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Should We Increase Economic Growth or Boost Employment?

The problem of American economic growth

SUMMARY: The United States of America is in a difficult economic situation. It was forced to address several problems during the crisis, but one of these still requires an answer: how should it grow in order to ensure that employment reaches pre-crisis levels? This phenomenon is not specific to the US and not just characteristic of the current crisis. Although this country is the land of opportunities, it has yet to resolve the problem of jobless growth. In this paper, I will investigate the factors that have led to the emergence and persistence of this phenomenon. After presenting the facts and trends related to jobless growth, I will analyse the causes which triggered the problem. I divided the factors influencing jobless growth into three groups. In most cases, these factors clearly support economic growth, but the number of employed people should also be increased in order to boost the profit of companies (which in this case results in economic growth). By providing a synthesis of the literature and statistical data, it has become clear that the problem is deepening and is very difficult to resolve. In this paper, I will address only one of the problems, namely GDP growth.¹

KEYWORDS: jobless growth, GDP, USA, employment rate

JEL-CODES: E2, J2, O4

The 2008 crisis has brought serious problems to the surface in many countries, and fundamentally shocked even the economy of the United States. The Fed's quantitative easing (QE) programmes² during crisis management – four such programs were launched – were meant to stimulate investment through increasing money supply and a zero interest rate policy, and most of them achieved their goal as GDP began to increase. Growth was 1.6 per cent in 2011 and 2.3 per cent in 2012, up at a swift pace. However, employment was not rising: the employment rate was 67.1 per cent in 2012, the same as in 1981. Although the unemployment rate could be reduced by

GDP growth, it should be noted, however, that it is not just unemployment that needs to be reduced but efforts should also be made to increase the employment rate, as it has not been recovered to date either. Long-term unemployment affected 29.29 per cent of the unemployed in 2012 (World Bank 2014). As a result, the US is attempting to close down the QE programmes.

Hereinafter, we will call the phenomenon which results in economic growth without an increase in employment, that is, without creating jobs, *jobless growth* (JG). This phenomenon is apparent in the US these days.

History has seen jobless economic growth occur on several occasions in history. This is what happened after World War I, at the

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time of the 1929–1933 economic crisis, after the oil crises as well as at the time of the shocks which hit the world in the 1990s and at the beginning of the 2000s. Naturally, jobless growth characterises not only the US but several other countries as well, including developing countries such as India and states in Sub-Saharan Africa. It is worth examining this phenomenon at this point in time, given that numerous processes have changed over the years, making economic recovery increasingly difficult (as far as GDP and employment are concerned). In this paper, I will only look at the US, as this country, despite the severe economic shock it has been hit by, is recording increasingly better economic growth figures, though it does not necessarily help the development trend it would like to achieve. My research aim is to explore the economic criteria of the processes which characterise the country and categorise the factors which contribute to jobless growth in the US. This is justified because several *start-up* companies are trying to understand and live the American dream and be successful. A vast number of multinational and transnational companies operate in the country, and thus the American economy has nearly every opportunity to produce an economic growth which can ensure sustainability and livelihood for the people. We need to realise though that this cannot always be achieved, as it does not work in this case either, because many different factors hinder its realisation.

The first part of this paper will discuss the phenomenon itself and its related variables, including their interconnections as well as an important effect of the attempt at managing the crisis which played a key role in the evolution and the sustained impact of JG. The second part of the paper will outline the causes which lead to jobless growth – limited only to the US – broken down into three groups.

THE FEATURES OF JOBLESS ECONOMIC GROWTH

The problem and management of unemployment is a very important issue in America (as well). It was a special campaign topic as early as the 1960 elections, when all the newspapers were talking about poverty (Rosenberg, 1966). Perhaps this is why the labour market of the United States used to be, and still is, attractive for both employers and employees. That is what the statistical data suggest, but in today's economic situation it is debatable whether this is still the case. Jobless growth plays an important role in this. As such, in the next chapter – before exploring the causes –, I will present the current status of JG in the United States and compare it to the figures of OECD countries, pointing out the severity of the problem by using descriptive statistical tools.

The topicality of the reappearance of jobless growth

It is well-known that the problem of jobless growth is not new. At the same time, it is interesting to see what gives it such an important role. The reason for its significance is that economic recovery became elongated after the crises with respect to GDP and employment. Whereas earlier this process lasted 6–8 months, it took over 24 months after the latest crisis (Rajan, 2010). This is happening in spite of the fact that there are numerous tools available today which can make our everyday life easier and boost economic processes.

The jobless growth observed in the US can be linked to the 2008 crisis, which crisis began when the economy was just recovering (could just have recovered) from the previous (2001) crisis to start a new boom. Following the first

years of the new millennium, several changes have taken place in the American economy and the world, which had an adverse effect on US employment figures. One of the basic theses of economics is linked to *Okun*, which takes unemployment as a basic factor in addition to GDP. Okun infers from this economic law that due to the economic processes, the working population contributes to the increase in the volume of products and services, while unemployed people obviously do not, so the two variables – GDP growth and unemployment – have a negative relationship (Okun, 1962). This would mean that the goal is to achieve GDP that is as high as possible, as it reduces unemployment. *Tobin* (1996) pointed out that this relationship does not hold true at times of recessions and booms, and that there are several circumstances that can demolish this fundamental theorem. One such example is the US crisis and the management thereof.

US domestic and economic policies are determined by the status of employment to a large extent (Botos, 2013), thanks to the weak social safety net and the relatively frequent and increasingly imbalanced cycles, which attach more importance to employment compared to the other countries. Since economic growth in the US is based on consumption (that is, providing freedom for the citizens), it creates an especially important reason for ensuring employment, as consumption must be financed by income (credit).

It became obvious during both the previous recessions and the most recent crisis that wages and employment are closely related: both declined (Mulligan, 2010). The 2008 economic crisis made it clear that ‘hybrid’ companies like Fannie Mae³ and Freddy Mac⁴ cannot go bankrupt (Glaeser – Jaffee, 2007; Corsi, 2009), as they play too important a role in the financial market (Corsi, 2009) and, as a result, in employment and consumption. Although

the Fed saw that the “balloon” was about to burst, it did not do anything (Baker, 2007) and eventually, even monetary intervention failed to help the government achieve its employment objectives (Botos – Halmosi, 2010). As *Myrdal* (1958) wrote in his book on the welfare state, there are several internal forces driving the economy, which force the governments to intervene into the market processes. In this particular case, the US intended to recover employment by stimulating investment to increase the GDP. The appearance of foreign working capital and global competition made it possible for other countries to enter various non-domestic markets as economic actors. According to *Shiller* (2007), the 2008 crisis is similar to the crisis that emerged after the World War I and the recession following it, but the 2008 recession has a much stronger force, considering how the unemployment rate developed. At the same time, it had a more adverse effect than before not only on the unemployment rate but also on GDP, the wages of employees and investments. (Bivens, 2011). This is a problem for jobless growth because the economy has not yet been able to recover from the stagnation or decline.

Jobless economic recovery is typical not only in America but several other countries as well (both in developing and in developed countries) after recessions (Peralta – Alva, 2011). The problem is, as *Bivens* (2011) also argued, that these periods tend to have an increasingly profound effect on the economy and economic agents. The cycles last longer and – as we have already seen on the basis of OECD data –, a crisis and its aftermath usually have less adverse effect on growth than on the labour market (Peralta – Alva, 2011).

