believed to improve their positions: Germany (53%, +5), the USA (58%, +3), Japan (55%, +2), the United Kingdom (58%, +9). The ranking of China and India, having the share of high-tech exports of 42% and 43% respectively, is expected to fall by one and three positions.

Table 1
Global Manufacturing Competitiveness Index for leading countries, 2016 and 2020 (projected)
[2]

2016			2020 (projected)			
Rank	Country	Index score	Rank	2016 vs. 2020	Country	Index score
1	China	100.0	1	+ 1	United States	100.0
2	United States	99.5	2	-1	China	93.5
3	Germany	93.9	3	-	Germany	90.8
4	Japan	80.4	4	-	Japan	78.0
5	South Korea	76.7	5	+6	India	77.5
6	United Kingdom	75.8	6	-1	South Korea	77.0
7	Taiwan	72.9	7	+ 1	Mexico	75.9
8	Mexico	69.5	8	-2	United Kingdom	73.8
9	Canada	68.7	9	-2	Taiwan	72.1
10	Singapore	68.4	10	-1	Canada	68.1
11	India	67.2	11	-1	Singapore	67.6
12	Switzerland	63.6	12	+6	Vietnam	65.5
13	Sweden	62.1	13	+4	Malaysia	62.1
14	Thailand	60.4	14	-	Thailand	62.0
15	Poland	59.1	15	+4	Indonesia	61.9
16	Turkey	59.0	16	-1	Poland	61.9
17	Malaysia	59.0	17	-1	Turkey	60.8
18	Vietnam	56.5	18	-5	Sweden	59.7
19	Indonesia	55.8	19	-7	Switzerland	59.1
20	Netherlands	55.7	20	+3	Czech Republic	57.4

As for Russia, its position in the ranking worsened; after holding the 20th place in 2010, the country ranked just the 32th in 2016. It is a common trend for all BRIC countries: India fell from the second to the 11th place, Brazil changed its position from the fifth to the 29th. However, we can see the rise of MITI-V (the "Mighty 5"): Malaysia (+4), India (+6), Thailand (the same 14th position), Indonesia (+4), Vietnam (+6) [2], which will be among the 15 leaders by 2020.

In terms of the dynamics of technological development in 2000-2015, the combination of the two most important indicators of national technological development, namely R&D expenditure as a percentage of GDP and number of researchers per million people allows identifying the following groups of the economies (fig. 1):



Notes: no (*) indicates 2000; (*) indicates 2014 or 2015. The number of researchers is for 2014 [except for the USA (2012) and India (2010)], and R&D expenditure (% of GDP) is for 2015 [except for India (2011)]

Fig. 1. Changes in R&D expenditure (share in GDP, %) (Y) and number of researchers (per million of inhabitants) (X) in top countries by spending, 2014 and 2000¹

- the economies that grew the most rapidly: South Korea and Taiwan (2000-2013 their spending went up from less than 2% of GDP to well over 3%, whereas the number of researchers per million people rocketed from 2, 500 to 6, 000 people [2]);

- developed countries that demonstrated moderate growth: Japan, Germany, France, the USA and the United Kingdom. Their comparatively small increases indicate that the level of development of financial and human research potential is already high, therefore it is not easy to augment it substantially. Moreover, the United Kingdom experienced a decrease in relative

¹ Composed by statistical data of UNCTAD (http://data.uis.unesco.org/Index.aspx?DataSetCode=SCN_DS&popupcustomise=true&lang=en#), OECD (<https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>) and World Bank statistics (<http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS>).

spending on research. Generally, having strong position today does not guarantee holding them in the future.

- large developing countries that showed growth in at least one of the considered indicators: China, India, Russia.

Instruments of technologies development. It seems to be that not in the last turn the development of technologies is related on demand on them. While examining the cycles of world economic development V. Klinov states that "basic innovations that opened the way for the development of new sectors of production occurred the most intensively in the periods of the least favorable economic situation" [3]. In the conditions of the global economic and financial crisis, declining world commodity prices, as well as strained global economic relations, we can also speak of a period of unfavorable economic situation, when highly demanded innovations create additional opportunities for scientific and technological development.

