

# The role of service sector in compensation of job losses and the effects of wages on economy

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## ABSTRACT

*The paper deals with the compensation of job losses in labor intensive sector of economy. Authors conclude that the high-tech manufacturing industries do not play a significant role in solving the problems of employment. Service sector to a certain extent is capable to absorb the workforce. Thus, there appears a problem of adequate labor remuneration in public sector. The basic principle of adequate wages – marginal efficiency of labor, depending mainly on productivity in private production sector is effective. The wage problem in private service sector is more complicated, as the productivity growth in service sector commonly is slower than in production sector, and there appears a gap between productivity and wages, which is broadly known as Balassa – Samuelson effect. The problem becomes more complicated, considering public service sector, where the prices are set not by market, particularly in public administration, where it is hardly possible to speak about productivity. Thus the marginal efficiency principle in public administration is not effective, and there should be introduced some other principles. The paper discusses the negative effect of economy that appears, if the wage growth in public administration sector overtakes the growth of productivity in economy as a whole.*

**Keywords:** Wages, employment, productivity, public administration

## 1. INTRODUCTION

Analyzing the national economy, employment is considered to be one of the most important economic processes. Population aging, falling birth rates and rising mortality rates are common in most of the European Union. Another wave of immigration from the West Asian and North African developing countries has recently taken place and will continue. As a result, in the coming years, the European Union will face social and structural problems in the labour market.

The analysis implemented in the paper allows us to conclude that high technology manufacturing industries do not play a significant role in solving employment problems. They are only able to partly compensate for job losses in labor intensive sectors of the economy. Accumulation of knowledge of the industrialized countries contributes to the development of the services sector. The authors rely on the assumption that the service sector is in a certain extent able to absorb the workforce. Employment in the services sector in the European Union remains largely focused on traditional sectors of activity. The goal of the paper is to investigate the latest trends in employment in the world and in the European Union and the role of the services sector in balancing the labor market.

Equilibrium in the labour market is achieved not only with the actions of employers and employees, but also with the comprehensive, sustainable employment policy developed by the government. The aim of the paper is to study the latest trends in global employment and the contribution of the services sector to the development of the labour market.

The first chapter of the paper deals with the analysis of manufacturing sector as an engine of economic growth. The analysis is based on statistical data of manufacturing sector share in the economies, labour absorption abilities of manufacturing in several developed and developing countries.

The second chapter discusses the interconnection between service sector and labour market. Analysis is based on employment data in service sector, particularly analysing knowledge-intensive and high-technology knowledge intensive services.

The third chapter considers the problem of labour remuneration, as the increase of the importance of service sector causes a problem, which is broadly known as Balassa – Samuelson effect - the productivity growth in service sector

commonly is slower than in production sector, and there appears a gap between productivity and wages. The problem becomes more complicated, considering public service sector, where the prices are set not by market, particularly in public administration, where it is hardly possible to speak about productivity.

The theoretical review and analysis of labour economics and employment use qualitative methods. The author's personal observations are used to identify problems in the current labour market and employment situation in the EU. Quantitative research methods: statistical analysis, forecasting and other financial calculations are used to analyze labour market trends and structural problems. Authors provide a number of suggestions on possible incentives to stabilize and develop the labour market in the European Union.

## **2. THEORETICAL ASPECTS OF EMPLOYMENT THEORETICAL ASPECTS OF EMPLOYMENT**

The complex of relationships, most adequately characterizing the principles, the content and form of participation of the working population in production, in science is identified with employment as the economic category. Economic dimension of employment is mainly the labour market.

Encyclopaedia Britannica defines: "*Labour economics*, study of the labour force as an element in the process of production. The labour force comprises all those who work for gain, whether as employees, employers, or as self-employed, and it includes the unemployed who are seeking work"[1]. Labour economics includes the factors affecting the efficiency of the workers, their deployment between different industries and occupations, modern labour economics especially deals with the labour force of contemporary industrialized economies.

Employment is the result of equilibrium determined by labour market: working-age population that has been able to carry out activities that can generate income in the form of wages or profits. Sloman and Hinde refer to Keynesian theory in which it is assumed that there is a maximum level of GDP that can be obtained at any one time, and if equilibrium GDP is at this level, there will be no deficiency of aggregate demand and hence no disequilibrium unemployment [2]. Employment is one of the most important factors of economic growth (traditional, approved by the practice of management in the period of domination of automatic production and occupying its rightful place in all economic growth models). Therefore, the risk of slowdown in productivity as a consequence of the unsolved problems of employment is taken as a threat signal of economic slowdown. To reduce the risk of slowdown, it is necessary to improve the use of available labour force and to accelerate structural reforms in the economy.

