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METHODOLOGICAL ASPECTS OF EVALUATING THE COMPETITIVENESS OF LABOUR MARKET

Abstract

The issue of competition and competitiveness is a subject of many theoretical compilations and empirical research that has been conducted recently. The reason why one is interested in this issue is the fact that pressure for competition has been intensified due to the globalization of the economy and development of new technologies, especially information ones. As for the hitherto existing research, analyses of so-called result competitiveness, i.e., concerning competitive ability of enterprises and economies, are the dominant ones. Deliberations concerning factor competitiveness, i.e., the one which refers to resources determining the ability of subjects to compete effectively, can be found relatively less often. The lack of more thorough analyses of competitiveness also refers to labour market. Meanwhile, traditional analyses of labour market are insufficient, taking the character of changes and phenomena occurring within the economy nowadays into consideration. The concept of the competitiveness of labour market may fill this gap.

The present article is an attempt to “fill gaps” that have been mentioned. An attempt was made – on the basis of definitions and notions accepted in the literature – to define the notion of “competitiveness” in relation to labour market. On the basis of accepted definition, assumptions that are a basis for the formation of the set of indicators serving to evaluate the competitiveness of labour market, were made. These measures may be used to monitor factors which favour the development of particular states and also to forecast changes in behaviors of labor market subjects – enterprises and employees.

Key words: labour market, competitiveness, indicators of the competitiveness of labour market, evaluating the competitiveness of labour market

Introduction

Commenting on the increasing phenomenon of offshoring – consisting in the migration of labor, but not people who carry it out, from the developed states to states that have been developing – N.G. Mankiw stated that it is just the last form of manifesting the benefits (profits) which have been discussed by economists since Adam Smith’s times (Mankiw, 2004). According to Mankiw, global movement of labour among the economies is simply a consequence of the fact that nowadays a subject of global market exchange includes much more things than ever before and this fact is advantageous. This statement also concerns labour as a subject of market transactions. The explanation of the development of offshoring, out sourcing, growing scale of economic migrations of population as well as differences in the level of economic development of states can be found in well-known assumptions of comparative advantages concept related to labour market. Phenomena concerning labour market that may be observed nowadays, give rise to the necessity for seeking new way of analyzing and evaluating labour market mechanism, taking the aspect of competitiveness into consideration.

The internationalization of economic activity (which becomes more and more dynamic as far as the first decade of the 21st century is concerned) gives rise to greater and greater competitive pressure and makes one look for new sources of competitiveness in a more intensive way. “Natural” resources are more and more seldom a source of competitive advantage of states (or their structural parts). Sources of competitive advantage should be sought, to a greater and greater extent, in human capital. For, on the one hand, it is a material essential for creativity and innovativeness, which are essential in the economy based on knowledge; on the other hand, it is a significant determinant of the fact that the requirements of cost competitiveness are met. From the point of view of investors, attractive are labour markets of these states that offer advantageous conditions of access to valuable and inexpensive human capital. In this sense, one may say that – on the basis of observations occurring in the economy, the question of comparability and evaluation of the competitiveness of labour markets of particular states becomes more and more significant. Modern, dynamically changing economies need efficient and effective labour market, allowing for flexible adjusting to changing circumstances of acting as well as creating new opportunities of development.

In the literature of the subject, the notion of competition is identified more broadly than the notion of competitiveness. Research on competitiveness the number of which has increased in recent years as well as concepts and models which were created on such a ground raise, the most often, the notion of competitiveness on a microeconomic plane in which the national economy is the subject of reference. Research on competitiveness at a microeconomic level usually concerns enterprises, in accordance with a general belief that the competitiveness of the economy of a particular state is a consequence of the competitiveness of its subjects and subsystems. Research on and analyses of competitiveness that are conducted refer to the sphere of goods exchange on commodity markets and so concern so-called result competitiveness. Hitherto existing state of examination of notions connected with competitiveness enables one to state that:

- while spheres and factors determining result competitiveness of the economy and enterprises (and particularly the first one) have been sufficiently recognized,
- there is a gap in the research on factor competitiveness (i.e., competitiveness in the sphere of resources).

Evaluation of the competitiveness of labour market is made by its main subjects: enterprises and employees; state is also a subject interested in determining the competitiveness of labour market. Each of these subjects evaluates from the perspective of their individual aims, needs, and planned benefits, applying various criteria. The multitude and variety of factors that are taken into consideration, as well as often their qualitative character, bring about the fact that the examination of the competitiveness of labour market is very difficult.

Theoretical bases – basic notions concerning competitiveness

The identification of aspects of evaluating the competitiveness of labour market should be preceded by defining basic notions.

Competitiveness derives from competition; it is a notion that refers to participants in the competition process. In the literature and terminology of economic policy, there is no explicit definition. As far as fundamental perspective is concerned, competitiveness is understood as a kind of ability to compete, and thus to act and survive in competitive environment (Durand, and others, 1992; Bossak, 2000).

Such a presentation of the notion of competitiveness requires highlighting some of its particular aspects. First of all, competitiveness is a specific feature (state) of a competitive subject. The degree of competitiveness may be evaluated both quantitatively and

qualitatively. Another important attribute of competitiveness is its relativism. For the sake of the evaluation of competitiveness degree which characterizes a particular subject that takes part in the process of competition, any element of reference (competitive object) has to be found, and comparisons have to be made. For, competitiveness belongs to a category of relative qualities which are described as comparative qualities (Gorynia, 2002).

