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WORK HUMANISM

The Peculiarities of Knowledge Workers Migration in Europe and the World

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The problem of knowledge workers migration is extremely important in the knowledge economy conditions. Scientific researches point out the probability to assess the consequences of knowledge workers migration to the source country's economy. However there are many misunderstandings in knowledge workers definitions. Considering this the conception of knowledge workers is crystallised in this article. The basic theoretical findings are made on knowledge workers migration as well. There are analysed migration theories which should be used explaining the reasons and consequences of high skilled migration. Positive and negative effects of knowledge workers migration for "source" and "purpose" countries are highlighted in the article as well. The practical findings are based on analysis of knowledge workers migration's tendencies in Europe and the World. As the outcome of theoretical analysis the determinants affecting knowledge worker's decision to migrate are systemised. The methods how to avoid or control the knowledge workers migration are suggested in the article.

Keywords: *knowledge workers, knowledge worker's migration, migration theories, "brain drain", "brain gain", knowledge worker's migration determinants.*

Introduction

The belief that advanced western economies are becoming knowledge economies has become conventional wisdom in the economic and management studies. It has been claimed that expertise and specialized knowledge are increasingly important to corporate performance and are replacing capital as the basis of social status and power (Bell, 1973). New occupations like financial and management consultants, information technology analysts, project engineers and computer technologists have emerged in response to demands of modern corporations. Incumbents of these new occupations have been referred to as knowledge workers. They are expanding occupational groups and are increasingly being considered as key expert groups in advanced western economies (Drucker, 1989; Baldwin, 2001; Beckstead, 2003; Lavoie, 1998; Lee, 1996; Mahroum, 1999; Massey, 1998; Tam, etc., 2005; Kriščiūnas, 2006).

Many of theoretical findings concerning knowledge workers are made in the organizational management level. (Tam, etc., 2005; Alvesson, 2000; Kanter, 1998; Zuboff, 1988; Causer and Jones, 1996; Raelin, 1985, etc.). But theoretical and practical findings about the knowledge workers importance for overall economy development as well as fundamental researches are still missing. Emerging challenge of XXI century when emigration of highly skilled workers stipulates plenty of problems for countries economies encourage scientifically analyse this phenomenon.

The accumulation of human capital is especially relevant to developing countries that need to catch up. In this light the topic of knowledge workers migration gains new importance and becomes a sensitive issue with developmental implications. This phenomenon is analysed by scientists (Ferro, 2006; Docquier, Marfouk, 2006; Castles, Miller, 2003; Massey, 1998; Sassen, 1994; Lowell, Findlay, 2001; Straubhaar, 1998; 2000; Wolff, 2006) as well as OECD and European Commission. There is emphasised the complication of measurement of this worker's type migration. Nevertheless scientists' agree that international mobility of highly skilled workers represents an increasingly large and complex component of global migration streams. The phenomenon of highly skilled migration can assume the features of brain drain – the massive flow of intellectual human capital directed to the most developed countries – facilitated by selective immigration policies (Lowell, Findlay, 2001) and by knowledge-based metropolitan economies in search of qualified resources (Sassen, 1994).

Considering above mentioned aspects the **research problem** being solved in this article should be constructed: how to systemize and construct the overall definition of knowledge workers in order to highlight the specificity of knowledge workers migration in Europe and World?

The **object of research** is knowledge worker's migration.

The **aim** of the article is to highlight the peculiarities of knowledge workers migration in Europe and the Word. To achieve this aim four tasks are to be solved:

1. To crystallise the conception of knowledge workers.
2. To present the theoretical interpretations of knowledge workers migration.
3. To analyse the tendencies of knowledge workers migration in Europe and World.
4. To emphasize determinants affecting knowledge worker's decision to migrate.

As the **research method** it was taken theoretical analysis of the scientific works in this field. Analysis of statistical data concerning knowledge workers migration was applied as well.

Scientific originality and **practical significance** of the article is:

- proposed conception of knowledge worker as well as presented possible classification of different occupations;
- proposed the economic theories which explain the reasons of knowledge workers migration;
- highlighted positive and negative effects of knowledge workers migration as well as extracted determinants affecting knowledge workers decision to migrate.