It's evident that among developed economies in the context of technologies development the European economies follow after the American. In the rating of the companies of high-tech and industrial sectors represented among the 100 leading companies by market capitalization (46 companies) the USA are the leader in companies' spending on R&D (41 companies out of 100 top). To compare, China occupies only the 12th place (2 companies).

In the European Union at a whole nowadays the mechanism of reindustrialization and technological development is stimulation of activation of small innovative business and own high-tech production. The instruments are:

- strengthening the protection for law on intellectual property, in particular, organization of the service of information support in part of this protection;
- furthering the transformation of industry through development of new goods and services (3D-printing of industrial products);
- simplifying the access to financing [7].

The most actively technologies will be developed, as the overview has shown, in German economy. The instruments in it served, as the researchers mention, governmental measures for protecting the jobs in the car and mechanical engineering, timely undertaken reforms in labor market and ensuring the moderate growth of the salary [5]. In the German economy, as well as in American, "the industry 4.0" will be actively developed. The key role when forming the German innovative, scientific and educational policy will be got to the Strategy of high technologies development, Pact on the higher school, Initiative on clusters, Pact on researches and innovations. In Germany the high-tech industry of new generation will be developed – the search of alternative energy sources, medical and biotechnologies, production automation and search of resource-saving technologies. The Concept "Industry 4.0" being realized now in Germany is a

concept of reorganization of production systems and of work organization in terms of development of a new form of production automation which is considered under the brand “Digital factory” [4]. On the way to "the Industry 4.0" reflecting formation of an super-modern manufacturing sector, there is an integration of the sector of production and automation to information and communication technologies. "Clever" factories will be grounded which use high technologies arise and at the same time are guided by individual orders [4].

Although, undoubtedly, the strategies of production technologies development will be taken also by growing developing economies. So, China, according to the national program "Made in China 2025", seeks to become the leading technologically advanced nation in the field of industry.

The comparative analysis of policies used to support industrial development in the leading countries seems to be of high relevance. Taking into account the always present limitations of resources (intellectual, financial, material, etc.) it is not possible to tackle the issue of resources' most efficient distribution and the necessity of concentrating the available funds on potential breakthroughs. If stating that this policy should pursue along with the development goals, some socioeconomic goals, including securing employment in traditional sectors, we can conditionally correlate: social goals with the block of traditional sectors, economic goals with competitive sectors, development goals with "venture" sectors. Admitting the choice between these types of sectors we can obtain a number of possible combinations of support for their development. Support of all three types is in place in the case of China's comprehensive support. The option of assisting to competitive sectors describes the South Korea's case, which, for instance, is the world leader in the robot density per 10, 000 workers (more than 500) with the world average equaling 68 and Russia's two in 2015 [8]. The third comes Germany, which adopts the policy of developing traditional for it and competitive industries (machine-building and others). The case of Japan represents a successful combination of support provided to competitive and venture industries.

Conclusion

Therefore, in the transformation of the world industrial-technological landscape, including the following main trends can be detected:

- existence of three main qualitative transitions in technological development (from physical to intellectual production, from B2B to the Internet of Things, from the concepts "hightech" and "low-tech" to the concept of advanced industries);

- presence of three groups of economies identified on the basis of combination of two indicators of national technological development, namely R&D expenditure as a percentage of GDP and number of researchers per million people: economies that demonstrated rapid growth (Asian countries); developed economies with moderate growth; large developing countries that showed an increase in at least one of these indicators (Russia included);

- use of possible combinations of support for development of three important types of industries: traditional, competitive and venture.

