THE EFFICIENCY OF PUBLIC EXPENDITURE - A KEY CHALLENGE FOR PUBLIC ADMINISTRATION IN THE 21st CENTURY (A THEORETICAL APPROACH)

Grażyna Kozuń - Cieślak

ABSTRACT

The efficiency of the public sector belongs to the most difficult and controversial issues, as it is a part of a discussion on the choice between what is economically justifiable and what is socially acceptable. This issue is one of the most complex areas of research, both in terms of theoretical approach and application of quantitative methods. Despite this the need to improve efficiency in the public sector has been stressed for many years and should be considered a key challenge for public administration in the coming decades. This article discusses the following topics:
- a portrait of the public sector in the EU countries in numbers,
- the efficiency of public administration – a new imperative, an old idea,
- dilemmas of assessing the efficiency of public spending.

KEY WORDS: efficiency, public sector, statistical data

1. A PORTRAIT OF THE PUBLIC SECTOR IN THE EU COUNTRIES IN NUMBERS

There are various models of public sector and public administration structure in the European countries, resulting from complex historical determinants, dominating public policies and numerous local contexts affecting the current form of these national models. They are a product of evolution – of a process of seeking a balance between economic and social values, with the clashing of different ideas on organization and competence stemming from diverse, historically determined traditions, but also affected by the globalization processes[1]. In Europe today, there are four public sector models, three of which – continental, or participatory (Germany, Austria, Belgium, France, the Netherlands, Luxemburg), Scandinavian/Nordic (Denmark, Finland, Sweden, Norway) and Mediterranean (Cyprus, Malta, Greece, Spain, Portugal, Italy) – are derived from the continental model of public finances, while the fourth one represents the Anglo-Saxon tradition (United Kingdom, Ireland). The question of how to categorize the post-socialist EU member states within the aforementioned models is still the subject of academic debate and research.[2] The public sector and public administration models represent different concepts of the relationship between the government and economy, and are reflected in the applied socio-economic policy, expressed by the level of the government's interventionism, etatism and paternalism.

All in all, it can be said that there are diverse forms of welfare state in the European countries, with different scopes and types of social security and instruments used, their essence being the aspiration to maintain and strengthen social cohesion by ensuring universal access to employment and redistribution of income, and thus encouraging sustainable economic growth and improving competitiveness.[3]

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[1] See for example: (Markowska-Bzducha, 2012).
[2] See for example: (Püss *et al*., 2010).
[3] See: (Pacut, 2012).

The consensus on the role of public sector reached on the grounds of the theory of economics and socio-economic policy is reflected in the size and structure of the public sector which in the EU countries is stronger than in any other region of the world. And, regardless of the specific public sector model that has evolved in any given EU member state, it should be said that in all of them the government is actively present in the social and economic life, and the influence of the public sector is constantly manifested in the status of citizens as taxpayers, beneficiaries of transfer payments, capital owners, users of the public infrastructure, or addressees of diverse policies (of sustainable development, international relations concerning economy, culture, the military etc.).

In contemporary market economies of the EU member states, the public sector's role is twofold: it creates and is responsible for an institutional framework within which individuals operate (as citizens and economic entities), and it participates actively in the economic processes correcting the potential effects of the market mechanism. These tasks are carried out by means of establishing laws, using public property and state-owned enterprises.

The significance of the public sector in the countries of the European Union is manifested in the statistics concerning the size of government expenditure and the level of employment in this sector. The above mentioned data are supplemented by the estimated assessment of the effectiveness of the public sector institutions (table A1), which seems especially important in the context of the topic of this paper.

The statistics presented below form a unique portrait of the public sector in the European countries, meant to enhance these features of the sector that determine its significance for each country's economy.

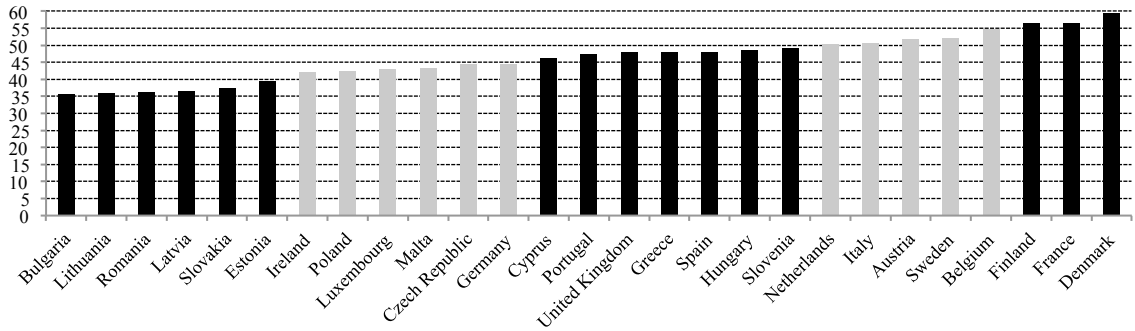

Figure 1 Government expenditure in 2012 as a percentage of GDP
Source: Annex - Table A1