Crystallisation of Knowledge Worker Conception

The main drivers of evolution of economy as well as society are changing (Kriščiūnas, Daugėliene, 2006). One of the consequences of transformations is the change of individual thinking, scope of work and the total needs of local and global market. Here the new conception arises in many scientific as well as in practical works (Drucker, 1989; Baldwin, 2001; Beckstead, 2003; Lavoie, 1998; Lee, 1996; Mahroum, 1999; Massey, 1998; Tam, etc., 2005; Kriščiūnas, 2006; Daugėlienė, 2005; Zhao et al., 2000; Baldwin, 2001, etc.) – this is *knowledge workers.*

For the first time term "knowledge worker" was mentioned by Peter Drucker in his work "Landmarks of Tomorrow" (1959). There was stressed analysis to the individual who consider the accumulation and dissemination of information as one of the assumptions for the identification of problem as well as for decision making. In the later works of Drucker (1989; 2001), Lee et al., (1998), Zhao et al. (2000), Baldwin, Gellatly (2001) there was highlighted that the rise of the "class" succeeding the industrial blue-collar worker is not an opportunity but challenge to him. The share of knowledge workers in total amount of workforce is rising all the time.

The shift from "blue collar" workers to knowledge workers in the United States started in 1990. Different situation, according to Drucker (2001), was in industrialized Europe – the United Kingdom, Germany, France, Belgium, northern Italy, where the belief is still deeply ingrained in industrial, blue-collar work, rather than in knowledge. The scientist raises the question: will Europe be able to react the way America did two decades ago? Considering the latest figures about the economic growth of the leading countries of Europe – Denmark, Finland, and Sweden – perspectives should be evaluated as positive for Europe development and challenging for the United States whose economic growth seems to be in "positive-stagnation" position in comparison with European progress (Daugėlienė, 2006).

The conception of knowledge workers presented in the latest works of Drucker, Lee et. al., Miller differ from that presented in the modern scientific literature. Drucker (1989) highlighted some basic characteristics of knowledge workers:

- the most of work is performed by arms. But the salary depends on the level of qualification acquired during informal learning;
- the most part of their work day these workers have to perform not experienced work (e.g. nurse obliged to check the patient's bed, answer the phone callings, perform other administrative work during the biggest part of their work day); However these workers feel themselves as "professionals" not "physical workers";
- they consider themselves as "associates" not subordinates. Being beyond the apprentice stage, knowledge workers must know more about their job than their boss does – or else they are no good at all. In fact, that they know more about their job than anybody else in the organization is part of the definition of knowledge workers;
- they identify the work as the way of living, the possibility for self realisation as well as knowledge acquisition and dissemination.

The Miller's W.C work *"Fostering intellectual capital"* (1998) represent the knowledge workers as individuals who use intellect in order to transform ideas into product or service, that is, in order to commercialise knowledge. This process is very important in knowledge economy because it stimulates the emergence of intellectual products as well as services (Kriščiūnas, Daugėlienė, 2005).

Considering the conditions of modern transformed economy there is a necessity to overview and correct the conception of knowledge workers. There should be pointed out that *knowledge workers* are individuals who accumulate, create and disseminate knowledge during the performance of job. They "produce" innovative ideas and use modern technologies in their activity. They cooperate and do not avoid challenges as well as positive risk. Knowledge workers are considered as top company asset (Rogoski, 1999). They are the group that gives the emerging knowledge society, its character, its leadership, its social profile. Knowledge workers may not be the ruling class of the knowledge society, but they already are its leading class (Drucker, 2001). And the most important thing for each individual of XXI century is to understand– that knowledge worker should change the way of thinking and manage himself. They have to think and behave as the chief executive officer.

The analysis of scientific works helped to state that identification of the main features of knowledge workers is complicated. There are many methods presented in scientific literature (Figure 1).

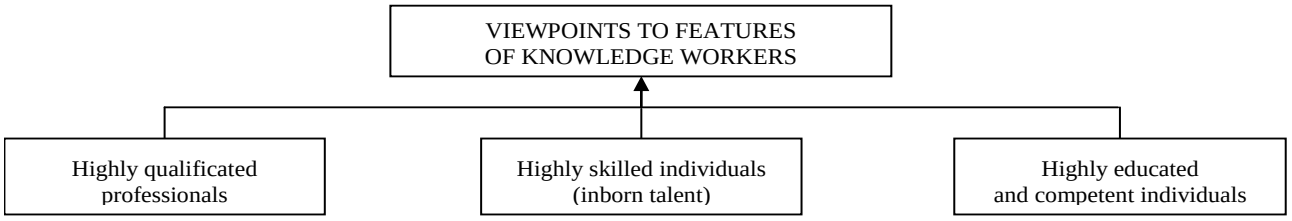

Figure 1. Viewpoints to Features of Knowledge Workers

Bender (1998), Halal (1998), McGinn and Raymond (1997-98) define knowledge workers considering the characteristics which are common for this category of workers (e. g. lawers, doctors, programmers, teachers or scientists). These are *highly qualificated professionals*. Other scientists (Miller 1998; Shea 1998; Verespej 1999; Gordon 1997) consider knowledge workers to be *highly skilled individuals (inborn talent)*. These declare that knowledge workers are individuals who can analyse and systemise information which will be used for decision making. The third method for explanation of knowledge worker phenomena is to stress the *education and competence of individuals* (Munk 1998; Allee 1997).