The term “competitiveness” refers to various kinds of economic units, sectors, national economy, products, resources, systems of management. In this sense, in order to identify and examine competitiveness thoroughly and in a right way – its essence, sources, and determinants – a standard of economic existence, which is a basis for the research and analyses, should be distinguished. Generally speaking, two subjects of competitiveness may be distinguished, i.e., an enterprise and the national economy. The competitiveness of both is mutually connected (Pierścionek, 2003). For, it is assumed that competitiveness at a macroeconomic level is a consequence of competitiveness of firms. At the same time, economic, politic, and social environment of a particular state creates conditions for the functioning and development (competitiveness) of enterprises. On the other hand, an object (area of competition) is both product market and final services as well as the market of production factors, i.e., labour, capital, and technology (Bossak, Bieńkowski, 2004).

Multifacetedness of the notion and elements of competitiveness makes one classify it on the basis of different criteria. Generally, on the basis of the criterion of results of actions taken by subjects of competition and their determinants, two main kinds of competitiveness are distinguished (Pierścionek, 2003):

1. Competitiveness of various economic systems.

In this case subjects of competition as well as borders among markets on which competitive contest takes place enable one to speak of the following levels at which competitiveness is analyzed (Stepień, Sulimowska, 2003):

- macro – international competitiveness of economies and international groups,
- meso – competitiveness of sectors of the economy and/or regions,
- competitiveness at a micro level – e.g., competitiveness of an employee on a labour market, competitiveness of enterprises within their domains of acting¹.

The aim of actions taken in order to improve the competitiveness of competing subjects is to maximize the efficiency and effectiveness of acting, to bring as good results as possible. For instance, the competitiveness of nation is described as the effective economy which creates workplaces and contributes to the improvement in the standard of living of citizens (Lehner and others, 2003). Qualities of competing subjects that influence their ability to achieve intended effects is called result competitiveness (*ex post*) (Moroz, 2003).

The approach proposed by OECD, according to which competitiveness should be understood as the ability of firms, sectors, regions, states, and international spheres to generate relatively high incomes of production factors and relatively high employment level in conditions of constant submission to international competition, may be a confirmation of such a definition of competitiveness. In this approach, socio-economic results of management process on a macro scale are highlighted. The measure of competitiveness understood in such a way is a share in a world trade and, as a consequence, its ability to achieve economic growth.

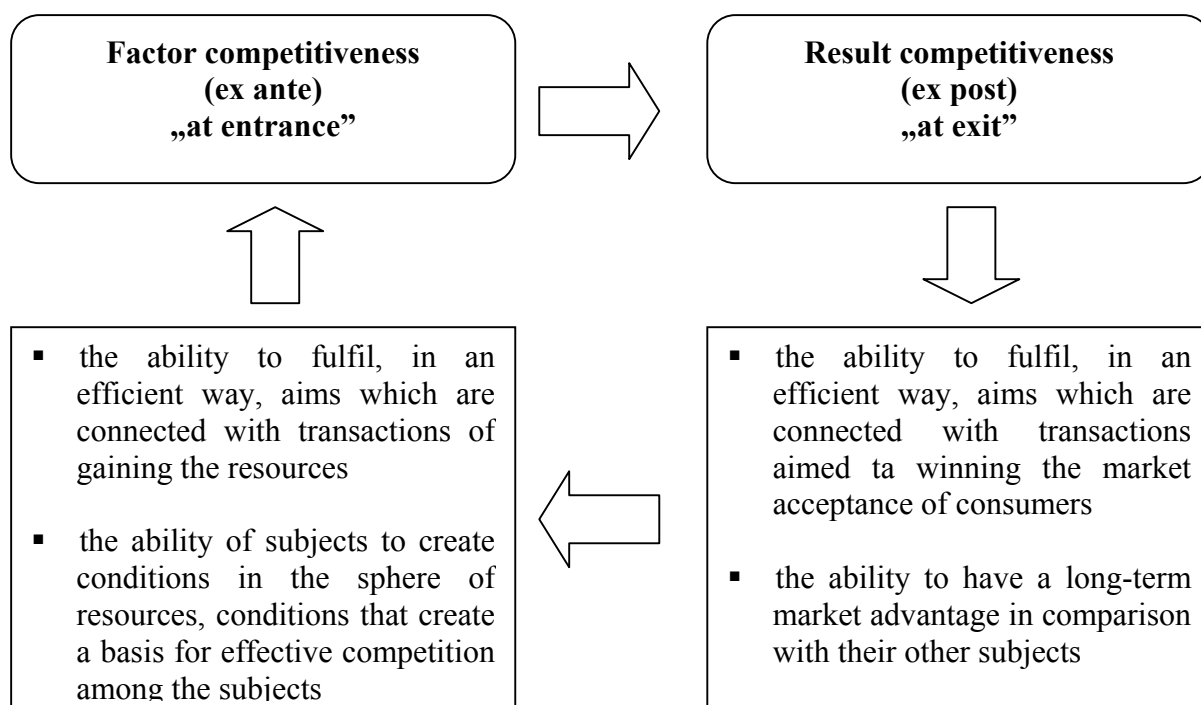
¹ Different definitions as well as groups of measures and factors influencing the competitiveness of competing subjects are generated for each of the above-mentioned main levels of competition. The discussion on these is not the aim of the present paper.

2. Competitiveness of factors and mechanisms that shape the competitiveness of economic systems.

Achieving high level of result competitiveness of enterprises, regions and the entire economies is determined by – generally speaking – competitiveness of resources and ability to use them. Factors dependent on and independent from subjects of competition which make up their ability to achieve market success are the case in question. Achieving and maintaining great result competitiveness requires a subject of competition to be very competitive in the sphere of resources, so-called factor competitiveness (*ex ante*) as well.