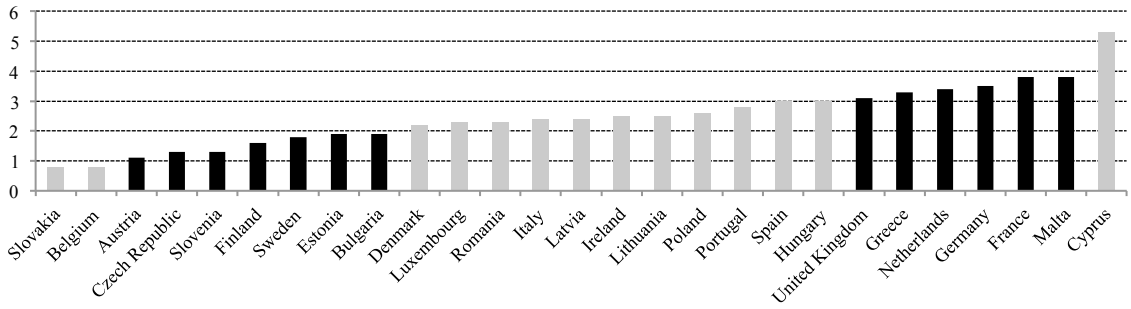

Figure 2 Percentage of public administration employees in the population
Source: Annex - Table A1

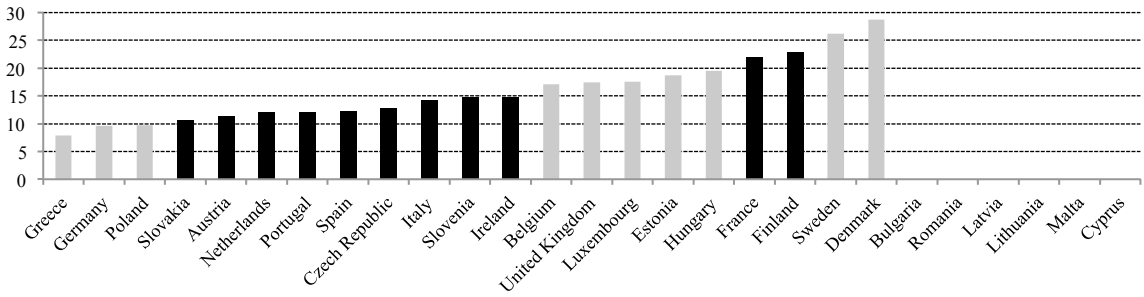

Figure 3 Employment in general government and public corporations as a percentage of the labour force in 2008
Source: Annex - Table A1 (no data for Bulgaria, Romania, Latvia, Lithuania, Malta, Cyprus)

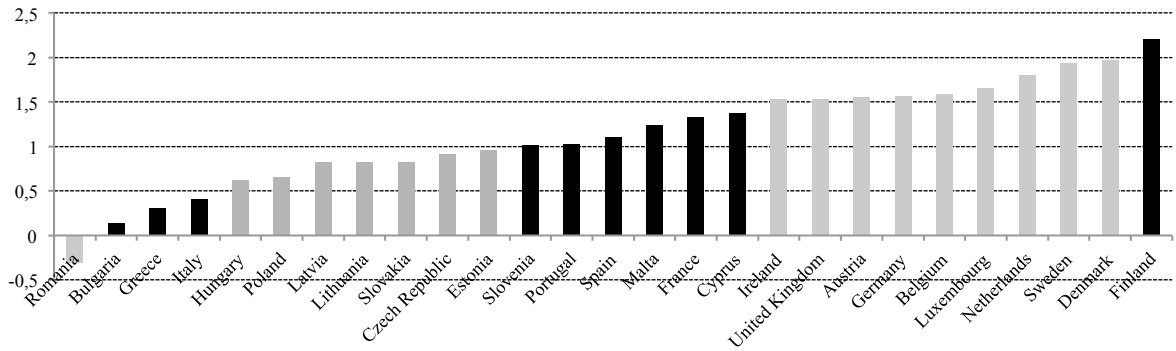

Figure 4 Government effectiveness in 2012 - World Bank estimations
Source: Annex - Table A1

Before discussing briefly the data presented in the charts, it should be noted that there is a strong correlation between the volume of government expenditure and the size of employment in the public sector on the one hand and the assessment of the sector's efficiency on the other (correlation coefficients are within the 95%–97% range).