The analysis has shown, that there're already the achievements in the sphere of development of advanced manufacturing technologies, and the EU countries possess one of the leading positions, in particular, Germany. They have high global industrial competitiveness. The instruments of technological development are the instruments of stimulation of small innovative business activation and of own high-tech manufacturing. In Germany will be developed "the Industry 4.0". However, to forecasts, European economies will cede their positions relatively to the economies of Asian-Pacific region, including of the developing. Already now the European economies cede them in the context of dynamics of some indexes of technological development.

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Information about the authors:

Andreeva Elena Leonidovna, Dr. of Economics, Professor; Acting deputy director of the Institute of economics of the Ural branch of Russian academy of sciences; Professor at the Urals state university of economics; 620014, Russia, Yekaterinburg, Moskovskaya str. 29; +7(343)371-38-15; elenandr@mail.ru

Myslyakova Yuliya Gennadyevna, Candidate of economics, Institute of economics of Ural branch of Russian academy of sciences; Assistant Professor at the Urals state university of economics; 620014, Russia, Yekaterinburg, Moskovskaya str. 29; +7(343)371-38-15; jul_jul@inbox.ru

Ratner Artem Vitalyevich, Candidate of economics, Institute of economics of Ural branch of Russian academy of sciences, research fellow; (343)371-38-15; 620014, Russia, Yekaterinburg, Moskovskaya st. 29 aratner@inbox.ru

STRATEGIES OF ECONOMISTS' TRAINING AND STATEHOOD SOVEREIGNTY

Andrei MUNTEANU, University Lecturer, Faculty of Economics and Management, Jiujiang University, Jiangxi province, P.R. of China; PhD candidate, State University of Moldova.

“We don't have an order in the world.
We might call it a fluctuating of fluid
constellation, but there is no order.
There are almost no rules being kept now”
(Schmidt, H., 1988) [1]

Abstract. Correlative thinking seems to make it plausible admit marketing researchers' stance, that most difficult issue in their business - problem definition – can be equally uneasy for the economists too, in terms of economic development in general, as key factor, when it comes to discussions about statehood sovereignty perpetuation. The most difficult problem of nowadays is why there is so huge economic disequilibria, at both national and international levels? The economic problems of the contemporary world can be classified in: *cyclical* and *ongoing-pressing* ones, respectively (i) more or less frequent *declines* and (ii) *some type of international business culture, which perceives national boundaries of countries as “nuisance”*. The article discusses the issues that the major problem of nowadays world is the quality of economists' and overall training of economic sciences, when it comes to national security of a country. It also tries to get more insight into the modes how to approach economic *interdependence*, *i.e.* International Economic Integration (IEI) in a way that could make it *advantageous*; what makes the chances of making IEI advantageous for economies of the world, and what does it depend on.

1. Introduction and problem definition

The scientific literature already available provides quite a few insightful data about finding the real problems of a nowadays' society. For example, “Defining the marketing research problem is the most important step in a research project. [...] The researcher should avoid defining the marketing research problem either too broadly or too narrow” [2]. The way we approach problem definition is quite relevant for today's global economy too, on broader scale, not least because it is getting more misbalanced. It is quite noticeable given, say, the excessive unsettling rhetoric from, and around North Korea [3]. A major problem of the world is that we may have missed to pay enough attention to ideas that should have been more discussed and deeper understood, by economists first and foremost, such as: “Economics is haunted by more fallacies than any other

study known to man [...] - the special pleading of selfish interests”. [4] Awareness of the “the special pleading of selfish interests” has been in need of more attention and discussion by academics worldwide, in terms of correlation between (i) their role in teaching new generations of economists conjoined with the need of raising *economic culture*¹[5] among larger layers of society, and (ii) state security enhancement, as cornerstone for peace building and balance.

Somewhat distorted understanding, to various extent, can be traced out in many regards. An example could be the stance of a transnational company exponent, who considers that nowadays “...national boundaries have become a hindrance and a nuisance [and that they] tend to find ways to get around them” [6]. Taking attitude towards the existent statehoods and their sovereignty in this way, does seem to be contrary to the official rhetoric about international security and economic cooperation.