The literature presents quite a number of approaches to the justification of the reasons for qualitative changes in employment. Thus, Manuel Castells, considering the economic development of industrialized countries, has formulated factors determining the nature and dynamics of employment evolution [3]. From the standpoint of the subject of this research, the most interesting are the following trends:

- the phasing out of agricultural employment;
- the steady decline of traditional manufacturing employment;
- the rise of both producer services and social services, with the emphasis on business services in the first category, and health services in the second group;
- the increasing diversification of service activities as sources of jobs;
- the rapid rise of managerial, professional, and technical jobs;
- the formation of a "white-collar" proletariat, made up of clerical and sales workers;
- the relative stability of a substantial share of employment in retail trade;
- the simultaneous increase of the upper and lower levels of the occupational structure;
- the relative upgrading of the occupational structure over time, with an increasing share of those occupations that require higher skills and advanced education proportionally higher than the increase of the lower-level categories[4].

The decline in manufacturing employment in the industrialized world is not a new phenomenon and there are raft of potential explanations ranging from productivity to globalization. So Rowthorn and Ramaswamy argue that deindustrialization is explained by developments that are internal to an advanced economy stimulated primarily by faster growth in manufacturing productivity which, in turn, leads to relative price changes and shifts in the structure of the economy[5]. An alternate hypothesis is that the manufacturing employment decline is primarily due to globalization and the rise of manufacturing in developing economies. Several recent contributions relate the decline of manufacturing employment to episodes of globalization and in particular the rise of China in the global economy.

Accumulated volume and quality of knowledge by population of industrialized countries coupled with the relatively high level of computer literacy has contributed to the revitalization of the business services vendors. Internet

technologies have pushed the boundaries of business making it attractive to almost every educated person. The result is that economists and lawyers, engineers and programmers have rushed into providing services.

### 3. MANUFACTURING AS AN ENGINE OF ECONOMIC GROWTH

Modern industrial entrepreneurs are not active players in the labour market. The main reason for that is significant decrease in prevalence of textile, clothing and footwear producing enterprises in industrialized countries. Moving labour intensive industrial production to Southeast Asia has strengthened the position of shadow economy built on informal employment, i.e. on the use of statistically unregistered labour that is not subject to taxation. The share of world manufacturing employment in the global total decreased from 14.4 percent to 11.5 percent between 1991 and 2014. Manufacturing employment in industrialized countries fell from 91 million jobs in 1991 to 63 million in 2014, and from 21.8 percent of total employment to 13.2 percent. Manufacturing employment in industrialized countries accounted for around 2 percent of global employment in 2014. (United Nations Industrial Development Organization, 2016)

**Table 1:** Structure and dynamics of formal employment in the world-manufacturing sector (share of employed in manufacturing sector, %)[6]

	1970/74	1975/79	1980/84	1985/89	1990/94	1995/99	2000/04	2005/09	2010/13
World	14.8	15.6	15.6	15.6	14.7	14.2	13.3	14.0	14.2
Developed countries	25.6	23.8	22.4	20.2	18.7	16.9	14.9	14.1	13.3
America	21.9	20.3	18.5	16.5	14.7	13.8	12.1	11.0	10.2
Asia	28.1	26.3	25.7	25.4	24.4	21.1	18.9	18.6	21.1
Europe	27.2	26.0	23.5	21.1	19.3	18.0	16.3	15.0	13.2
Africa	20.3	17.9	16.1	15.4	14.5	13.7	12.5	11.4	10.7

Europe experienced the largest decline in the share, by 15 and 13 percentage points, respectively. The Americas reduced its share by 10 percentage points. The decline of the manufacturing employment share in developing countries in Asia has been modest compared with that of Europe and the Americas, with a drop of 7 percentage points over the 40 years: Asia still has a more than 20 percent manufacturing employment share, the highest among all regions (including developed countries). Although developing countries as a whole have increased their manufacturing employment share for the past four decades, the increase has been concentrated in Asia, where all three regions increased the manufacturing share in total regional employment. East Asia increased its share by 10 percentage points over the 40 years. Given that it includes China, the world's most populous country, this has increased manufacturing employment by 130 million jobs since 1970.