The share of government spending in gross domestic product is quite diversified in the EU countries. The group with the lowest figure, between 35% and 40%, comprises six out of ten post-socialist member states (Bulgaria, Lithuania, Romania, Latvia, Slovakia and Estonia). The highest figure, between 55% and 60%, is recorded by Finland, France and Denmark. The average value for the entire European Union is 46.3% and differs very slightly from the median which is 47.5%, as represented by Portugal. The only post-socialist country with the share of government expenditure in GDP exceeding the European average is Hungary (48.6%).

Employment in the public administration is another indicator of the significance of public sector in the lives of different nations. In seventeen EU countries the percentage of population employed in the public administration ranges from 2% to 4%. The average value for the examined group of countries is 2.47%, almost the same as the median of 2.4%. The lowest percentage of population working in the public administration can be found in Slovakia (0.8%), and the highest in Cyprus (5.3%).

The next index shows the percentage of the labour force employed in the public sector. Unfortunately, there are no data available for six of the member states, hence the analysis will not be complete. Nevertheless, a very high diversity can definitely be observed: in Greece, Germany and Poland the rate ranges from 5% to 10%, while in Sweden and Denmark it reaches 25%–30%. The average value for the 21 countries analyzed is 15.8% and differs slightly from the median (14.7%).

Interesting information is also provided by the analysis of the index showing efficiency of the public sector as estimated by the World Bank basing on the so-called "soft data", such as the perception of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The average for this index was 1.14 and, sadly, all the post-socialist member states have a lower rate. So do Greece and Italy. The following countries have been rated the lowest: Romania, Bulgaria, Greece and Italy. Finland tops the list, followed shortly by Denmark, Sweden, the Netherlands and Luxemburg, i.e. countries that for many years now have formed the top ten of the least corrupt states (according to Transparency International CPI).

2. THE EFFICIENCY OF PUBLIC ADMINISTRATION – A NEW IMPERATIVE, AN OLD IDEA

Considering efficiency of public administration, or even more broadly – efficiency of the public sector, two kinds of approach can be distinguished in the literature on the subject.

A considerable group of authors regards the structures of public authorities as the best expression of an efficient organization, identifying it with Weberian bureaucracy as an ideal type. Following Weber, bureaucracy is perceived as a manifestation of rational and efficient means of managing work performed by many people.[4] Public administration has also been affected by neo-Taylorism as a modern management method based on strict procedures, close monitoring of work, cost accounting, mechanisms for controlling work performance, and elements of motivating workforce through a system of rewards. In late 1990s, neo-Taylorism was combined with the public choice theory, transaction-cost economics and agency theory, which formed the basis for developing a new form of managerialism, based on liberation and market-oriented management, called the New Public Management (Ćwiklicki, 2011).

Another group of authors represents the idea that the structures of public administration cannot be efficient at all, since efficiency is not the most important objective in the public sector and thus can be supplanted by other values. The supporters of this view claim that while a private organization has one clearly defined purpose, namely to achieve profit or revenue, public sector organizations are evaluated in many different respects (legality, transparency, integrity, being democratic), and the pursuit of these objectives may reduce efficiency or even clash with achieving it. Moreover, public sector entities always have multiple goals and arranging them in a hierarchy proves very difficult, or it can even be impossible to agree on the values that are to be accomplished. Furthermore, it is usually very hard to measure the results of the work of public sector entities. It is also necessary to emphasize that in the political context, goals achieved by public entities can be ambiguous and changing fast.[5]

These two different approaches to the issue of efficiency of public sector entities are a telling example of using two different meanings of the term "efficiency": the so-called technical efficiency associated with the input to output ratio in the case of the first approach, and substantive efficiency referring to the goals and values for the second approach.

Therefore, the discussion concerning the issues of public administration efficiency is related to the way of understanding the efficiency category and to determining whether they refer more to the conceptual or to the empirical debate.