In America, the FDI attracted investment into machinery. Although it contributed to an increase in gross domestic product, it failed to solve the other serious problem, employment; in fact it made the situation even worse

(Rajan, 2010; Aronowitz – DiFazio, 2010). Investors decided to focus on machinery because the Fed wanted to boost economic growth through cheap money policy, that is, low rates, which lead to large investments into machinery (Bivens, 2011). The high degree of uncertainties (see: Fed’s quantitative easing programme) makes it impossible to put the economy back on secure grounds, as the effects of these programmes are uncertain and the introduction of new programmes is questionable. All these factors have an impact on the employment rate. As *Korten* (2011) argues, even developed countries are concerned about economic uncertainty, as economically active people may easily become unemployed due to these uncertainties, and employees are exposed to low real wages as well as less favourable part-time and fixed-term labour contracts. The new jobs created during crises are generally low-paid jobs contracted for a fixed term (Rifkin, 1995; Korten, 2001; Kuttner, 1997). On the basis of this, it is obvious that not only did employment stagnate whilst GDP was on the rise, but the number of the unemployed also increased. So, the relationship between the two variables changed in the periods after the crises. When examining the correlation between employment and GDP, we can see that it continued to hold during 2012–2007 ($\text{sig}=0.62$), but the correlation between unemployment and GDP growth became positive and strong (0.789). Next, I will present a few examples for this.

The analysis of the relationship between employment and GDP

It is worth comparing the data of various countries. If we take a closer look at employment data and GDP growth in OECD countries, we can see which countries are over (under) the 2004–2007 OECD average

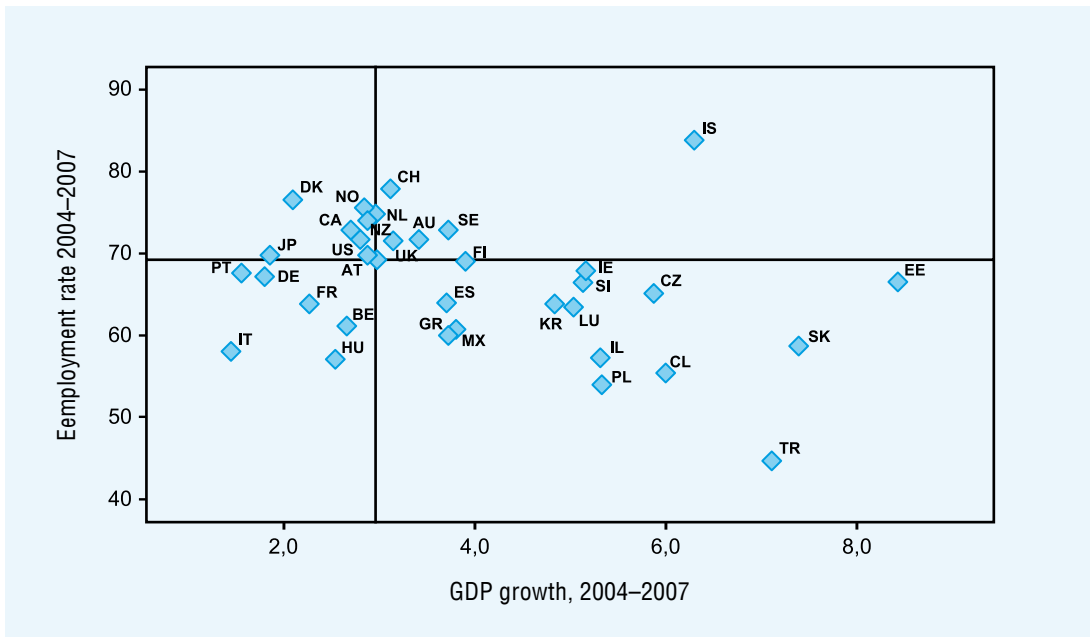
in the period before and after the crisis (*see Chart 1*). Iceland, Switzerland, Sweden, New Zealand and the United Kingdom performed over the OECD average both in employment and GDP growth. Although the United States lagged behind the aggregate average of OECD countries in terms of GDP growth, it recorded above-average results in employment for these four years. This is surprising because GDP growth was quite convincing year after year, yet did not compare favourably with that of OECD countries.

If we look at the factors examined before for the years after the crisis (2010–2013), we again get different results (*see Chart 2*). In this period, Iceland and the United Kingdom lagged behind the 2010–2013 OECD average, but Canada and Japan outperformed OECD countries. Looking at the US, it becomes clear that GDP growth did start to pick up momentum after the crisis (thanks to Fed’s “cheap money” policy, which stimulated the investment and productivity of various businesses and economic agents), but employment fell back below the 2010–2013 OECD average. These data clearly show that the US and its employment policy were hit quite hard by the crisis for reasons that I will present in detail later.

Next, I will limit the analysis only to the US. *Chart 3* shows the long-term correlation between employment rate and GDP. These data also suggest that economic recessions and crises do indeed have an impact on employment as well. A similar decline can be seen after the 1973 and the 1979 oil crises. Both GDP growth and employment declined, but the macroeconomic indicators soon recovered, although the employment data were slower in responding to the drop in GDP. The same can be said about the crisis in the 1990s, when GDP and employment reached the level before 1990 faster than in the 2001 period, that is, it “recovered” from recession.

Chart 1

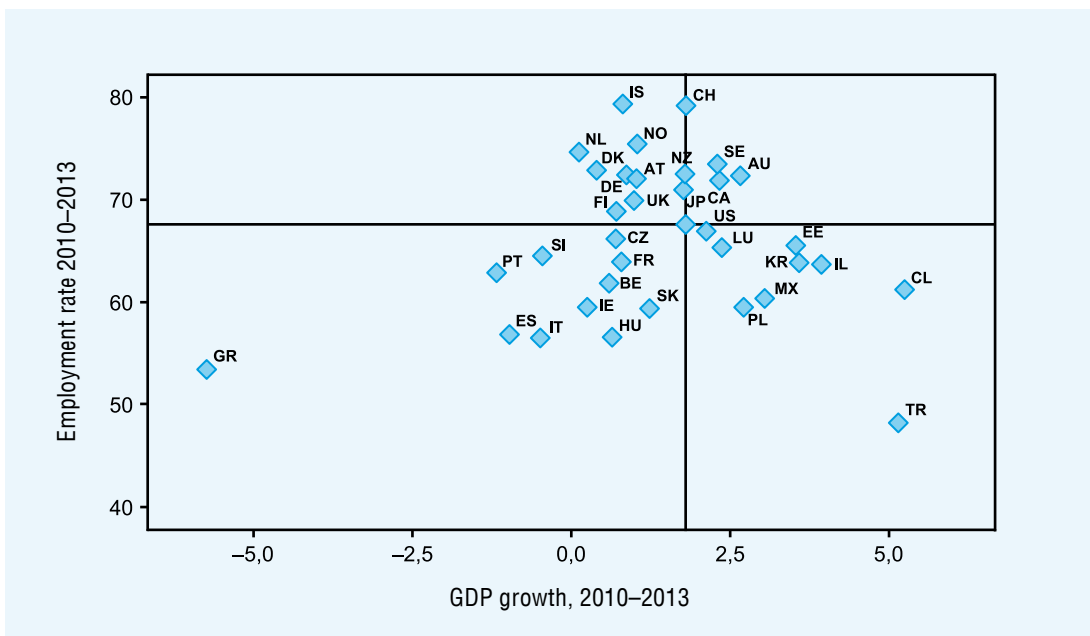
POSITION OF OECD COUNTRIES ACCORDING TO GDP GROWTH AND EMPLOYMENT FOR 2004–2007



Source: Author's own editing based on OECD database (2014)

Chart 2

POSITION OF OECD COUNTRIES ACCORDING TO GDP GROWTH AND EMPLOYMENT FOR 2010–2013



Source: Author's own editing based on OECD database (2014)

Although the situation did not favour GDP growth, the economy picked up momentum relatively quickly. On the other hand, the period of recovering employment had become somewhat longer, as up to the 2008 crisis it was able to reach neither the 2000 level, nor the one before it.