Manufacturing employment in the United States, as measured by surveys of workers (rather than surveys of establishments), fell by 8% from 2008 through 2015, despite the economic recovery that began in 2009. Canada, France, Italy, Japan, Sweden, and the United Kingdom all saw similar or larger declines over that period. Over the 25-year period between 1990 and 2015, manufacturing employment fell by a much lower percentage in the United States than in the United Kingdom and by about the same percentage as in France, Japan, and Sweden. Other high-income economies, including the Netherlands, Italy, and Germany, also saw large declines in manufacturing employment over that period[7].

The manufacturers of Germany, whose economy is considered to be the "locomotive" of EU, make a worthy contribution to the economic growth of the country. In 2012, the share of manufacturing was 22.2% of gross domestic product in Germany. For comparison, the value of this indicator on the average in EU-28 was 15.3%, in Finland 16.2, United Kingdom 9.5 %, Italy 15.5% [8].

Therefore, it can be argued that Germany's way of overcoming from the engine to the high-tech manufacturing is fairly painless. The successes of German manufacturers are predetermined:

- firstly, because of the fact that the leading subsectors of the manufacturing industry in Germany is dominated by multinational corporations (Siemens AG, Volkswagen, BASF AG, Deutsche Telekom AG, Leica Microsystems). Huge investment by corporations in the development and implementation of innovation is an effective tool for the formation of high-tech manufacturing.
- Secondly, because of the officials forming the industrial policy on the federal and state levels, and actively lobbying the interests of German manufacturers in governing institutions of the EU.

Experts have formulated the most important preconditions to ensure a competitive advantage of German manufacturers:

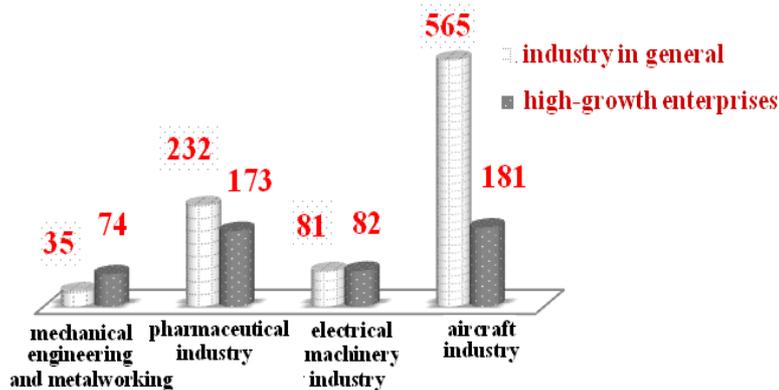
- 1) successful operation of small and medium-sized enterprises in Germany, which provide jobs for about 70% of the workforce of the country and produce complicated, difficult to imitate production;
- 2) highly skilled workforce;
- 3) high quality infrastructure.

Experts have concluded that Germany has concentrated its efforts on the development of new technologies and innovative capabilities [9].

The ability of entrepreneurs of US, Germany, Italy, France, United Kingdom to maintain the competitiveness of the national manufacturing industry may be proof to the fact that these countries possess strong enough position in high-tech manufacturing and knowledge intensive services ensuring these activities. Authors take into account that Eurostat in the high-tech manufacturing includes manufacturing of pharmaceuticals; manufacturing of computer, electronic and optical products, manufacturing of machinery and equipment; and manufacturing of aircraft. According to statistical information provided by Eurostat, the activity of manufacturing enterprises in Germany is characterized as following for the year 2015:

- the share of high-tech enterprises in the total number of manufacturing enterprises was 4.2%, but the number of working for them – 7.0% of total employment in the manufacturing industry of Germany;
- on average, one high-tech enterprise in manufacturing sector employed 58 workers, while in the manufacturing industry in Germany as a whole the respective number was 35 workers [10].

Fast growing high-tech enterprises in Germany are able to solve the employment problem in the industry only in some cases as evidenced by the information in Figure 1.