In economic literature, the technical approach to defining efficiency prevails. In line with this approach, efficiency is generally characterized in terms of the input to output ratio. In these definitions, the notion of efficiency is often accompanied by a reference to the

[4] See for example: (Breton, Wintrobe, 1985), (Denhardt, 2000), (Etzioni-Halevy, 1985).
[5] See for example: (Denhardt, 2000), (Kang, *Efficiency*, 2003), (Wilson, 1989).

category of "effectiveness," meaning goal accomplishment, with some authors describing effectiveness as a condition for achieving efficiency, while others, conversely, regard efficiency as a criterion for the assessment of effectiveness. Others still perceive the two categories as independent of each other. The literature also contains examples of identifying efficiency with productivity.

The references to effectiveness show a very important characteristic of the "efficiency" category – according to most of the authors efficiency is not an inherent value but a means to achieving a goal (a desirable outcome). For example, Aaron Wildavsky put it as follows: "Technical efficiency does not tell you where to go, only that you should arrive there with the least possible effort."(Stone, 1998) Technical efficiency is here understood as an instrumental, secondary criterion for assessing an organization's work.

Perceiving efficiency in the context of goal accomplishment moves the discussion towards substantive efficiency, meaning a concept of efficiency that is directly or indirectly associated with setting goals or values, and in case of public administration – with carrying out a particular policy. Substantive efficiency refers to Aristotelian theory of causality, where efficient cause (*causa efficiens*) is always accompanied by final cause (*causa finalis*).[6]

A powerful example of the substantive approach to understanding efficiency are the views expressed by Dwight Waldo in his book *The Administrative State*, where he said: "Efficiency operates in the interstices of a value system: it prescribes a relationship (ratios or proportions) among parts of the value system; it receives its 'moral content' by syntax, by absorption. Things are not simply 'efficient' or 'inefficient'. They are efficient or inefficient for given purposes, and efficient for one purpose may mean inefficient for another."(Waldo, 1984)

It should be emphasized here, however, that substantive efficiency should not be simply identified with effectiveness seen as an extent of goal accomplishment, which is closer to the technical approach. Substantive efficiency focuses on the ability to strive to "generate" an effect, on a causative power making it possible to attain goals rather than on the results themselves.(Rutgers, Meer, 2010)

A noteworthy approach is presented by Robert Goodin and Peter Wilenski who said: "What stands most immediately behind the goal of efficiency is the more fundamental goal of want-satisfaction" (Goodin, Wilenski, 1984). Efficiency is thus a means to fulfill needs, to achieve satisfaction as a meta-goal. Such an approach moves the substantive concept of efficiency closer to Pareto optimality (Pareto efficiency).[7]

The discussion presented here clearly shows that the study of efficiency of public sector entities is an extremely complex issue, both on the conceptual and empirical level. Further on, the paper will discuss the principal dilemmas of efficiency evaluation resulting from the specificity of the public sector.

2. DILEMMAS OF ASSESSING THE EFFICIENCY OF PUBLIC SPENDING

Due to their noncommercial character, institutions performing public tasks lack those mechanisms that make efficiency a constant concern for entities operating on the market. Neither is such a concern encouraged by the sheer specificity of non-market supply,[8]

[6] On the subject of the evolution of 'efficiency' see: (Kozuń – Cieślak, 2013a).

[7] For a discussion on allocative efficiency in the area of production, consumption and production structure, see (Kozuń – Cieślak, 2013b).

[8] The specificity of non-market supply has been characterized at length by C. Wolf who indicated four features distinguishing it from the supply of goods through the market mechanism. These features include: 1) difficulty in defining and measuring output, 2) monopolizing the supply sources (single-source production), 3) lack of substantial knowledge about production technology, 4) absence of "bottom line" for evaluating performance and of termination mechanisms. For more on the subject, see: (Wolf, 1993).

differentiating it from the provision of goods through the market mechanism. This gives rise to factors that make it very difficult to develop performance measures for public sector entities and methods for estimating their effectiveness. We can formulate six causes, in a broad sense, for the difficulties with assessing the efficiency of the public sector (Kozuń – Cieślak, 2011):

1) Specificity of accumulating public funds – in the public sector expenditure is financed by tax revenue, which means fiscal expansion with all its consequences, such as:

- *deadweight cost/loss*[9] – social costs having an adverse effect on economy,
- high costs of supporting fiscal administration,
- high costs of taxpayers' adjusting to new fiscal regulations,
- growing marginal cost of public spending (each zloty of public expenditure is associated with an increasing alternative cost).