On the basis of the employment data, it is obvious that up to the end of the 1990s employment showed a rising trend (see Chart 4), reaching and exceeding 70 per cent, but after the crisis that broke out in 2001, it began to decline and failed to reach the pre-crisis level. This was a problem because a few years later the 2008 global economic crisis also contributed to the drop in the number of employed people. If we put a trend line on the employment data of the pre-crisis period (which already show the decline due to the falling figures of the 2000s), it becomes clear that the data after the 2008 crisis fall well short of the

values of the trend. The figure shows that employment had failed to recover even after the 2001 crisis until the 2008 crisis broke out. In accordance with the trend for the 1982–2007 period, employment rate in 2012 should have been close to 74 per cent, which it exceeded in 1999. Presently, it is very far from this value (at 67 per cent).

Unemployment rate was 5.8 per cent in 2002 (during the crisis of the 2000s). This value increased dramatically in 2010, reaching 9.6 per cent (OECD, 2014). In 2013, the unemployment rate dropped compared to 2010 and was only 7.4 per cent. However, in addition to the unemployment rate, the rate of active workers also decreased in this period after the crisis. In 2002, 76.4 per cent of the working-age population were registered as employed or unemployed. In 2013, this figure was only 72.8 per cent (OECD, 2014), which means that the number of inactive people

Chart 3

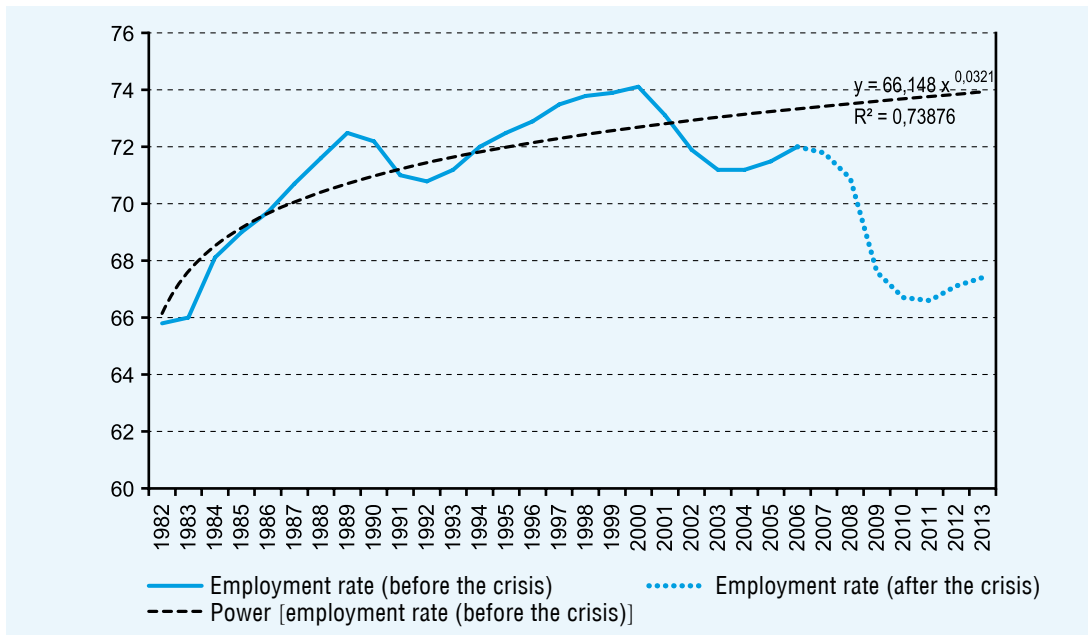
**EMPLOYMENT RATE (LEFT AXIS) AND GDP GROWTH (RIGHT AXIS)
IN THE US BETWEEN 1970 AND 2012 (%)**



Source: OECD database (2014)

Chart 4

EMPLOYMENT RATE AND THE TREND VALUE OF PRE-CRISIS EMPLOYMENT BETWEEN 1982–2012 (%)



Source: Author's own editing based on OECD database (2014)

increased within the working-age population. Long-term unemployment shows an even more drastic picture. This category included only 6 per cent of the unemployed in 2000, whilst this rate reached 10 and 29.29 per cent in 2006 and in 2012 respectively (WorldBank, 2014).

According to the data of the Bureau of Labor Statistics (2014), the companies in the private sector created or added 6.9 million new jobs from December 2013 to March 2014 quarter on quarter (see Table 1). In the same period, companies cut 6.5 million jobs compared to the previous period, which is also a better figure, that is, less jobs were cut, but net job creation figures show a gradually slower increase compared to the previous quarters, as it was a mere 0.3 per cent increase compared to December 2013.

Being aware of these figures and trends, one wonders what factors may have caused such a

decline in the unemployment rate – the recovery of which is yet to be seen even though GDP growth has already picked up momentum. In the next section, I will present these processes.

THE CAUSES TRIGGERING JOBLESS GROWTH

Jobless growth can be triggered by various factors. On the basis of the literature I looked into, I created two groups in order to classify the causes that shape this phenomenon, which are hard to differentiate sharply because there are overlaps between them. I grouped the causes according to the following topics: factors related to work organisation and phenomena connected to structural changes, which also include problems related to productivity (economic policy).

Table 1

EMPLOYMENT DATA					
	2013	2013	2013	2013	2014
	March	June	September	December	March
Gross job creation (thousand)	7,272	7,174	7,051	7,296	6,856
Triggered by expansion (thousand)	5,648	5,849	5,708	5,956	5,624
By establishing new businesses (thousand)	1,624	1,325	1,343	1,340	1,232
Loss of jobs (thousand)	6,346	6,496	6,583	6,553	6,459
Due to the expiration of contracts (thousand)	5,187	5,284	5,435	5,335	5,330
Due to closed down businesses (thousand)	1,159	1,212	1,148	1,218	1,129
Net change in employment (thousand people)	926	678	468	743	397
Net change in employment (%)	1	0.6	0.5	0.6	0.3

Source: Bureau of Labor Statistics (2014)

Problems related to work organisation

I have mentioned before that the recovery after a crisis takes more time, despite the fact that there are a number of tools available for accelerating economic processes. Essentially, this is exactly what generates one of the problems, as new methods have been created for work organisation as well. *Rajan* (2010) argues that the root of the problem lies in our increasingly globalised world, where *just-in-time* (JIT) systems⁵ (Schreft – Singh, 2003) were created thanks to innovation (technological changes, new corporate management systems, etc.).

The system has several advantages, which also influence workforce recruitment. Whilst up to the 1990s, companies did not have the opportunity to find the new workforce they needed quickly and easily and therefore started to search for the employees that best suited their needs months before they had to fill vacant jobs, in the 21st century, it is enough to start the search 1–2 months beforehand (*Rajan*, 2010; *Schreft – Singh*, 2003). In addition, new positions in the JIT system are open

to anybody in the world, and foreign employees can also fill these jobs, thereby reducing the possibilities of domestic job-seekers. As a result, considerably more applications are submitted for each position, so the given company can find the candidate with the best skills and qualifications in a much shorter time, thereby reducing both recruitment period and training time. All in all, companies can wait until the economy picks up before they hire new employees, but this strategy does not help the economy because it leads to a drop in consumption.

In this interpretation, the attribute ‘jobless’ refers to the decrease in length of employment periods created by the JIT systems and shorter recruitment periods on one hand, and it allows domestic employees to be driven out of the given positions on the other. As a result, these days it takes much more time for the economy to recover (although there is economic growth, employment does not grow at the same pace) than in the previous periods, as the just in time systems are working successfully.