This aspect is particularly important with reference to competitiveness at a macro level. For, as some researchers emphasize, nations do not compete in such a way as enterprises do. Nations compete rather in the domain of creating attractive conditions which make investors – both domestic as well as foreign – invest in productive and competitive ventures, within their borders/territories. Competitiveness of nations understood in such a way is a result of economic policy of a state which creates incentives and programmes that support entrepreneurs. The aim of this policy is to help entrepreneurs achieve greater and greater productivity and competitiveness on domestic and foreign markets (Tolentino, 2000). Bossak views competitiveness in a similar way. He assume that the competitiveness of a state may be described as such a creation of institutional and macroeconomic conditions as well as conditions of competition and efficiency of market mechanism that create economic foundations for a dynamic development of enterprises in circumstances of changing environment (Bossak, 2000). Such understanding of competitiveness puts an emphasis on the creation of conditions for efficient management and competition on domestic and international arena; furthermore, it allows for referring to both results that are achieved nowadays as well as to potential chances of effective competing in the future.

Figure 1. Factor competitiveness vs. result competitiveness



Source: own compilation

Figure 1 shows relations that occur between competitiveness “at entrance” and competitiveness “at exit”; the first one is a set of strong and weak points of a particular product, the second one – determines the results of competing (the share in the sale of goods and services on competitive markets). As it turns out from figure 1, the process of shaping the competitiveness of a certain product or economic system takes place concurrently in the sphere of resources as well as on target markets (of goods and services). Great competitiveness achieved in the sphere of resources determines possibilities of preparing competitive market offer. There is also a relation which is cause and effect in nature, and occurs in another direction, namely, the level of result competitiveness that has been reached, influences further actions in the sphere of resources.

Definitions and concepts of competitiveness that have been presented above allow for indicating its fundamental aspects:

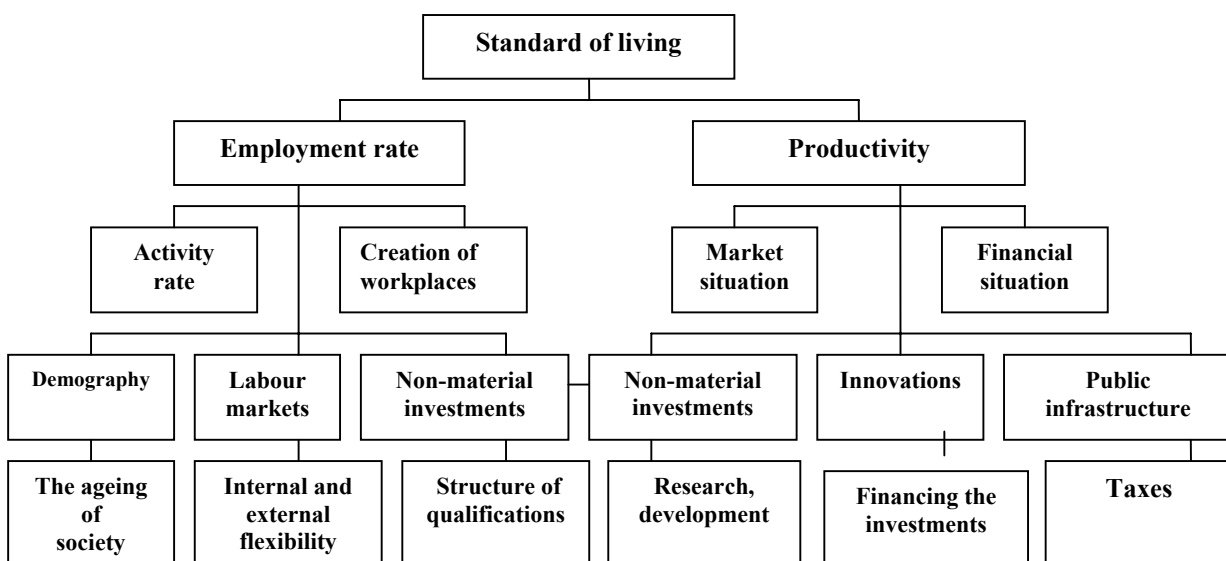
- competitiveness at a state level is a result of greater effectiveness of acting at the level of enterprises, and the ability of the economy to allocate resources as well as the ability as for very productive activity allowing for generating the high level of incomes (profits) (Chevallerau, 2005);
- competitiveness is connected with improving standard of living of society, improvement in employment opportunities, and the ability of nation to carry out its international responsibilities (European Commission, 1997).

In this way, competitiveness of the economy consists of the following: the ability of subjects functioning within this economy to effectively compete on markets which make up their domain of activity as well as general increase in the prosperity of society.

The aforementioned aspects enable one to state that competitiveness ought to be viewed on two planes (Chevallerau, 2005):

- international which is a result of greater possibilities of free flow of capital, products, and services; this implies a necessity for competing with goods and services produced by states that have different comparative advantage structures, but also the possibility of choosing more advantageous conditions of business location;
- local (domestic), for, the competitiveness of enterprises and the economy entails growing incomes from used resources, and growing real incomes of society.

Figure 2. Pyramid of competitiveness



Source: European Commission (1997)

Presenting competitiveness in terms of the effective economy, which creates workplaces and contributes to the improvement in the quality of life, is characteristic for European Commission of the European Union and has its reflection in so-called pyramid of competitiveness (see fig. 2). The pyramid consists of a set of factors determining competitiveness. Synthetic indicator determining the standard of living (GDP per citizen) constitutes its peak. Lower levels are a decomposition of this indicator to employment rate and level of productivity, and then to factors determining employment and productivity.