2) Difficulties in determining a relationship between the level and structure of public spending and the actual benefits to the economy and society resulting from this spending, which can be caused by the fact that:

- the product (effect of the activity) of a given "supplier" of public services can be complex and manifold, which can cause difficulties in separating the costs incurred and identifying them with producing and delivering a specific good or with completing a specific stage of an "action program" planned for the long term;
- the cause and effect relationship between the working of a service and the final results it contributes to may be visible only after a sufficiently long period;
- there is a problem not only with defining measures for outputs of public goods and services but above all for the outcomes – e.g. in the case of expenditure on education and healthcare;
- the effectiveness of outlays incurred can be verified only in exceptional situations, when a specific event happens (e.g. expenditure on national defence, prevention of natural disasters).

3) Difficulties with estimating costs or benefits of the delivered public goods due to:

- not taking alternative cost into account – when estimating expenditure associated with a particular area (education, healthcare, defence etc.), authorities do not take into consideration the costs of lost opportunities to use the assets (such as buildings, land, forests etc.) in another way. For example, expenditure on education includes the costs of wages, of school furnishings etc. but excludes e.g. the cost of renting the buildings;
- not taking fixed costs of the public sector into account – underestimating the expenses concerning any given field is caused by the difficulties with matching the fixed costs of maintaining the public sector to the costs of particular operations (e.g. when considering expenditure on education in relation to the benefits resulting from this expenditure, the budget does not take into account any fixed costs of public administration, such as the costs of the working of the parliament, the president's office etc.);
- not taking into account both positive and negative externalities and feedbacks resulting from the mutual interrelations and connections between the services provided or programs carried out (for example, it would be extremely difficult to estimate the costs and benefits

[9] The extent to which the direct effect of raising or lowering a tax (or subsidy) is reduced by its indirect effect. For example, raising the tax imposed on wages will result in some of the employed quitting their jobs or reducing the amount of their work, which will reduce the revenue that was to be obtained by the increased taxation. On the other hand, introducing a tax relief or some other form of subsidizing e.g. for a purchase of life insurance, will have a deadweight loss as a result of the fact that those who would buy such insurance regardless of incentives will benefit from it. (*The Economist* www.economist.com; *Financial Times Lexicon* http://lexicon.ft.com).

of expenditure on education and environmental protection from the perspective of the effect they have on the society's health).

4) Difficulties with including quality differences in the analysis. In the private (market) sector, goods and services have their prices and thus the value showing the difference in quality of the goods on the market can be measured. In the public sector, the supplied goods usually have no prices, so quality differences of a given good supplied by different entities or during a certain analyzed period cannot be taken into consideration (accounting for differences in quality is supposed to reflect the idea that producing higher quality goods is regarded as equivalent to production growth).

5) Lack of a "model" level (i.e. one substantiated by a theory) of goods and services supplied by the public sector that could be considered 100% effective at a given level of public spending. Therefore, estimating efficiency in this sector requires that appropriate techniques be selected, taking into account the specificity of the work done by the entities assessed, the adequacy and availability of the data, and the objective of the estimation.

6) Lack of a standardized approach to estimating efficiency due to the fact that there are many potential "users" of information on economic effectiveness of the entities of public finance sector. Since different groups interested in this information – e.g. authorities at different levels, taxpayers, employers, employees, consumers – have different limits of accountability and diverse information needs, the efficiency estimation model has to be continually adjusted to the specific research requirements.

The discussion presented here clearly shows that estimating expenditure efficiency in the public finance sector is a very complicated issue, whether it is the allocative concept of efficiency or the technical one that is being analyzed. Also, not infrequently opinions are voiced that the role of public sector entities is beyond any notion of economic efficiency whatsoever, since such functions as supporting economic development, stimulating employment growth and ensuring adequate quality of life for the society are not prone to quantification analyses. The problem of evaluating the efficiency of public spending becomes even more complex when it concerns dynamic efficiency – determining what the society will need in the future and what its current preferences are in order to give up alternative forms of consumption and production so that future needs could be met remains beyond the scope of the existing capabilities of empirical methods.