The American social security system also contributes to jobless growth because the

insurances, the healthcare packages paid for the employees significantly increase the companies' costs per employee. As a result, many businesses start laying off their workers during recessions because they want to save costs, which leads to stagnation or a potential decline in the number of jobs. The social safety net does not allow the economically active population to stay unemployed for a long time because that would mean serious problems for their health insurance and subsequent pension (Hamermesh, 1977; Rajan, 2010).⁶ On top of all this, proposals have been made to privatise the pension system (Krugman, 2007), given that the retirement of the *baby-boom* generation will impose more costs on the social system and require more money to support individual employees. There is an anomaly to be observed in this context, as the cause of jobless growth lies in the social system, but the weakness of the social safety net urges people to get a job quickly. However, this is not possible because there are no jobs. Another problem in this context is that life expectancy has increased (Waxell, 2011): life expectancy at birth was significantly lower in the 1990s than today when it is not unusual for people to try to keep their job even after retirement because their pension is not enough to make ends meet. As a result, the employment period becomes longer, which is good for companies as they can keep their experienced and reliable workforce. This process reduces the opportunities of the working-age population on the labour market.

As a result of the joint effect of several factors (JIT systems, globalisation, technological change, social system, etc.), the American job market is characterised by strong *job insecurity*. There are many signs of this, such as the pressure on people with jobs worried about losing said jobs (Rifkin, 1995), which makes them work even harder and perform better. This does not contribute to an increase in

employment. On the other hand, thanks to rapid technological changes, there is growing demand for highly trained experts. The new forms of businesses and large multi-division companies, however, have few such people, given that the people currently employed do not have the skills that are required for the new economic and technological environment (Rosenberg, 1966). This phenomenon, called *skills mismatch*⁷ (OECD, 2013) is more and more widespread and hard to eliminate, as foreign working capital tends to invest in machinery due to its cheaper funding (Botos, 2013) than in live labour or the retraining of the labour force. These types of business investments affect direct labour force to a lesser extent, as increasing the use of machines requires relatively little workforce (Aronowitz – DiFazio, 2010), and as such mechanisation replaces expensive labour force (Dekerley, 1996). The skills mismatch problem is made even worse by the fact that training time in education is also longer due to new and different needs (Waxell, 2011). As a result and due to accelerated processes, supply and demand do not meet at the time of entry to the labour market. It was quite common in America for public education to provide as comprehensive knowledge in basic and secondary education as possible with only a small proportion of the population receiving higher education (Rajan, 2010), so it is more difficult to fill vacancies when it comes to managerial functions.

Thanks to the changes taking place in the economy and machines replacing live labour force, a so-called jobless organisation was created in order to boost productivity (Klaas, 2002). *Klaas* calls attention to a shift from traditional work-based wage systems to defining wages on the basis of persons, which further enhances the possibility of creating as many jobless organisations as possible. In the past, wages were determined on basis of position, but now allowances are granted on the basis

of personal efforts, such as how innovative the ideas proposed by a particular employee are to boost the productivity of the given company. Due to this new structure, the payment scale is getting wider, which means that a business will invest in a workforce that is very efficient, so it may employ less people.

This change in the methods of work organisation calls attention to wage elasticity, as it can influence job creation and economic growth. *Shimer* (2012) tried to find a correlation between the ways to create jobs on the basis of wage rigidity and wage elasticity. His results show that rigid wages restrict the hiring of new workers, whilst flexible wages may help companies employ new workforce. This is because businesses cannot align the wages to production and demand but need to employ people with wages determined for a relatively long period, thereby encouraging them to be more productive. If wages can be managed in a flexible manner, companies can reduce their costs (wages) on the basis of their profit generated by demand, so they can employ more people at difficult times. *Ravallion* (1997) identified high wage differences as a problem as well, as less people can be employed for higher wages.

Jobless growth is further enhanced by certain atypical forms of employment that have become more widespread recently. Part-time employment, fixed-term labour contracts, increasing overtime work and employing women further increase the problems of employment that influence economic growth (*Waxell*, 2011; *Schreft – Singh*, 2003). On the one hand, these new forms can be advantageous for employers, as three-fourths of American companies do not support the social security of their part-time employees (health insurance, pension, sick leave), and only half of them pay for their holidays and days-off (*Schreft – Singh*, 2003). In addition, it is quite common that the employees on a fixed-term or part-time contract perform much better than

their 8-hour counterparts. As a result, there is lower demand for extra workforce. *Peralta – Alva* (2011) and *DiFazio* (1998) note that more women are entering the labour market. This also poses a problem, as women are often more efficient in their work, so less workers are needed.

(International) migration also contributes to high unemployment, since many people immigrate for example from Mexico to US cities where they can find work (*Korten*, 2001; *Todaro*, 1989; *Todaro – Maruszko*, 1987), including jobs that Americans are not willing to take (*Corsi*, 2009). *Botos* (2013) and *DiFazio* (1998) also mention migration as a cause of jobless growth, as it boosts workforce supply. However, employers expect their employees to be flexible or even mobile, which also reduces the demand for workers. There is yet another problem that needs to be tackled in connection with migration which contributes to jobless growth through wage differences: immigrants typically receive lower wages for their work than domestic workers with the same qualification, and the unemployment rate is higher among migrants (*Battisti et al.*, 2014). This means that it is worth employing migrants for a lower wage, so citizens are deprived of more jobs.

The shift away from workforce-intensive technologies is a factor that shapes jobless growth, which is related to work organisation but is dependent on structural processes (*Bernanke*, 2003; *Rajan*, 2010; *Botos*, 2013; *Waxell*, 2011; *Handy*, 1984).⁸

Factors related to structural processes

The next group is made up of structural features. This group includes macro-economic and economic policy factors which brought profound changes in economic processes and thus contribute to jobless growth.

The previous section showed how skill mismatch influences JG. This process is largely due to sectoral changes (Aghion – Howitt, 2009; Bernanke, 2003; Rajan, 2010; Peraltva – Alva, 2011; Waxell, 2011), though technological changes also play an important role. Manufacturing processes are fully automated in several sectors, where there used to be a demand for live labour force and where the distribution of resources must now be changed. There is a need for mobility of the workforce across sectors, for example, there are increasingly fewer people needed in steel industry, whilst more employees are needed in the software sector (Bernanke, 2013). There are numerous examples of such sectoral changes. Many companies were closed down after World War II and new ones were founded, absorbing the workforce (Botos, 2013), which created plenty of new jobs, and many organisations were established at that time which still exist today. After the mechanisation of agriculture, the economy secured a new, emerging sector for the people which also helped recover the level of employment (Rifkin, 1995). First the industry (Rosenberg, 1966), then later the services absorbed the people left without a job on the labour market, but today one can only guess whether the next such sector will be information technology (Adler, 1992; Rifkin, 1995; Rajan, 2010; Handy, 1984). In their book, *Aronowitz and DiFazio* (2010) attribute the lack of the ability to create jobs to technological changes, in which mass production also had a key role (Rifkin, 1995). With the spread of mass production, the replacement of the labour force with machines (as an innovation for reducing costs) can not only increase productivity but it can reduce costs as well. If companies want to reduce their costs, they use efficiency improvement measures, which help increase the company's profit but may have a detrimental effect on employment (Christensen – Bever, 2014).