**Figure 1** The average number of employees in one Germany manufacturing enterprise in 2015 [11]

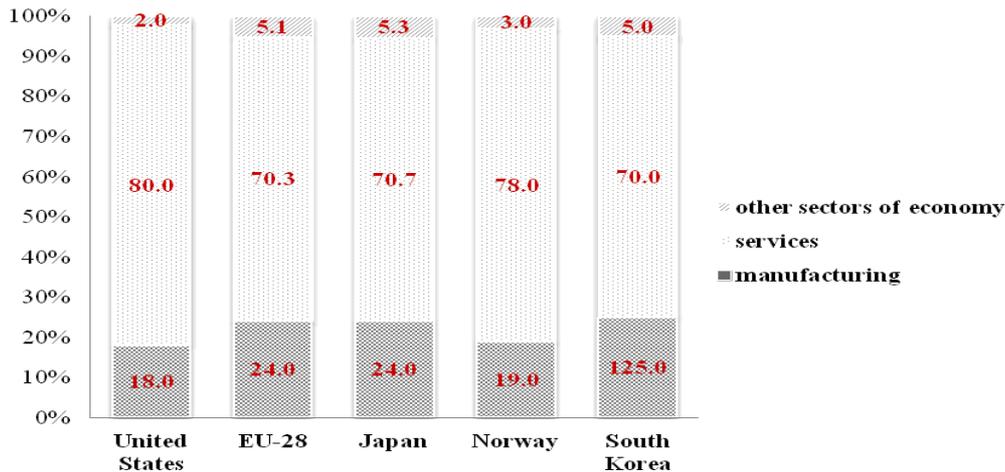
In 2015, average number of employees in the fast growing company (74 people). However, among high-tech companies growth was observed only in manufacturing of electrical machinery and optical instruments, office machinery and computers. Moreover, fast-growing manufacturers of aircraft companies have been significantly lagging behind in the number of employees compared to enterprises that had the standard rates of growth.

Given information can serve as an argument in support of the conclusions of UNIDO experts that industries that are classified as high-tech, do not play a significant role in solving the employment problems. But they are crucial in the accumulation of capital, development of skills and increase the level of knowledge in the economy, that is, they are crucial in the formation of productivity growth conditions. Manufacturing industry in the developed countries keeps the motor function of economic growth, as is the main source of capital, knowledge, and (to some extent) jobs.

#### **4. ROLE OF THE SERVICE SECTOR IN LABOUR MARKET**

The attractiveness of the service sector in the labour market is confirmed by the employment statistics. According to experts of the International Labour Organization (ILO), 49.7% of all employees in the world were employed in the service sector in 2016. Overall, slightly below 28.8% of the global labour force was employed in agriculture in 2016. Employment in the manufacturing now accounts for about 21.5% of global employment at a growth rate of only 1.6 percentage points [12].

In the economies of industrialized countries, the dominance of the service sector in the labour market looks even more impressive. In the US, for example, 80.0% of all workers in 2016 were employed in the service sector – see Figure 2.



**Figure 2** Employment in the basic sectors of economy in industrialized countries in 2016, as a percentage of total employment

The service sector is the determining factor in shaping the demand in the labour market in other industrialized countries too. It should be noticed that the share of service sector employment amounted to 70.3% in the EU-28.

Crucial role in addressing employment problems in service sector is provided by traditional activities - hotel services and public catering, wholesale and retail trade, repair of motor vehicles and motorcycles, real estate activities. In other words, those activities which, according to European Classification of Economic Activities (NACE Rev. 2), are not included in knowledge-intensive services (KIS).

The division of the service sector in the traditional and knowledge-intensive is, as rightly noted by the Russian researchers, conditional in its character due to unclear criterions for defining the meaning of “knowledge-intensive”. In statistics this uncertainty is reflected as the expansion of the boundaries of knowledge-intensive services. Thus, Eurostat includes transport services and education, postal services and health care, science and financial activities. But statistics, even with such expanded approach, do not indicate that knowledge-intensive services currently play a decisive role in shaping labour supply in EU. Even in Germany, United Kingdom, France, Spain and Italy – countries that employed 71.2% of those employed in service sector in the EU in 2016, the proportion of workers representing knowledge-intensive services, according to Eurostat classification, did not exceed half of the employed in the economy of EU-28 - see Table 2.

**Table 2:** Employment in the service sector in 2011, as % of employment in the economy of the EU-28 [13]

	Services generally	Knowledge-intensive services	High-technology knowledge-intensive services
Germany	71.3	40.4	2.5
Spain	76.2	35.9	3.0
France	75.8	46.0	3.0
Italy	70.0	34.6	2.5
United Kingdom	80.0	49.0	3.8
EU-28	71.2	40.0	2.9

As one can see in Table 2, in the UK, where the vast majority (80.0%) of the working population were employed in the service sector, less than a half (40.0%) of workers were employed in knowledge-intensive service sector. In the economic areas as information, communications and computer services, as well as scientific research, that is, in those industries that are included in the high-technology knowledge-intensive services, there were occupied only 2.9% of the UK workers in 2016. In the other leading EU countries the value of given indicator was even smaller.