As it has been stated, the competitiveness of a particular state are all the factors which influence the ability of firms to compete on international markets and give people a chance to improve their standard of living; competitiveness understood in such a way provides a great opportunity for socio-economic policy of a state. The following question arises: what factors determine the competitiveness of the economy? Classical economists have made the competitiveness of the economy conditional on resources that it possesses: labor, land, capital. Ricard's theory of comparative advantages may be treated as an early attempt to explain in what way nations compete. However, later research on competitiveness allowed for indicating the importance of other factors as well. For instance:

- Schumpeter indicates a key role of resourcefulness (it was Drucker who implemented this theory on management ground),
- Solow – technological innovativeness and know-how in economics,
- Porter – so-called “diamond” of factors which include, among others, conditions of production factors and conditions that shape internal demand.

Recent research shows that – presented in an extensive way – specific features characterizing the economy, technology and policy of a particular state, and also its society along with tradition and culture, play a crucial role in shaping the competitiveness of firms and economies. Nowadays, the importance of knowledge comes to the fore. What determines the success of the economy to a considerable extent is, among others, a well-developed educational and training system which increases the value of human capital available within the economy.

Another current of deliberations on shaping the competitiveness is based on a belief that abilities and resources possessed by subjects are determinants of their competitive abilities. Non-material resources (knowledge, organizational culture, reputation, brands, relations with environment, intellectual property rights), and particularly the staff of a firm – human capital – are basic resources of dynamically developing enterprises (Białasiewicz, 2002) Such an approach toward the determinants of competitiveness focuses on labour market as such an economic mechanism the efficiency of which co-decides about the quantity, quality, and price of human capital within the economy.

The notion and planes of competitiveness of labour market

Referring to generally accepted essence of competitiveness (among others: European Commission 1997; Durand, and others, 1992; Bossak, 2000; OECD, 1996), it may be assumed that the competitiveness of labour market is determined by such an architecture (a set of features) of it which creates conditions for effective functioning of enterprises and development of particular industries, trades, and the entire economy. In other words, from the perspective of the economic role of labour in the economy, competitive labour market is such a market which, by means of the qualities of its supply and demand offer, contributes to the creation of new workplaces and/or the improvement in the standard of living, as well as to economic growth and development.

Elements making up the competitiveness of a labour market, understood in such a way, ought to be treated as factor competitiveness which is a basis for creating the

competitiveness of enterprises and economies.

The need for determining the essence of the competitiveness of labour market results from two fundamental reasons, namely:

- the role of labour market as a factor determining the competitive capacity of the economy of a particular country;
- increasing globalization and, what is connected with it, greater mobility of labour and capital.

In the circumstances of the modern open economy, there is a necessity for making analyses and comparisons from an international aspect in both cases.

The first of the two above-mentioned reasons enables one to present competitiveness of labour market from a broader perspective, which results from the relation between factor competitiveness and result competitiveness of the economy (a pyramid of competitiveness is an illustration of such a relation). For, labour market is this socio-economic sphere of a particular state that determines conditions on which enterprises get labour resources they need. The influence of labour market on the competitiveness of enterprises and the economy is multi-faceted, qualitative, and quantitative, and determined by the behavior of leading actors on the arena of competition – firms, employees, and state.

Generally, the notion of labour market includes all the institutions, attitudes, systems of values, and processes which are connected with getting and carrying out work as well as its valuation (Corina, 1972). From an economic perspective, the mechanism of labour market has to meet a few requirements:

- provide enterprises with appropriate supply of labour resources,
- create the ability to adjust employment size to the requirements connected with changing the determinants resulting from the realization of capital function,
- provide employers and employees with a chance to make free decisions.

The importance of labour market can also be found in its income function (carrying out work is a main source of society's income) and psycho-social function (for a human being work is a value itself; it allows for developing one's personality, and most of all enables one to establish social ties).

The fulfilment of chief functions of labour market creates conditions for monetary stability of a state, for efficient reallocation of labour resources and structural modifications of the economy, and most of all for a long-term economic growth and the improvement in the standard of living of population. In this sense, labour market mechanism functioning in an efficient way is a significant factor of the competitiveness of the economy. The realization of a demand for competitive economy is determined by, among others, certain features of labour market which – making up its character and specificity in a particular moment – may be described as its competitiveness. Such a presentation of the competitiveness of labour market implies the evaluation of its qualities as economic system, playing a fundamental role in the process of human capital reallocation, and influencing economic results of a state (factor competitiveness). Economic and social policy of a particular state, and particularly aims and tools of labour market policy, play a key role in the formation of competitiveness understood in such a way². Nowadays, when aspirations of certain states to achieve a relatively good position in a global distribution of profits connected with production and trade can be easily noticed, the function of a state as a labour market subject are modified. As it has been already stated, one expects a state to create conditions for efficient creation and reallocation of human

² Major and specific aims of labour market policy are determined by the model of economic and social policy of particular states. The identification of labour market as a significant determinant of the competitiveness of the economy has an influence on changing the priorities of this policy, e.g., aspiring to the rise in employment instead of fighting the unemployment.

capital in* the economy in such a way so that its international competitiveness would improve.