Companies are looking to expand and make as much profit as possible, but there are several obstacles to this, such as jobless growth for instance. How are people to finance their consumption (and help companies boost their profit) if they have no income? The increase in the productivity of companies has a negative impact on employment. On the one hand, if companies try to produce more and more, they automate their processes (Shimer, 2012; Rajan, 2010), which indeed boosts productivity and economic growth but reduces the number of people employed. A good example of this is the car industry, where creative destruction took place. In this sector, labour force headcount has decreased significantly in recent years. The efforts to strengthen their position against the competitors prompt economic agents to introduce new technologies using as little money as possible (Pásztor, 2011). Another example for increasing productivity is India or Mexico, where agricultural workers were replaced by machines, but staying in the US, we have to look no further than Wall Street, where decisions are recommended by computer programmes (Korten, 2001), which perform more reliable calculations. Mechanisation in the interest of boosting productivity leads to new investments into machinery again rather than into supporting live labour force (Botos, 2013).

Sectoral changes often entail changes in business cycles (new business processes and skills) as well as technological progress and innovative solutions. *Milton Friedman* considers unemployment to be a natural and automatic feature of the changes in business cycles. The American car industry is a great example of this, where the history of the Big Three in Detroit (Ford, Chrysler, General Motors) highlights the rapid change in cycles: Ford and Chrysler were unable to quickly restructure themselves after the crisis due to the oil price explosion. New demands appeared on

the market in the new cycles (e.g. for environmentally friendly, low-consumption cars), but Ford and Chrysler, contrary to GM, were able to create a new business model only much later, so they had to cut many jobs (Pásztor, 2011). The powerful multinational companies that emerged after World War II, such as General Motors, got into a very good position on the American market, but the crises that shook the economy and the changes in business cycles have affected these companies as well as far as productivity and employment are concerned.

The activities that are not closely related to production are *outsourced*, as these work processes can be carried out at less cost by companies in developing economies (Jha, 2002). *Waxell* (2011) also argues that in today's globalised world economy, workforce-intensive sectors transfer their activities to countries where labour costs are lower, whilst keeping their knowledge-based workflows in the developed countries, which has become a very important factor in global competition. Americans, however, who have the required qualification to perform these activities, should be paid much more, which results in the loss of additional jobs (Aronowitz – DiFazio, 2010; Rajan, 2010), despite the fact that the economy is expanding. The reinterpretation of the Williamson hypothesis highlights the fact that the technological changes taking place in the world strengthen the big cities to such an extent that there is no room for convergence among the different regions (Capello, 2007); moreover, they increase wage and income differences, which is one of the reasons for JG. The export of jobs⁹ also has serious economic consequences. *Geddes'* famous saying, “think globally, act locally”, is true for this phenomenon as well, as the multinational companies reigning the world should take social responsibility, for the creation and retention of jobs for example. General Electric

is a great example of this, which relocated its industrial plants from China back to the United States (Diekman, 2013).

The imperfect distribution of resources causes a number of problems to surface. According to *Corsi* (2009), a kind of duality is emerging in the US, which is due to increasing income differences and qualification, that is, to inappropriate resource allocation. The main reason for inequalities is that emphasis has shifted from work to capital. In addition, training, healthcare and welfare conditions are different for the given societies (Teulings, 2014). Wealthy, highly qualified people with professional qualifications stay in the country. On the other hand, 10 per cent of the Mexican population already live in the United States, generally performing physical work. Rajan (2010) lists several reasons in connection with economic growth which suggest that the world is heading in the wrong direction. One of the problems according to Rajan (2010), *Krugan* (1994) and *Dunkerley* (1996) is the unequal distribution of incomes and wages, which is also mentioned by *Krugman* (1994), since most of the incomes are generated in the rich countries,¹⁰ whilst in the poorer countries even the rich are not as well-to-do as in the developed economies, that is, the developing countries possess a much smaller part of the incomes (Rosen, 1981; Rajan, 2010). *Kuttner* (1997) provides two different explanations for the increasing differences: the increasingly laissez-faire labour markets (that is, rewarding abilities), which has great significance in the US, and the efficient allocation of resources. The rewarding of abilities and skills also contributes to the unequal distribution of incomes even within the same country (which is, of course, not the same as the wages). If we take only one country as a basis, we can see that the differences between people earning more and those earning less have become sharper. Before the dynamic

technological explosion of the 2000s, DiFazio (1998) noted the problem of wage differences, which was described in detail by the chief economist of Morgan Stanley, saying that the wages diverged significantly in the US compared to other countries. In addition, it is also suggested that real wages in the US, especially those of low-income people, have been stagnating for about twenty five years, and the incomes are high because the American people work more hours than the Europeans (Stiglitz, 1969). By studying growth and inequalities, *Aghion* and *Howitt* (2009) also demonstrated that the wages of people with higher qualifications increase at a significantly greater rate than of those with lower qualifications. *Aghion* and *Bolton* (1997) also studied the effects on inequalities through the accumulation of capital. The wages of managers are ten, twenty or even a hundred times higher than those of the middle or lower classes. On the one hand, this is because people are expected to have higher qualifications for certain tasks in the United States as well.

Table 2 shows the OECD indexes that measure global skills and capabilities related to education as well as structural and production processes. The skills are measured in 7 separate indexes, and weights are assigned to workforce mobility, the ratio of active people, wage differences and the incompatibility of the demand for and the supply of skills. Index values range between 0–10, where a higher value means that we face serious problems in the given country when the given phenomenon is examined. The flexibility of education received a relatively high value in the US compared to the other countries, which shows that the education system cannot adapt properly to changing market needs. The US received a relatively low value for workforce, which means that the ratio of active people is quite good compared to the other countries. There is a very serious problem in the US in

connection with skills. In this index, the US has the highest value, which indicates that the capabilities and skills that employers expect from employees are very hard to find on the given labour market, as they are different from those required. The last three indexes concern wages. The index comparing wages in general shows relatively low values compared to the other countries, but the same cannot be said about the sectors requiring high vocational qualifications against those requiring low vocational qualifications. The problem is that the wages increase more in the sectors requiring high qualifications than in those requiring low qualifications, which causes a significant tension among the employees. Naturally, it also suggests that the inequalities in wages among the various sectors is a real and considerable problem. When looking at professions, we get a different picture. Where the differences appear only in professions but not among sectors, the pressure on wages is not very high in the US. If these six indexes are averaged, we see that the index for the US measuring skills is above the average among the OECD countries (for which we have data), which in this case means that there are serious problems with the labour market. The two main problems are represented by *skills mismatch* and the inequalities of wages.

The indexes clearly demonstrate that although the wage differences are classified among the structural factors, they may also belong to work organisation, as with a higher wage we move away from equilibrium wage, which results in a decrease in the number of employed people, but at the same time, a higher wage is meant to stimulate efficiency to increase the productivity of the company. It is also interesting to observe the indexes that are characteristic of Hungary. Although the two economies have very different structures, the values of the indexes are almost the same, with a significant deviation only in wage differences.