CONCLUSION

Practice shows, however, that the presented difficulties and dilemmas have not abated the need to try to quantify the efficiency of public entities, as far as it is possible. On the contrary, in recent years, an improvement in public spending efficiency has become an imperative for numerous reforms in this sector worldwide. In consequence, many highly developed economies have been implementing reform programs of the public sector by cutting spending, making the expenditure more rational and the management methods more effective. All this is to finally lead to an improvement of the public finance which seems especially important in the face of excessive public debt that many highly developed economies are contending with. Therefore, the issue of improving efficiency in the public sector may be considered a key challenge for public administration in the coming decades, while developing and perfecting the methods for assessing this efficiency remains a challenge to scientists and researchers, as it is not possible to manage an entity or an organization, if there is no way of measuring and analyzing the processes resulting from the changes introduced to their activities, or of estimating the efficiency of their operations.

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ANNEX

Table A1 Public sector in the EU in numbers

Country	Government expenditure in 2012 as a percentage of GDP [a]	Percentage of public administration employees in the population [b]	Employment in general government and public corporations as a percentage of the labour force in 2008 [c]	Government effectiveness in 2012 - World Bank estimations [d]
Austria	51.7	1.1	11.4	1.56
Belgium	54.9	0.8	17.1	1.59
Bulgaria	35.7	1.9	nd	0.14
Cyprus	46.3	5.3	nd	1.38
Czech Republic	44.6	1.3	12.8	0.92
Denmark	59.4	2.2	28.7	1.97
Estonia	39.5	1.9	18.7	0.96
Finland	56.6	1.6	22.9	2.21
France	56.6	3.8	21.9	1.33
Germany	44.6	3.5	9.6	1.57
Greece	48.0	3.3	7.9	0.31
Hungary	48.6	3.0	19.5	0.62
Ireland	42.0	2.5	14.8	1.53
Italy	50.6	2.4	14.3	0.41
Latvia	36.5	2.4	nd	0.83
Lithuania	36.1	2.5	nd	0.83
Luxembourg	43.0	2.3	17.6	1.66
Malta	43.4	3.8	nd	1.24
Netherlands	50.4	3.4	12.0	1.80
Poland	42.3	2.6	9.7	0.66
Portugal	47.5	2.8	12.1	1.03
Romania	36.4	2.3	nd	-0.31
Slovakia	37.4	0.8	10.7	0.83
Slovenia	49.2	1.3	14.7	1.02
Spain	48.0	3.0	12.3	1.11
Sweden	52.1	1.8	26.2	1.94
United Kingdom	47.9	3.1	17.4	1.53
	Statistical characteristics			
Average value	46.27	2.47	15.82	1.14
Median	47.50	2.40	14.70	1.11
Correlation coefficient	0.9716	0.9598	0.9537	1

nd - no data available

[b] Public administration covers public employees (without differentiating what the basis for the employment is, whether the workers are appointed or work on a contract basis), i.e. staff employed by the central government institutions (ministries, agencies, inspectorates, civil

workers in law enforcement agencies, civil workers in the army, police, staff employed in diplomatic service) and constitutional institutions but excluding medical staff, teachers and academics. Note: The publication does not specify the year that the data refer to.

[c] Data refer to 2008 and were collected by the International Labour Organization (ILO). The data are based on the *System of National Accounts* (SNA) definitions and cover employment in general government and public corporations. The general government sector comprises all levels of government (e.g. central, state, regional and local) and includes core ministries, agencies, departments and non-profit institutions that are controlled and mainly financed by public authorities. Public corporations are legal units mainly owned or controlled by the government which produce goods and services for sale in the market. Examples of public corporations in some OECD countries include post offices, railways and mining operations. Public corporations also include quasi-corporations.
Data represent the number of employees except for Austria, the Czech Republic, Italy, the Netherlands and Poland where data represent full-time equivalents (FTEs). As a result, employment numbers for these countries are understated in comparison. The labour force comprises all persons who fulfil the requirements for inclusion among the employed or the unemployed.

[d] Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5 (higher values indicate better performance).

Source:
[a] EUROSTAT on-line data.
[b] *Public Employment in European Union Member States*, Published by the Ministry of the Presidency. Technical Secretariat-General, Madrid 2010, p. 7-8.
[c] *Government at a Glance 2011*, OECD iLibrary.
[d] *Worldwide Governance Indicators*, The World Bank on-line data.

CONTACT
Grażyna Kozuń-Cieślak, dr
University of Technology and Humanities in Radom,
Facuty of Economics, Department of Ecomomics
Wydział Ekonomiczny
26-600 Radom ul. Chrobrego 31
Polska
grazyna.cieslak@interia.pl