History has provided lessons enough to be learned from the past, and to be used for the good of mankind, about correlation between *economic culture*, *level of welfare* and chances of *keeping peace*. The situation of pre-II-WW Germany, just to mention for an example, could be quite an example. “In 1923, a German housewife burned mark notes in her kitchen stove, since it was cheaper to burn marks than to use them to buy firewood [...] in Germany in 1923, you needed 726,000,000 marks to buy what you’d been able to get for 1 mark in 1918” [7]. A cause-and-effect relationship analysis suggests that the rampant inflation of that time Germany, was a major “driver” for shortly subsequent coming to power of National Socialist Party, later re-named as the Nazi Party. Typically mistakes of economists, proceeded from questionable economic culture, trigger violent confrontations in proportions much bigger than ever possibly anticipated.

Improper quality of economists’ training worldwide is a serious problem. An evidence of this is too many countries being poor, and keep aggravating the economic disequilibria at international level. It is a fact which should be on high agenda of the international bodies’ strategies, conjoined with academics involvement in terms of both (i) quality of economists’ training, and (ii) training of economic theory for students of non-economics departments/faculties.

Questionable understanding of *globalization*² and *competition*³ entails some countries to undertake defensive measures, which eventually become quite a threat to their own economies, to neighboring countries and worldwide community, than common-sense “*protectionism*”. Likewise, improper understanding of concepts mentioned above can be used as improper excuse for violation

¹ *Economic culture* is proceeded from the concept of *cultural capital* [5], defining assets convertible in certain conditions, into economic capital, and may be institutionalized in the form of educational qualifications, *i.e.*, *economic thinking* of a certain quality.

² In the view of the author *globalization* should be defined first and foremost as joint responsibility of all the countries’ care about our planet and environment, as well as innovations, management and resource allocation for this purpose.

³ In the view of the author, *competition* is an inherent peculiarity of human nature, of human diversity, having nothing to do with so-called “conspiracy theory”, or the like.

of smaller countries' rights. In a bigger extent, in terms of a causal analysis, it seems plausible to admit that between the (i) nowadays' aggravating political crisis and (ii) some businessperson's statement about the national boundaries as "hindrance and a nuisance", the link is quite strong.

In one of his speeches, Helmut Schmidt declared that that: "Normally political leaders of a country have no knowledge of economic interdependence, [...] So we had little success in educating political leaders" [1, p. 83], and that "How good this great communicator Gorbachev may be I don't know, but he doesn't have any economic concept so far." [1, p. 89].

The incidence of awareness raising discussions about mistakes of economists' training have got more frequent recently, with new and more thorough insights, like: (i) "Economics is Broken", (Salerno, J.) [8], (ii) "The Broken State of Modern Economics", (Deist, J.) [9], (iii) "Too much Maths, too little History: The problem of Economics", (LSE Economic History Department) [10], if to mention just a few.

Over and above, the issue touched upon gets more alarming by claims that "Economics loses its importance for advising governments and becomes increasingly less attractive as a field for students" [11], which can trigger worse implications for the longer-run. Despite of that, economic performance in some countries of the world does occur, with examples that deserve due analysis: "During the industrialization of the United States and Great Britain in the 19th century, their real incomes per capita doubled in 50 years. China did the same in 9 years" [12]. Also, no doubts have been noticed so far in the international media about a detail, that: "... the annual China-US trade volume has skyrocketed from only 2.5 billion dollars to more than 558 billion dollars last year" [13], *i.e.* a growth of over 223 times.

2. Typical *modus operandi* and consequences

In discussion about the problem of the contemporary world, it is plausible to believe that in an eventual higher economic welfare, mass physical unrest and and/or violence/confrontations are far less probable.