Table 2

THE GLOBAL SKILLS INDEX OF OECD COUNTRIES, 2014

	Australia	Austria	Belgium	Canada	Chile	Czech Republic	Denmark	France	Germany	Hungary	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Poland	Portugal	Spain	Sweden	Switzerland	United Kingdom	United States
Flexibility of education	4.7	5.2	6.2	5.7	6.0	7.5	6.4	3.5	6.2	7.8	3.5	5.3	2.8	5.9	4.8	4.7	4.7	4.6	4.8	4.2	8.6	4.1	4.2	7.1
Labour market participation	4.0	5.5	5.6	5.4	5.5	4.9	5.0	5.2	4.5	4.9	7.7	3.0	6.0	4.3	5.2	6.8	6.7	5.1	6.0	7.4	3.9	5.1	6.6	4.2
Labour market flexibility	4.9	4.0	4.7	3.6	6.3	3.3	3.0	8.0	6.9	4.7	2.7	5.8	7.1	3.8	7.2	4.8	4.4	6.7	6.1	5.3	4.8	2.9	5.0	4.7
Skills mismatch*	4.1	3.3	0.2	6.9	5.5	1.3	7.5	5.9	3.3	9.6	10.0	8.0	9.5	8.6	5.5	3.7	4.6	4.2	10.0	10.0	6.7	4.4	9.6	10.0
Wage inequalities	6.5	6.0	5.8	4.4	6.0	3.4	3.8	5.0	5.8	3.9	4.3	2.9	8.0	6.5	4.7	2.2	2.9	4.1	4.6	3.3	7.4	7.0	2.9	5.2
Wage inequalities in the sectors requiring high qualification	8.0	7.6	0.0	6.5	5.0	6.9	0.0	4.5	9.9	8.6	5.9	0.0	2.7	4.2	10.0	6.5	10.0	7.0	10.0	10.0	10.0	5.6	7.7	9.9
Wage inequalities in the jobs requiring high qualification	5.1	3.6	4.3	6.8	2.0	6.3	5.8	4.0	6.6	4.8	6.5	2.1	6.0	5.4	3.0	4.6	1.2	3.1	0.0	4.0	4.7	2.2	0.0	2.9
Index for total value	5.3	5.0	3.8	5.6	5.2	4.8	4.5	5.2	6.2	6.3	5.8	3.9	6.0	5.5	5.8	4.8	4.9	5.0	5.9	6.3	6.6	4.5	5.1	6.3

Note: OECD countries for which there are no data are not included in the list.

Source: The Hays Global Skills Index (2014)

A country like the United States has relatively little need to concentrate on other countries, as growth is based on internal consumption (Somai, 2009). What really matters today in the US and other countries is not income but rather consumption, which exceeds the income earned by individuals with the help of loans and other tools (Hernádi, 2009). In order to stimulate consumption, employment should also be increased, which in turn could boost economic growth, but the government's QE programmes failed to have this effect on the economy. Although there have been investments, these boosted consumption, or particularly employment to a lesser extent, in contrast with economic growth. Consumption declined significantly in the economy, entailing that the companies also curbed their production and, as a result, need fewer employees. Aronowitz and DiFazio (2010) consider consumption to be the primary basis of freedom and democracy in the US, since as long as citizens have enough money or loans, they can buy anything. As consumption is very important for the people, good consumers in an economic sense are supposed to vote for those in the elections who can ensure this opportunity for them as cheaply as possible. Consumption in the US has however reached a level, where it drives prices and inflation up, giving room to cheaper foreign products and investments from Germany, Japan and China (Chimerica) (Rajan, 2010). In other words, jobs are being exported, thereby losing millions of domestic jobs (Corsi, 2009). US monetary policy intended to recover consumption by offering cheap loans, but this policy failed to achieve its intended aim (Botos, 2013). It is clear that the decisions of monetary and fiscal policy have also contributed to jobless growth (e.g. the establishment of state-owned mortgage loan institutions) as did the uncertainties inherent in politics and the economy¹¹ (such as

the lack of young and innovative businesses due to these uncertainties), which affect the companies and their productivity.

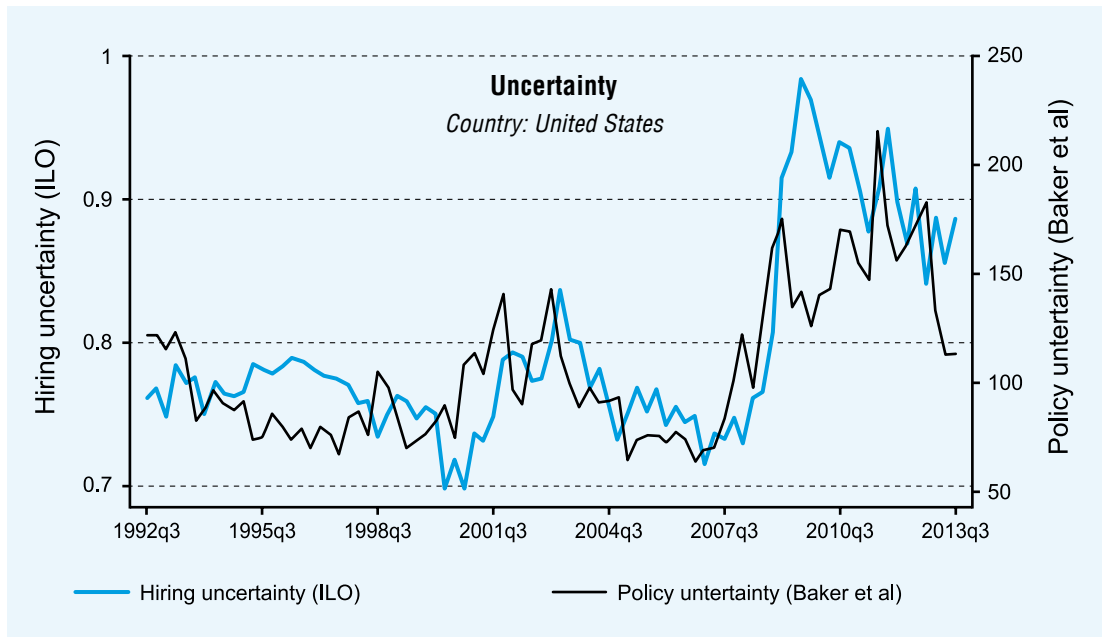
In periods surrounded by these uncertainties, fewer companies are willing and able to offer new jobs to employees, as shown in *Chart 5*. Political and employment uncertainties show a correlation. This is also true for both the 2001 and the most recent crisis. It is striking that after the 2008 crisis, the uncertainty in economic policy was so strong that it had a considerable influence on employment as well, reaching its peak by 2010. Since then, the factors of uncertainty have declined but are still showing high values compared to the period before the crisis.

If *Chart 5* is examined on the basis of employment rate, we can see that the two indicators (the employment rate and the uncertainty index¹²) move together (*see Chart 6*). When there is a high level of uncertainty (which is made up of both political and economic factors in this case), the employment rate declines. The uncertainty index was at a relatively low level in the mid-1990s (ranging around 100), and the employment rate regularly exceeded 71 per cent in this period. Looking at the pace of the crises, however, it can be seen that if there is recession/crisis in a particular period, the value of the uncertainty index rises and the employment rate declines in that period. This is especially striking for the 2008–2013 period.

Since we expect technological changes to boost productivity, the question arises: How does technological change affect the economy? Looking at this question from a quantitative side, companies become more productive and need to employ fewer people. Of course, the question is whether a new technology increases unemployment? In most cases, an increase in productivity gives rise to price cuts. As a result, new markets become open for the businesses, which can