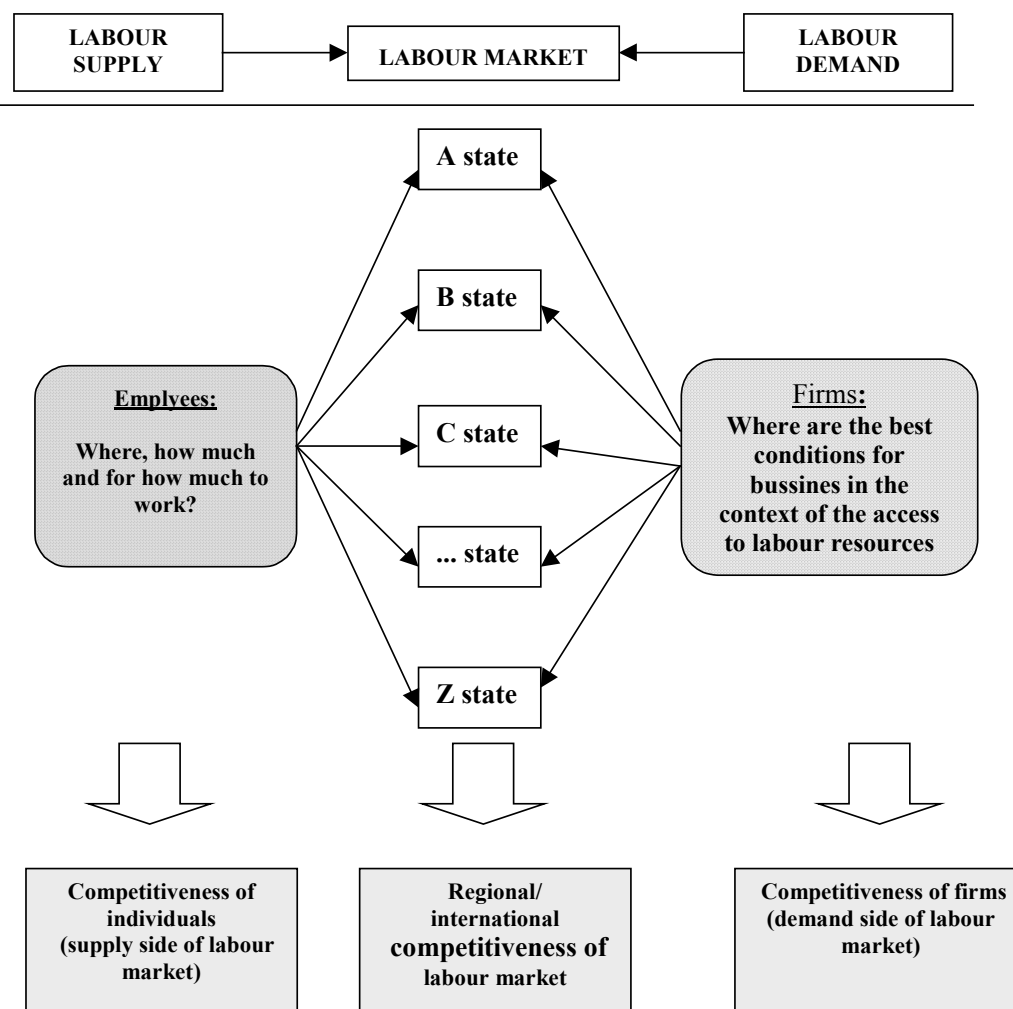
Another look at the competitiveness of labour market results from the behaviour of leading actors of labour market, namely:

- individual employees who can be characterized by certain patterns of professional attitudes and qualifications, preferences concerning various types of work that is carried out, and expected kinds of benefits from work, and the like;
- individual employers along with their models of labour demand and preferences concerning employment and human resources management.

The observation of market behaviour of employers and employees entails a necessity for viewing labour market not only as *economic existence*, but at the same time as *an area of market competition*³ as well which occurs:

- among firms competing for valuable labour resources;
- among employees competing for advantageous job offers.

Figure 3. Planes of the competitiveness of labour market



Source: own compilation

³ On a labour market, just as on any other market, the relations of exchange occur between those who buy labour (employers) and who sell it (employees), which is accompanied by negotiating processes. At the same time, parallel relations may be found. These can be characterized by the fact that competitive processes accompany it, obviously as long as there is more than one seller and more than one buyer on the market (Kryńska, 2001).

Nowadays, legal and technological factors, allowing for international allocation of production factors, change economic optimum of advantageous places of locating business and carrying out work. The liberalization of global trade, technological revolution, and processes of regional integration that have been progressing (among others, in the case of the European Union) create open and global economy. In such circumstances, resourceful subjects are given a hitherto unprecedented – on such a scale – chance of choosing the area for their economic activities (Garelli, 2002). The development of processes allowing for a free flow of labour and capital at an international level entails even the necessity for making economic decisions by market subjects on the basis of international comparisons, also with reference to labour market (see fig. 3). Generally speaking, entrepreneurs evaluate the “offer” of labour market of different states, taking these qualities into consideration that constitute more advantageous reasons for achieving great result competitiveness. On the other hand, employees evaluate labour markets paying special attention to perspectives concerning conditions of employment and pays. As a result, from the point of view of enterprises and employees, the competitiveness of labour market of a particular state can be treated as a set of features determining its peculiar “appeal”.

A number of phenomena occurring in the modern economy is a confirmation of the competitiveness of labour market understood in such a way. For instance, the analysis of directions in which migrations for money occur show competitive labour markets as seen by entrepreneurs. Similarly, such phenomena as outsourcing and offshoring have their origin in the competitiveness of labour markets.

A consequence of open, global economy is a need of states to compete for new investments and economic enterprises, and also contest for maintaining hitherto existing. This sets new functions and aims for the policy of a state also in the sphere of labour market which determines business environment. For, a state has to find such instruments and tools which – balancing between economic requirements and abilities, and social expectations resulting from history, traditions system of value – are going to turn out to be effective, i.e., are going to support the development of business in competitive, international environment.