Hence, if *economic culture* is taken for equivalent of economic thinking of a certain quality, a future world with higher economic culture has much more chances to be peaceful and mesmerizing, vs. an economically "dis-culturalized" one. Undeniably, a certain degree of "interdependence of the economic functioning of the world" [1, p. 81.] has always been typical to the mankind. "The concept of international economic coordination is essentially a notion in which sovereignty is traded off for economic benefits of an international division of labor" [14], whereas the "*Macroeconomic simulation models consistently yield transmission effects far too small to resolve the current account problem* [emphasis added]" [1, p. 95]. The economists' training and

aims to use their capacities for higher level researches and raising overall economic culture, need more openness to alternatives in order to better capitalize the investments in education, by means of economic sciences.

The debated upon dilemma between “...two much mathematics and too little history...” [10] in teaching economics, too much traditionalism seems to be more of a problem. Excessive focus on history and “telling a narrative [;...] telling a story about what happened in that particular case...” [*ibid.*, min. 15:10], “... and then [...] retelling the [...] same story in maths” [*ibid.*, min. 16:40-16:47], suggests that mathematics has been used also as “semiotic language”, even when calculations and/or metrics were unnecessary. This may have been contradictory to a principle, which is more desirable for getting highest possible returns on economic education - “learning economics should be as uncomplicated as it is informative” [15].

One more detail about maths’ use in teaching economics, could be as follows. Although “... [among] Asian school systems that made it into the top 10 for maths were Hong Kong, Macao, Taiwan, Japan and South Korea” [16], none of those countries were ranking among the top 10 in the world in terms of “Global Innovation Index 2016” [17], only three Asian countries rank among top 25 countries by this index, and roughly same number or less in terms of top 25 countries by GDP (PPP) per capita [18]. This should be a plausible stance to consider mathematics as missing from either major or key science, in terms of building-up economic creativity and innovational capacities of a society/country. Although some observers might claim this data incomparable in terms of age-groups taken for comparison, it is comparable in terms of *educational and research policies’ outcomes* for certain time-scales in various countries, and/or groups of countries.

In training economists time allocation and management for scientific researches, in terms of evaluation criteria, also seems to be quite an issue. Should we compare the need for *empirical researches* (ER) versus *desk studies*, we could agree that too much attention paid to ER is disadvantageous; it declines effectiveness. This requirement takes the role of economists in a country to the level of a *marketing researcher*; the latter is undoubtedly important, but of much less impact as implications, if mistakes are made in decision making. Too much time is spent on sampling, whereas samples comprise many people with low or lack of economic qualifications, based on which economics researcher is supposed to make conclusions and economic decisions for a macro-economic system level. Less time is left for reading scientific articles of highly experienced, renowned economists, and for interpretational/analytical skill development. ERs also curtail the importance of scientific observations and time allocated for developing this skill for a future economist [19], for raising efficiency and better decision making. By requiring ER for doctoral researchers in economics, as utmost form of economic thought development in a country, is a display of improper time management and implies competitive disadvantages. Over and above,

should *efficiency* and *effectiveness* be pursued, in search for welfare by means of economic studies, the policy-makers and governments need to consider time-pressures and need to specifically differentiate between: (i) *educating statisticians* as data producers, and the unavoidable need for (ii) *economist-analysts (EAs) as idea producers* plus *EAs as designers and developers of capacities of idea production, i.e. economics' teaching staff*.

It has been mentioned already the stance of a transnational company exponent with regards to national boundaries as “nuisance”. Some other economist considers that “[... labor market [can be] rigid (*i.e.*, labor market does not adapt to changes in society and economy)” [20]. So, labor market is perceived as “determinant factor” instead of a mere indicator/reflector of a certain quality of economic policies, as outcome of certain quality of overall education and/or economic education. In some other instance a high-level governmental official, graduate of a prestigious school of economic thought, declares: „...we cannot, we have not good indicators, we have no systems, no mechanisms, to measure which is the quality of education, [...] this is why we can judge only through the angle of the business circles” [21], whereas it is so much known that *Returns to Education* has been being an indicator used to measure the quality of education for at least 60 years by now, in all the highly advanced economies. Or, judging quality of education through the angle of the business circles only, can imply a worse economic disequilibria instead of coherent development in a country. The authors of the claims above may have met fully the requirements of doing comprehensive ERs for getting their degrees.