Chart 5

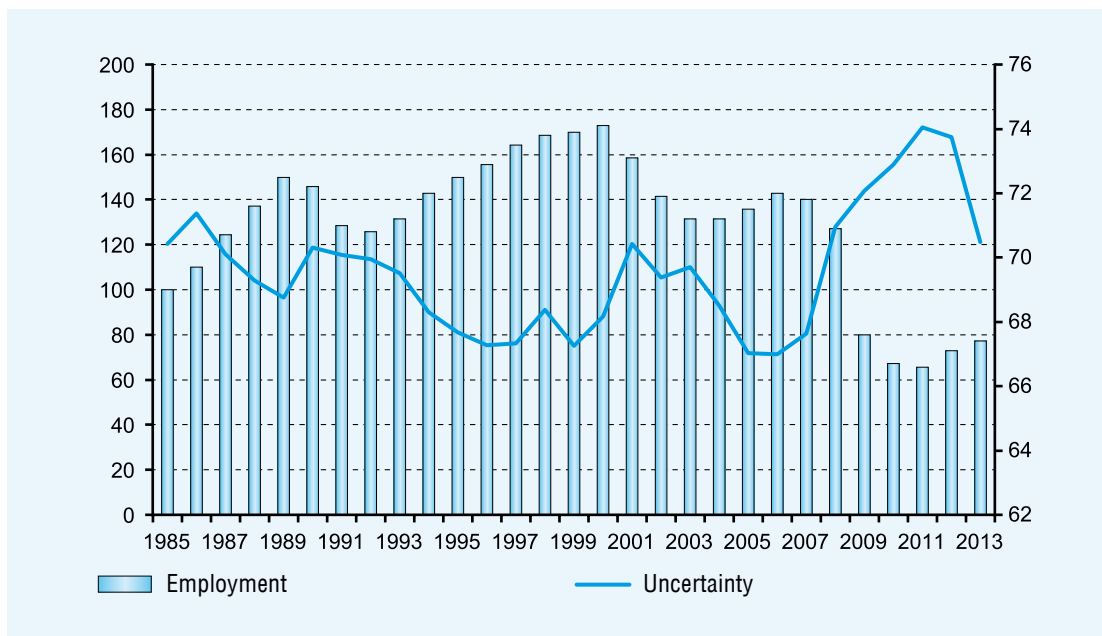
**POLITICAL UNCERTAINTY AND HIRING UNCERTAINTY BETWEEN 1992–2013
(BROKEN DOWN BY QUARTER)**



Source: Ernst, E. – Viegelahn, C. (2014), p. 19.

Chart 6

**EMPLOYMENT RATE (LEFT AXIS) AND UNCERTAINTY (RIGHT AXIS)
BETWEEN 1985–2013 (%)**



Source: http://www.policyuncertainty.com/us_monthly.html (28 November 2014), author's own editing based on OECD database (2014)

create more jobs (Adler, 1992). Currently, the problem is twofold: the change in inflation and price levels, and the pace of the changes. A swift response is important, as the different technologies are not spreading at the same pace, hence the number of new jobs required for the economy is also different in each period (Adler, 1992). The jobs that fell victim to the technological changes are not only those which require low qualification. This process affected teachers, engineers, healthcare workers, etc. as well, since there was strong technological pressure on their work processes over time (Aronowitz – DiFazio, 2010). This process also impacts the interactions among people, whose number is constantly decreasing because of mechanisation. Monetary policy has a crucial role in inflation or the fear of inflation as well as in the failure to increase employment. Seeing the increase in money supply and the stimulation of investment, the economic agents were afraid of inflation, so they focused on saving rather than on consumption (Kutasi, 2009).

The processes which contribute to jobless growth are rather complex and extensive. There are many overlaps among the problems, but it is clear that the economic processes that further deepen this phenomenon have greatly accelerated, for which it is difficult to find a solution in time.

SUMMARY

Jobless growth did not emerge as a phenomenon triggered by the 2008 crisis. At the same time, the recession caused by the crisis puts significant pressure on this phenomenon, especially in the US. JG has appeared several times in history, but the depth of the problem and the recovery is posing an increasing challenge.

Due to a number of factors, employment data has declined, but economic growth

began nonetheless. It is apparently difficult to meet constantly changing market needs, especially in a country where innovative ideas abound. In addition, several global changes have commenced, which make it necessary to transform the entire system of the global economy, as the processes that triggered jobless economic growth are the result of these changes.

Based on the in-depth analysis of the factors that trigger JG, it is obvious that micro-level processes frequently entail that companies invest in innovations in order to increase their profit, which are often contrary to the objectives of employment policy. The question arises: if these micro-level processes can facilitate economic growth – which is so important for most countries –, can this lead to achieving full employment? Should we give up one objective for the other, or can we manage both of them concurrently? Do we need to achieve full employment at all, and if not, what tools can be offered to ensure the livelihood/consumption of the working-age population without employment?

For now, it is obvious that economies, including the US, are trying to manage these two objectives together. It is hard to say when both employment and economic growth can be recovered to the pre-crisis level, or whether it is possible at all. One thing is for certain, the Fed's quantitative easing and zero interest policy have accomplished their goal in terms of economic growth, but not in terms of employment. It remains to be seen, however, to what extent the trust of businesses/investors can be recovered after the easing programmes are phased out, and their effectiveness should be examined on this basis. Will the neutrality of money exert its effect and will investments and, as a result, GDP and employment drop back once again after the QE programmes are cancelled?

NOTES

- ¹ The author would like to thank Dr Beáta Udvardi for her valuable suggestions.
- ² Quantitative Easing Programme
- ³ Federal National Mortgage Association
- ⁴ Federal Home Loan Mortgage Corporation
- ⁵ *Just in time* systems are based on “streamlined production”, that is, to produce goods just in time. This Japanese method was established in order to prevent surplus stocks and to reduce costs. Only those goods are produced for which there is demand (Estall, 1985).
- ⁶ Krugman (1994) argued that since it does not cost much for the state to support the unemployed, this is a less pressing problem on that side of the Atlantic Ocean than in Europe, where governments typically provide strong support for their unemployed citizens.
- ⁷ Skills mismatch: employees do not have the skills/abilities required by employers. In some cases, they are underqualified, in others they are overqualified for their current professions. This is a problem as it has economic and social consequences, such as reducing the productivity of companies. (<http://skills.oecd.org/hotissues/skillsmismatch.html> 3 December 2014)
- ⁸ The literature on this topic always argues that the solution to this problem is to protect these sectors and technologies, since there is a powerful shift towards automation, resulting in a significant decrease in employment.
- ⁹ Job export means that a company moves to a foreign country in order to save money, so the jobs created by it are not filled by the active workers of the given country but by those of the receiving country (Slaughter – Swage, 1997).
- ¹⁰ In the US, the richest 4 per cent of the people together make USD 454 billion in a year, whilst this amount is produced by 51 per cent of the poorest population (Dunkerley, 1996).
- ¹¹ These uncertainties include for instance: the election of President Clinton and President Obama, the Gulf Wars, 9/11, Black Monday, etc.
- ¹² The uncertainty index consists of three factors: it measures the effect of the news appearing in economic papers in connection with uncertainty; the level of allowances which will expire in the near future, thereby generating uncertainty; and based on Fed projections, takes the progression of consumer price index and that of federal, state and local expenditure into account.

LITERATURE

- ADLER, P. S. (1992): The Emergent View. In: Adler, P. S. (ed.): *Technology and the Future of Work*. Oxford University Press. New York. pp. 6–9
- AGHION, P. – HOWITT, P. (2009): *The Economics of Growth*. *The MIT Press*. Massachusetts
- AGHION, P. – BOLTON, P. (1997): A Trickle Down Theory of Growth and Development. *Review of Economic Studies*. 64, pp. 151–172
- ARONOWITZ, S. – DIFAZIO, W. (2010): *The Jobless Future* (2nd edition). *University of Minnesota Press*. Minneapolis
- BAKER, D. (2007): The Menace of an Unchecked Housing Bubble. In: Stiglitz, J. E. – Edlin, A. S. – DeLong, J. B. (eds): *The Economists’ voice: top economists take on today’s problems*. Columbia University Press, New York