The data presented in Table 2 shows that employment in the service sector is still largely focused on traditional areas of activity. Knowledge-intensive services are only starting to conquer positions in the EU single market. One of the reasons for such a slow formation of so important sector for modern industrialized country, which uses skilled labour, is a permissive attitude of politicians, scientists and civil society of EU Member States to the business in the markets of knowledge-intensive services.

Business in the area of knowledge-intensive services is classified by researchers and statisticians as knowledge-intensive business services – KIBS. The OECD includes in the KIBS the following services:

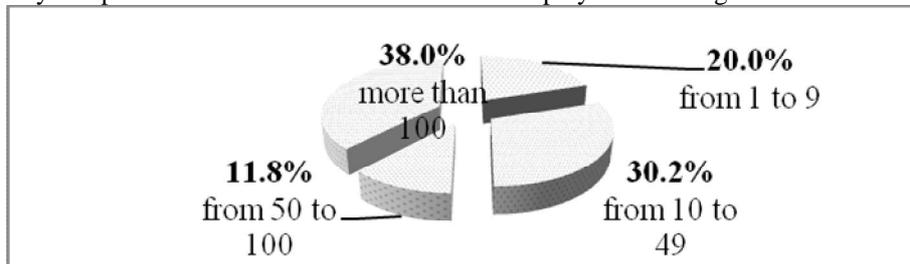
- IT-consulting;
- R&D services;
- legal;
- accounting;
- marketing and advertising;
- business consulting;
- human resource development [14].

However, it should be noted that the statisticians of the EU and the US have not reached a consensus on the issue of the structure of knowledge-intensive business services. Therefore, cross-country comparisons of the extent and dynamics of this phenomenon require a certain correction.

US experts, based on the analysis of information on the performance of the US companies in 2009-2012, argue the following:

- number of fast-growing companies in the reporting period was relatively small (2% of the national average), but they created more jobs than conventional enterprises;
- one fast-growing company in the US created 43.3 jobs on average, while companies that do not meet the criteria for fast-growing company- 4.5 times less.
- almost  $\frac{2}{3}$  (62.4%) of new jobs that have emerged during the reporting period in the US labour market due to the growing activity of the fast-growing enterprises, were concentrated in the following five areas:
  - 1) administration, support, and waste management – 20.7%;
  - 2) professional, scientific, and technical services – 11.5%;
  - 3) health care and social assistance – 10.7%;
  - 4) wholesale and retail trade – 10.4%;
  - 5) manufacturing – 9.1%.

The first position in contribution to accelerate the employment growth (38.0% of the total number of surveyed companies) is held by companies with total staff of 100 or more employees – see Figure 3.



**Figure 3** Distribution (in %) of the US high-employment-growth enterprises in 2009-2012 by the number of employees (persons)[15]

Leadership of large enterprises can be explained both by abundance of resources and the effective functioning of investment attraction model in the US business. It is important to note here that the US statistics show quite serious contribution of enterprises employing from 1 to 9 employees, that is, the significant role of microenterprises to accelerate growth. The significant presence (50.2%) of small (10 - 49 employees) and micro enterprises among US high-employment-growth enterprises demonstrates their ability to grow rapidly.

In this regard, the authors conclude:

1. In the US, the service sector is dominated by micro enterprises – 79.9% out of total in 2014, and together with small enterprises (16.5%) SME dominance is obvious.
2. Despite the impressive scale of the spread of SMEs in the service sector, their role in shaping the demand in the labour market of the country is not a determining. In SMEs that provided services in 2010, there were working only 26.6% of those working in the industry, but in enterprises with 250 or more employees – 58.7% [16].
3. The US government orientation to liberal market values, including stimulating entrepreneurship policies, is capable of creating the most favourable conditions for the expansion of the number of entrepreneurs. However,

from the standpoint of solving the employment problems of the US economy determining factor remains large enterprises.

The scale of involvement of the US working-age population in service sector indicates that along with the solution to achieve equilibrium in the labour market, it is also solving the problem of social sustainability. Sociology scientists argue that employees in high-tech knowledge-intensive manufacturing and entrepreneurs providing knowledge-intensive business services play a major role in stabilizing society.