Aspects concerning the measurement of the competitiveness of labour market

In the sphere of the research on the issue of competitiveness, the question of its measurement is significant; it is essential for the realization of demand for making comparisons between competing subjects with regard to competitive abilities that they have. In the literature, a number of competitiveness measures is mentioned; the construction and information value of these measures are very much diverse, depending on the aim and area of research. Working out standard (universal) measure of the competitiveness of enterprises or economies is made difficult by the complexity of phenomenon, and, connected with it, lack of unanimity as for its definition. Still, it has been stated that an ideal measure of competitiveness should meet the following criteria (Durand, Giorno, 1987):

- it should cover all the markets, sectors, and segments of the economy, exposed to the processes of competition, and represent all the competing subjects;
- it should be based on data which enable one to make comparisons on an international scale.

Evaluating the evaluation of international competitiveness of states is a special challenge. In practice, meeting these requirements is very difficult. Still, research conducted by some international economic organizations allowed for constructing aggregated measures of the competitiveness of states which may be a basis for a ranking of world's states according to the degree of competitiveness. The following may serve as examples: *The World Competitiveness Index* worked out by World Economic Forum, or an indicator which is a basis for a ranking of

states included in *World Competitiveness Yearbook* (The Institute for Management Development, Switzerland). In both cases, a starting point was an assumption that states compete on the plane of economic, legal, and social conditions which aim at encouraging the investors – foreign and domestic – to invest in productive and competitive ventures within their borders (Garelli, 2002). The multitude of aspects that have to be taken into consideration while measuring macro-competitiveness understood in such a way made both organizations adopt similar methodologies. Namely:

- partial indicators have been identified,
- indicators which have been subsequently grouped into fundamental factors, structural in nature, that enable one to evaluate to what extent a particular state provide entrepreneurs with favourable conditions of acting and achieving competitive advantage on sales markets⁴.

Ascribing certain weights to particular factors (or their groups), WEF and IMD experts work out aggregated evaluations (ranking) of the competitiveness of particular states.

Concepts of measuring the competitiveness and preparing ranking lists for several dozen states that have been presented above are based on procedures deriving from taxonomic methods (Michalski, 1996). Using these methods – due to using appropriate measures and indicators – enables one to compare subjects described by means of many features. Moreover, it makes evaluations objective to a great extent, and, at the same time, the process of comparing the objects. As far as the research on the international competitiveness of states is concerned, the economies of chosen states are objects whereas values characterizing the competitiveness of the economy of each state are diagnostic features. States under consideration are described with k value of the same features. These features take different values for different states, and the object under study (the economy of a state) is equated with R^n space vector. In taxonomic procedures, research are conducted not directly on objects or features, but on the realization of these features. As a consequence, the following data matrix is taken into consideration:

$$X=[x_{ij}] \quad (1)$$

where:

x_{ij} – the realization of j value in i object

Since examined features that determine the competitiveness of an object are called, one standardizes them in order to provide himself/herself with an opportunity to make use of measures that have been constructed on the basis of these features⁵. Such a standardization leaves the indicator of a level, and apart from that can be useful for applying statistical procedures of selecting the features that characterize particular objects (diagnostic features). As an effect of standardization, the following matrix comes into existence:

$$Z=[z_{ij}] \quad (2)$$

the z_{ij} line of which, just as the lines of (1) matrix, are identified with particular states.

As researchers working on competitiveness indicate, the essence of its measurement is not so much a direct indicating the position of examined object as indicating desired direction and intensity of changes that are needed (Lubiński, 1995) – in this case, the thing is about actions that aim at increasing the level of competitiveness. As far as the research on competitiveness is concerned, it is worth knowing which of examined objects are ahead of the other ones, i.e., it is worth knowing the classification list (ranking), which is a basis for

⁴ For instance, IMD has analysed competitiveness of 60 the most developed and developing states by means of, among others, 286 available statistics on the economy (presented as four major groups), and also the results of questionnaire survey (c.a. 4000 respondents). (see WCY, IMD, 2005).

⁵ Such a standardization of features is demanded so that all of them would be stimuli after the standardization. This means that destimuli that have been standardized in a classical way should be multiplied by (-1).

positioning examined objects of competitiveness. The identification of a distance among examined subjects is a signal (for objects that have been classified lower) to undertake actions aimed at decreasing it. Furthermore, ranking shows “model” objects that are a point of reference for actions aimed at the improvement in competitiveness. A measure allowing for the classification of objects of competitiveness under consideration is a synthetic indicator of the measurement of competitiveness which may have the following form:

$$C_i = \sum_j^k z_{ij} \quad (3)$$

where:

- C_i – a synthetic indicator of competitiveness for i object (e.g., a state)
- z_{ij} – standardized values of diagnostic features corresponding to i object
- k – the number of diagnosed features

The higher the value of synthetic indicator of competitiveness, the more developed (competitive), with regard to features under consideration, the object of competition is.

As it turns out from the above, the question of measuring the competitiveness of economies and enterprises has been investigated relatively well so far; yet, in the sphere of factor competitiveness – and with reference to labour market – there is a considerable gap. Despite the fact that the role of labour market as a determinant of the competitiveness of enterprises and the economy is usually considered as crucial, it is very rarely – in such a presentation – a fundamental subject of analysis (Kwiatkowski and others, 2004).

The lack of uniform standard of the evaluation of the competitiveness of labour market may result from the specificity of this phenomenon. For, while in the case of result competitiveness researchers focus on looking for the best ways of measuring *the results* of management, in the case of factor competitiveness only *these factors on which achieving results that are desired by firms and economies of particular states depends* can be measured.