- BATTISTI, M. – FELBEMAYR, G. – PERI, G. – POTUVAARA, P. (2014): How immigration benefits natives despite labour market imperfections and income redistribution. *VOX*, online: <http://www.voxeu.org/article/how-immigration-benefits-natives>
- BERNANKE, B. S. (2003): Remarks by Governor Ben S. Bernanke. Global Economic and Investment Outlook Conference, Carnegie Mellon University, Pittsburgh, Pennsylvania
- BIVENS, J. (2011): Failure by Design. The Story behind the America's Broken Economy. *Cornell University Press*. Ithaca and London
- BOTOS, K. – HALMOSI, P. (2010): Jelzálogpiacok az Amerikai Egyesült Államokban és Európában. (Mortgage markets in the United States of America and Europe.) *Public Finance Quarterly*, Volume LV, pp. 781–790
- BOTOS K. (2013): Gazdasági növekedés munkahelyek nélkül? (Economic growth without jobs?) *Public Finance Quarterly*, online: <http://www.penzugyiszemle.hu/fokuszban/gazdasagi-novekedes-munkahelyek-nelkul>
- CAPELLO, R. (2007): *Regional economics*. Routledge. London and New York
- CHRISTENSEN, C. M. – BEVER, D. (2014): The Capitalist's Dilemma. *Harvard Business Review*., online: <https://hbr.org/2014/06/the-capitalists-dilemma>
- CORSI, J. R. (2009): *America for Sale. Fighting the New Global Order, Surviving a Global Depression, and Preserving U.S.A. Sovereignty*. Threshold Edition. New York
- DiFAZIO, W. (1998): Poverty, the postmodern and the jobless future. *Critical Perspectives on Accounting*. 9, pp. 57–74
- DUNKERELY, M. (1996): The Jobless Economy? Computer Technology in the World of Work. *Polity Press*. Cambridge
- ERNST, E. – VIEGELAHN, C. (2014): Hiring uncertainty: a new labour market indicator., online: <http://www.policyuncertainty.com/media/HiringUncertainty.pdf>
- ESTALL, R. C. (1985): Stock Control in Manufacturing: The Just-in-Time System and Its Locational Implications. *Royal Geographical Society*. No. 2, pp. 129–133
- GLAESER, E. L. – JAFFEE, D. M. (2007): What to Do About Fannie and Freddie? In: Stiglitz, J. E. – Edlin, A. S. – DeLong, J. B. (eds.): *The Economists' voice: top economists take on today's problems*. Columbia University Press, New York
- HAMERMESH, D. S. (1977): Jobless Pay and the Economy. *The John Hopkins University Press*. Baltimore and London
- HANDY, C. (1984): *The Future of Work. A Guide of Changing Society*. Basil Blackwell Publisher Limited. Oxford
- HERNÁDI A. (2009): Fogyasztási stratégiák a világgazdasági válság tükrében. (Consumption strategies in the light of the global economic crisis.) In: Szalavetz, A. (2009): A globális válság: hatások, gazdaságpolitikai válaszok és kilátások. A válság hatása néhány kiemelt gazdasági tevékenységre, (The global crisis: effects, economic policy answers and prospects. The impact of the crisis on the output of a few key economies.) Budapest MTA VKI, pp. 55–69
- JHA, P. S. (2002): *A Jobless Future. Political Causes of Economic Crisis*. Rupa&Co. New Delhi
- KLAAS, B. S. (2002): Compensation in the jobless organization. *Human Resource Management Review*. 12, pp. 43–61
- KORTEN, D. C. (2001): When Corporations Rule the World. *Kumarian Press*. Bloomfield

- KRUGMAN, P. (1994): Europe Jobless, America Penniless? *Foreign Policy*. 95, pp. 19–34
- KRUGMAN, P. (2007): Confusions About Social Security. In: Stiglitz, J. E. – Edlin, A. S. – DeLong, J. B. (eds): *The Economists' voice: top economists take on today's problems*. Columbia University Press, New York
- KUTASI, G. (2009): Az amerikai kamatdöntések hatásai a 2007–2008-as pénzügyi válság kapcsán. (The impacts of interest rate decisions during the 2007–2008 financial crisis.) In: Magas, István (ed.): *Világ gazdasági válság 2008–2009 diagnózisok és kezelések (Global economic crisis 2008–2009 Diagnoses and prognoses)*. Aula Kiadó, Budapest, pp. 203–221
- KUTTNER, R. (1997): Everything for Sale. The Virtues and Limits of Markets. *The University of Chicago Press*. Chicago
- MULLIGAN, C. B. (2009): Is Macroeconomics Off Track? In: Edlin, A. S. – Stiglitz, J. E. – DeLong, J. B. (eds): *The Economists' voice 2.0.: the financial crisis, health care reform, and more*. Columbia University Press, New York
- OKUN, A. M. (1960): Potential GNP: It's measurement and significance. *American Statistical Association. Proceedings of business and economics Statistics Section*. pp. 98–104.
- PÁSZTOR, S. (2011): A nagy szanálás – Válságkezelés (The great reorganisation – Crisis management): Chrysler, Ford és GM. *Külgazdaság*. LV. évf., pp. 64–92
- PERALTA-ALVA, A. (2011): Jobless Recoveries or Jobless Growth? *National Economic Trends*. Federal Reserve Bank of St. Louis
- RAJAN, R. G. (2010): Fault Lines. How Hidden Fractures Still Threaten the World Economy. *Princeton University Press*. Princeton and Oxford
- RAVALLION, M. (1997): Can high-inequality developing countries escape absolute poverty? *Policy Research Working Paper Series*. 1775, The World Bank
- RIFKIN, J. (1995): *The End of Work. The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. Putnam's Book. New York
- ROSEN, S. (1981): The economics of superstar. *The American Economic Review*. Vol. 71, No. 5. (Dec., 1981), pp. 845–858
- ROSENBERG, J. M. (1966): *Automation, Manpower, and Education*. Random House. New York.
- SCHREFT, S. L. – SINGH, A. (2003): A Closer Look at Jobless Recoveries. Federal Reserve Bank of Kansas City. *Economic Review*
- SHILLER, R. J. (2007): Long-Term Perspectives on the Current Boom in Home Prices. In: Stiglitz, J. E. – Edlin, A. S. – DeLong, J. B. (eds): *The Economists' voice: top economists take on today's problems*. Columbia University Press, New York
- SLAUGHTER, M. J. – SWAGEL, P. (1997): Does Globalization Lower Wages and Export Jobs? *Economic Issues*. 11, IMF
- HERNÁDI A. (2009): Autóipar és válság. (The car industry and crisis) In: Szalavetz, A. (2009): *A globális válság: hatások, gazdaságpolitikai válaszok és kilátások. A válság hatása néhány kiemelt gazdasági tevékenységre, (The global crisis: effects, economic policy answers and prospects. The impact of the crisis on the output of a few key economies.)* Budapest MTA VKI, pp. 19–36
- STIGLITZ, J. E. (1969): Distribution of Income and Wealth among Individuals. *Econometrica*, 37. pp. 382–397
- TEULINGS, C. (2014): Why does inequality grow? Can we do something about it? VOX, online: <http://www.voxeu.org/article/why-does-inequality-grow>

TOBIN, J. (1996): *Full Employment and Growth. Further Keynesian Essays on Policy*. Edward Elgar. Celtenham

TODARO, M. P. – Maruszko, L. (1987): Illegal Migration and US Immigration Reform: A Conceptual Framework. *Population and Development Review*. 13, pp. 101–114

TODARO, M. P. (1989): *Economic Development*. Longman. London

WAXELL, A. (2011): Life Sciences and Human Capital: Jobless Growth on Specialised and Local Labour Markets? *Growth and Change*. 42. 3. pp. 231–260

Bureau of Labor Statistics (2014)

OECD Database (2014)

WorldBank Database (2014)

<http://www.policyuncertainty.com/media/HiringUncertainty.pdf> (27 November 2014)

<http://skills.oecd.org/hotissues/skillsmismatch.html> (3 December 2014)

<http://www.hays-index.com/> (28 November 2014)