## **5. THE EFFECTS OF WAGES IN SERVICE SECTOR ON EMPLOYMENT AND ECONOMY AS A WHOLE**

The increase of the importance of service sector causes a problem, which is broadly known as Balassa – Samuelson effect: the productivity growth in service sector commonly is slower than in production sector, and there appears a gap between productivity and wages [17],[18]. According to what became later known as “Baumol’s disease”, the expansion of the employment share in services relative to industry is the direct consequence of services’ lower productivity performance [19].

The problem becomes more complicated, considering public service sector, where the prices are set not by market, particularly in public administration, where it is hardly possible to speak about productivity.

Simply put, wages are based on productivity. The producer's income is determined by the amount of the product created and sold. The part of the added value that will be paid as remuneration for work will be according to the labour input.

In the service sector, the relation between wages and productivity is less obvious, though market still will adjust wages and productivity. As a result of Balassa-Samuelson effect the increase of wages will outweigh the increase in productivity. Mechanisms that balance this process are broadly described in the theory of economics, but it goes beyond the scope of this article [20].

In the public sector, first of all in public administration, it's absurd to talk about productivity. It is not so that the productivity of a Member of Parliament should be measured by how many minutes he spoke from the podium, or the productivity of the minister with the number of documents signed. Here the basic principle must be such that wages in the public administration sector should follow the productivity in the economy as a whole.

If wage growth in public administration overtakes the private sector, this will put pressure on wages in the private sector, causing a gap between wages and productivity, thereby reducing the competitiveness of private sector in the international level. In Latvia, this has happened over a long period of time, and this is usually indicated by foreign experts. According to the Central Statistical Bureau of Latvia, the average wage in June 2017 in Latvia was 942 euros; in the private sector it was 918 euros, and in the general government sector in public sector - 1120 euros[21]. In the new state budget, the ministries' budgets foresee an increase in salaries by 25-30% in certain types of activities.

Therefore, it is necessary to restrict the increase of wages of direct public administration officials so that it does not exceed the nominal GDP growth. This does not apply to the public sector as a whole; it does not affect teachers, policemen, judges and others working in this sector. However, it affects ministry officials and Members of Parliament.

The productivity growth in the private production sector and knowledge-intensive service sector is essential to the increase of competitiveness and economic development of any country. The basic factors determining productivity are:

- provision of employees with tangible capital. The productivity thus will depend from the technological level of the capital, which in turn requires high level of technological knowledge of employees;
- quality of resources: environmental (natural) resources, tangible capital, human resources, including labour. The quality of labour is significantly enhanced by education, higher qualification;
- technologies and work organization. The development of managerial skills both in micro and macro levels are substantial to a significant increase of productivity;
- market volume. However it is not so that the productivity can grow permanently depending from the market volume;
- social, political and economic environment, the role which is usually underestimated;
- infrastructure. This is the main factor particularly outside the urban areas. The present situation in developed countries, where population more and more is concentrated in large cities, thus causing territorial misbalance in the labour market, may be a significant threat to the sustainable development of economy. Therefore this factor plays a significant role in economic policy and national economic development planning.

The marginal efficiency principle in public administration is not effective, and there should be introduced some other principles.

## **6. CONCLUSION**

There are certain factors that affect the efficiency of workers, their deployment between different sectors and industries. Modern labour economics is particularly concerned with the labour force of the contemporary industrialized economies. In general, employment is the result of equilibrium determined by labour market: working-age population that has been able to carry out activities that can generate income in the form of wages or profits.

The accumulated amount and quality of knowledge of the industrialized nations and the relatively high level of computer literacy contributed to the revitalization of the business services vendors. Knowledge-intensive business services are a key driver of economic development. High-tech knowledge-intensive manufacturing is needed to solve the problems of economic growth.

In European countries, employment in the service sector is largely focused on traditional areas of activity. Knowledge-intensive business services, which are crucial for economic development, are just starting to conquer positions in the EU single market. One of the reasons for such a slow formation of this sector, which plays such an important role in a modern industrialized country using skilled labour, is a permissive attitude of politicians, academics and civil society of EU Member States towards business in knowledge-intensive services markets.

The reorganization of the government expenditure structure can significantly improve the competitiveness of the economy and the labour market situation. A genuine structural reform in the understanding of the World Bank must be made - a significant reduction in the public administration (rather than any organization working in the public sector - schools, hospitals, police, etc.).

When deciding on state budget expenditures, it is necessary to look deeper than the level of ministries, also considering the planned budget expenditures of each ministry.

Wages of the direct public administration officials should be restricted so that they does not exceed the nominal GDP growth.

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