Labour market of a particular state is characterized by great competitiveness (in a long-term) if enterprises are able to raise labour resources that are needed and – when employees are able to realize their own expectations about work. This implies such its architecture which allows for employing different individual strategies of acting of leading actors on labour market, including a state which controls and regulates the relations of exchange occurring between employees and employers. Evaluating (measuring) the competitiveness of labour market understood in such a way is a process that is conceptually and methodologically complex, and most of all that provides traditional analyses of labour market with new dimensions.

In economics, secondary nature of labour market phenomena (mainly demand for labour) is traditionally emphasized compared with processes that take place on goods and services market. The plane of labour market functioning which is in the focus of attention of economists is the one that is connected with quantitative and qualitative adjusting – within market mechanism – basic categories of labour market, i.e., labour force supply and demand for labour force. Another plane on which labour market is viewed, as well socio-economic policy which is carried out within labour market, is a consideration of basic categories of supply and demand from the perspective of actual use of labour resources and adapting the workplaces. Compared to this, phenomena connected with unemployment on labour market are a separate area of research. However, pressure for competition, that is growing nowadays, which is a result of production and trade globalization as well as the mobility of labour and capital that accompanies it entails a necessity for broadening traditional research by the issue of international comparisons that are made on a plane of competition theory. For, what is left for settling is to what extent enterprises behaviour on labour market is *a result* of its adjusting to the conditions on goods and services markets, and to what extent it is *an anticipatory*

action which is an effect of basing its strategies of competition on possessed resources, including labour resources (human capital resources). New theories of growth⁶ and the development of resource-based view⁷ enable one to state that behaviour of firms on labour market can be more and more often included in the category of primary products in relation to markets (and not secondary ones), i.e., the ones that determine (initiate) competitive ability on target markets. As a consequence, labour market analyses should concern not only the question of adjusting the demand for labour or its supply, the formation of pays, unemployment – as a consequence of a particular structure and size of demand for goods and services, but should also take place on a plane of competitiveness in the sphere of resources, and its influence on the results of management on goods and services markets (product markets).

The fact that the evaluation of the competitiveness of labour market (and international comparisons which accompany it) should be made on a plane of identifying such properties of it which contribute to achieving as good results of management as possible at the level of enterprises and economies to the greatest extent, indicates that the use of (3) formula is well-grounded. As it appears from this formula, synthetic evaluation of the competitiveness of labour market should be made on a basis of a particular set of determinants of competitiveness. The selection and evaluation of diagnostic features require adopting certain point of view, comparative basis for this competitiveness, as well as time horizon of evaluation (Pierścioneek, 2003). The competitiveness of labour market is evaluated mainly by:

- entrepreneurs who decide on the location of investment, methods of production that are used (questions of substituting labour and capital),
- employers who decide on whether to work, where to work and for how much, and also on possible individual investments in human capital,
- state which regulates relations between employers and employees.

Comparative basis for the analysis are local or domestic markets (the choice of comparative basis depends on the aim of the research).

Taking the above as well as requirements of taxonomic methods into consideration, the following synthetic index of the competitiveness of labour market may be created:

$$CLM_A = CLM_f + CLM_w + CLM_s = \sum_{j=1}^k w_{kj}(z_{Aj}) z_{Aj} \quad (4)$$

where:

CLM_A – the indicator of the competitiveness of labour market of A state⁸

z_{Aj} – the value of j standardized diagnostic feature (factor) in A state

$w_{kj}(z_{Aj})$ - a relative importance (weight) of j factor z from the point of view of labour market subject

k – the number of diagnosed features

CLM_f, CLM_w, CLM_s – subindexes of the competitiveness of labour market based on a