Some other readings, although unrelated directly to economics, one can find that: “...for a significant proportion of children something seems to go wrong once they are “taught” maths. Either they fail to develop their skills further or they lose even those skills which they have” [22, p. 104]. So, could it be possible to “...remedy six or more years of poor teaching [mathematics]” [*ibid.*, p. 105], and narrow the gap of *economic culture*, if focus on maths is excessive in the need to raise chances of economic development? Should this category of learners be disregarded and discouraged in terms of their potential desire to raise economic culture and/or become economists?

3. Alternatives and desirable openness

Professor Richard Paul claims that “...there are multiple logics in the world...” [23, min. 3:54]. It is a stance building up the assumption that there is *some difference* between the *economic logic* and *mathematical logic*. *The latter* is about the need for “precise or very precise” measurement such as in engineering and architecture, for example; also very close to science of statistics and data production *for analysis*. Whereas, *the former one* deals mostly with the need to build-up ideas,

creativity and production of economic added value, efficiency, effectiveness, and skills of equitable distribution of economic output in any kind and form of human action; provide for conjunctions of how to make economy functional, dynamic, by using logical combinations of variables and factors to most possible extent; to be motivational, although admittedly, could be with some degree of approximation.

The elementary logic of the aim of economics teaching and training would suggest that we would rather have an *approximately calculated* strong and very strong economic growth, set on a sound ascending trend, rather than a very precisely calculated economic stagnation, or decline. We may not be able to train good economic thinkers by cognitive burdens that “sabotage” creativity and economic logic development, by incautiously scaled use of maths, without due attention to *emotional ergonomics* of the process; we can neither disregard it can “develop” learning disorders to many students, even at post-high-school levels.

The logic of the compensatory effect, *i.e.* “to offset an error, defect, or undesired effect” [24], suggests that economic lagging behind of many countries is caused by improper economists’ training. An alternative and/or complementary approach can be a more focus on a combination of *rhetorical analysis*, *hermeneutic analysis* and *causal analysis* of any economic contents; descriptive articles of a nowadays situation could be quite plausible. Rhetorical analysis, defined as: “a form of criticism (or close reading) that employs the principles of rhetoric to examine the interactions between a text, an author, and an audience; also called rhetorical criticism or pragmatic criticism” [25] is, in essence, a reflection of a certain level of economic thought/culture, which inherently comprises the dimension of content *understanding*, as reflection of *interpretation* of a certain quality. Thus, we could consider it as a derivative of “hermeneutic analysis”, defined as: “... attempt[s] to make clear, to make sense of an object of study/[contents]; [it] must, therefore, be a text, or text-analogue, which in some way is confused, incomplete, cloudy, seemingly contradictory – in a way or another, unclear” [26, p. 42]. An example of a *Rhetorical Analysis Guide* bellow (Box 3.1) is a concise set of items which can be used also selectively, tailored depending on the size of content and time available, as well as on any trainer/teacher’s individuality and creativity horizon:

Box 3.1. Rhetorical Analysis Guide

1. *Who is the author of the content?*
2. *Identify several key words in the content;*
3. *Identify several key main word combinations and/or phrases;*
4. *What is the central message the author presents?*
5. *What are the minor supporting details?*
6. *Why did the author choose to study this?*
7. *What is the author’s purpose? To inform? To persuade? To criticize?*
8. *How does the author use diction? (Is it formal, informal? Is it technical or slang?)*
9. *Are there any important terms repeated?*
10. *Is the content declarative, imperative, exclamatory? What effect does it have?*

11. Are there any words or phrases in: italics, underlining or parentheses?
 12. Ask all possible questions and state all possible thoughts/inferences related to the content;
 13. Divide the content into 3 to 4 clusters/specific components;
 14. Do components of the content mostly relate to the beginning or to the end of the text? (Note: pay particular attention to the: style, culmination, denouement, major problems, if any...);
 15. Did I pay attention to all possible details I need to provide for a best possible interpretation?
 16. Did I work enough to provide already my own interpretation?
 17. Which way will my credentials and conclusions change as a result of studying this content?
 18. What is the root problem? Why?
- Source: Adapted from: [27] and [28].

In nowadays' reality when "Over 80% of market value in today's global markets is allocated to intangible assets" [29], the historical approach to learning economics may not be relevant enough to make possible develop good logic for economists face the future; nowadays' economy differs significantly from historical theories of economics, although they matter for comparison. The logic of historical economic contents may not be as justifiable as the use of historically developed tools.

During economics training programs, we study and learn various historical time-scales and experiences, but do not focus enough on developing economic logic in terms of how to deal with *unpredictability*. By developing mostly economic models we predispose our minds towards some kind of quasi-"standardized economic situations" and expectations, we rely too much on *ceteris paribus assumption* and the latter rarely matches the reality. The world is much more changeable due to a high level of innovations production, changes of human behavior and lifestyles; due to long-term prevailing intellectual labor.

At least too many, if not most, of the university economics training staff seem to have attended too few courses of educational sciences. *Emotional ergonomics* as science is virtually unavoidable for economists' analytic skills development, and still quite disregarded. This state of affairs does not seem to meet anymore the logic of the need of future economists' training. Over and above, we need to manage quality of the International Economic Relations, in order to make and keep international economic interdependence "advantageous-equitable-coherent" [30, p. 115], and *enhance national sovereignty upon economic assets of a country*, which can be achieved by better quality of economics training, with more focus on on-going development of economic logic among professionals and raising economic culture for vast majority of populations.

"At a time when family and community structures are breaking up, education remains the main instrument that can knit together this fabric (society) into a new humanism; a humanism which recognizes the indivisibility of culture, across the arts and the sciences, the emotional and the rational, the perspective and the analytical, as well as across countries. Developing the concept of such a new humanism and sustaining its practical application is a major challenge for education

in the twenty first century” [31]; the latter thought is not less relevant to economists training for facing the future, particularly in economically disadvantaged countries.

Conclusions

1. In the attempt to specify the importance of using mathematics by due caution of *emotional ergonomics*, mathematics-education-policy-makers should consider the need to raise returns to money allocated for teaching mathematics in the overall education sector, in the on-going capacity building sector. The importance of numbers, operations, fractions, ratios and percentages calculation(s) for *economic education* and *culture* enhancement will always be undeniable, yet, not to the detriment of developing interpretational skills, as of paramount importance for understanding and better use in economic thought development.
2. The problems about improper quality of teaching mathematics at lower school levels, combined with excess use of mathematics in teaching and training economic sciences to forthcoming professionals and societies at large, seems to become more a factor of economic dis-culturalization, instead of added-value production; it does not work enough for diminishing economic disequilibria and raising the state economic security.
3. Quite a few topics concerning significant aspects of economic performance cannot be subjected to empirical studies, or mathematical simulations, but they may matter a lot and these can be explored by focusing on *rhetorical analysis* and developing *scientific observation* techniques and skills for better decision making.
4. Rhetoric and hermeneutic analysis should pave deeper way in economics teaching and training.
5. Teaching economics should be considering more the importance of motivation, and be treated mostly as *idea production process*, based primarily on real life situations analysis, focused on need of skills to face unpredictable future. Teaching focused on more *training of economic logic* - compared to outdated excessive modelling/simulations, information dissemination and/or reproduction - gets us to the point of acknowledging economists mostly as problem-definers, idea producers and decision-makers.
6. Faculties of economic sciences should significantly build up skills of new generation of professional economists' training to face contemporary economic challenges, by teaching *economics of education* as a course of study, in the contemporary economics faculty/departments curricula.

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