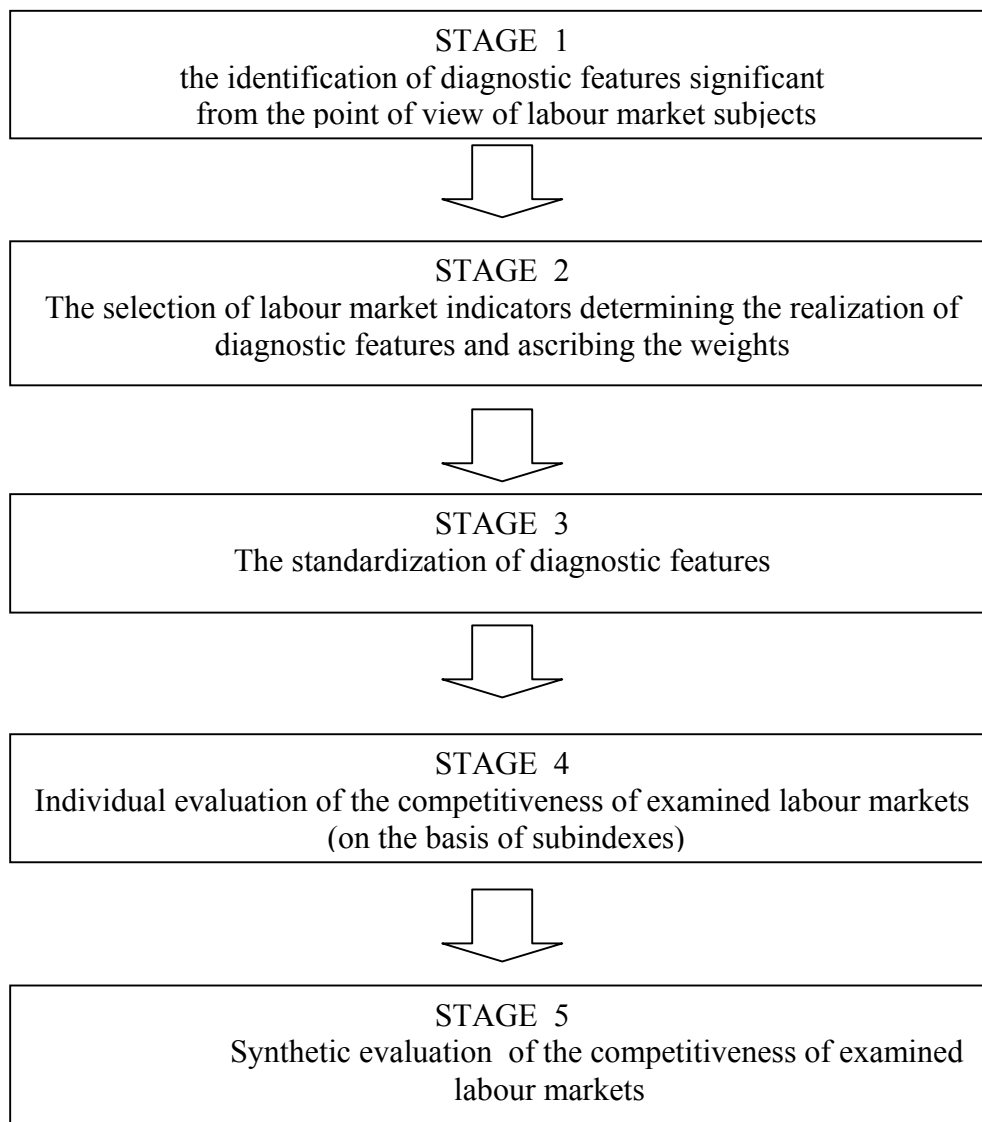
⁶ The concept of a new theory of growth is associated with such economists as Romer and Lucas Jr. These economists, elaborating the idea of innovativeness of Schumpeter and his students such as Galbraith, Solow, Goodwin, and Hirschman, proposed a change in a neoclassical growth model treating technology – and knowledge on which it is based – as an important element of economic system (Garelli, 2002).

⁷ The notion of “resource-based view” has been introduced by B. Wernerfelt (see A Resource-Based View the Firm, “Strategic Managerial Journal” 1984, Vol. 5 pp. 171-180). The essence of this concept is a thesis that market success of a firm is determined by descriptions of resources themselves, i.e., by their kind, size, and nature on the one hand, and on the other hand by the imperfection of the market of factors on which these resources are raised. Detailed discussion on a resource-based view is not the aim of the present paper.

⁸ While using the formulas allowing for making data that are used comparable, the value of indicator is from 0 to 100. The higher the value of analysed indicator, the more competitive labour market, with regard to analysed features.

set of features significant from the point of view of firms, employees and state

Fig. 4. The process of measuring the competitiveness of labour market



Source: own compilation

As it turns out from fig 4, using the synthetic indicator to measure the competitiveness of labour market is a procedure which consists of the following stages:

1. Identifying the subsets of elements shaping the competitiveness of labour market, i.e., factors influencing result competitiveness. Selecting them, one should consider the point of view of:

- enterprise,
- household (employee),
- state.

2. The choice of indicators (parameters) determining the degree to which selected features are realized, i.e., the choice of partial indicators allowing for evaluating the competitiveness of labour market from the point of view of its subjects. Ascribing the weights for every subset of competitiveness indicators that determine their relative importance for firms, employees and state.

3. The standardization of diagnosed features.
4. Partial (individual) evaluation of the competitiveness of labour market. Subindexes considering these features of labour market that are important in an individual evaluation of enterprises, households, and state are a basis for the evaluation.
5. Synthetic evaluation (an index of the competitiveness of labour market) on the basis of partial formulas (the measurement of the competitiveness of labour market on the basis of CLM indicator).

Conclusion

Competitiveness, as a multi-faceted phenomenon, cannot be defined explicitly. That is why many economists give up when it comes to providing explicit definition, and present the ways in which it can be measured instead (Michalski, 1996). As a consequence, a considerable piece of research on competitiveness focuses on two fundamental questions:

- What feature characterizing the competitive subject should be considered in the research on competitiveness?
- How to create measures allowing for evaluating the competitiveness and making classification lists for examined subjects?

Finding out the level of the competitiveness of labour markets of particular states is a difficult task. It requires a multi-faceted analysis of facts, phenomena, and processes occurring on labour market, that have social, legal, technological, and economic grounds. The taxonomic concept of measuring the competitiveness of labour markets, that have been presented above, in accordance with (4) formula, considering specific diagnostic features allows for making comparative analysis of labour markets of particular states. Major difficulty connected with using this synthetic indicator of the competitiveness of labour market is connected with indicating appropriate factors of the competitiveness of labour market (diagnostic features), due to diverse motives and strategies of behaviour of leading actors on labour market, and their individual evaluation of labour market parameters.

A solution which allows for identifying the set of features (and their levels) determining resource competitiveness is a direct questionnaire survey conducted among employers and employees. However, certain barriers connected with permanent access to primary source data (providing credibility and comparability of results give rise to a necessity for carrying out the research on a great number of subjects, in as many states as possible) make one look for an alternative solutions. The following may be considered as such: using the statistical indicators of labour market that have been worked out and used by economists and experts from such organizations and institutions as: OECD (Organisation for Economic Co-operation and Development), ILO (International Labour Office), IMF (International Monetary Found), Eurostat (Statistical Office of the European Union) and other.

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