Beckstead, Vinodrai (2003) present three basic categories of knowledge occupations:

- professional occupations – characterized by high relative wages and a high proportion of persons who have completed university-level education;
- management occupations – characterized by high relative wages but with a lower proportion of persons who have completed university-level education;
- technical occupations – characterized by lower relative wage rates and a high proportion of persons with post-secondary higher education.

Taking into account Standart Occupation Classification, Beckstead and Vinodrai (2003) highlighted the classification of knowledge workers professions. The scientists enumerate such groups of workers as *leaders and managers*; *representatives of business, science and engineering, technical science, health care, education, law and social sciences* as well as *representatives of art and culture*.

Beckstead and Vinodrai (2003) were not the only scientists who presented the classification of knowledge workers. Classification of occupations into knowledge, data, service and goods workers (as it is seen, the classification is more detailed) was presented by Wolff (2006). The author enumerates 267 occupations (Fig. 2).

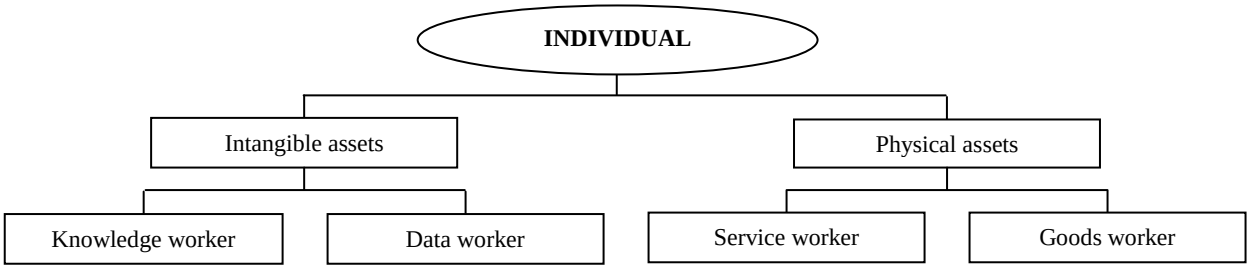

Figure 2. Classification of occupations

Wolff's (2006) classification of occupations into knowledge, data, service and goods workers demonstrates the variety of occupation types and highlights the difference between those individuals using intangible assets for decision making and creation of intellectual product (knowledge and data workers); and those who apply physical assets in order to produce tangible materials (service and goods workers).

Theoretical analysis of different conceptions of a knowledge worker allow to construct the whole definition and consider that *knowledge worker* is a highly skilled individual who is able to convert knowledge, intellect, wisdom and ideas into tangible innovative product or service. On the other hand, knowledge worker can create intangible products, to teach other people by transferring own competence and skills. Knowledge worker is not only the one who thinks how to work. Knowledge worker can use others' intellect for the creation of innovative, value added products.

Usually two categories of workers – knowledge and qualified – are interpreted as the same. This research maintains that the difference between knowledge and qualified worker is obvious and should be highlighted. As it was mentioned above, knowledge workers apply, create and transfer knowledge and ideas in order to create innovated product. Contrarily, qualified workers are more specialists (craftsmen) than creators.

The problem of knowledge workers migration is needed to be solved in knowledge-based economies. It is economically sensitive for the "source" country. Skilled migration and brain drain assuredly affecting the landscape of many nations: their positive and negative consequences in both origin and destination countries enter social and political policy agendas and debate in academic discussions. This phenomenon – even if numerically limited – represents an important intersection of contemporary, international migration flows, labour markets and economies.

Theoretical Interpretations of Knowledge Workers Migration

Problem of international mobility usually covers two aspects: migration of qualified and non-qualified workforce and migration of knowledge workers. It should be stressed that most studies concerning migration problem are oriented to the total migration trends not differentiating skilled and not skilled workers.

The consequences of knowledge workers migration are more obvious and economically as well as socially sensitive for the sending (source) country. In many countries, foreign-born persons represent a significant percentage of persons with tertiary education (OECD, 2006). This fact substantiates the importance of consequences of knowledge workers migration.

Usually the knowledge workers migration phenomenon is directly concerned with *"brain drain", "brain exchange", "brain waste"* and *"brain circulation"*. Negative phenomenon could be interpreted as "brain drain" and "brain waste". However "brain exchange" and

"brain circulation" is very welcome in different countries especially is those with law human capital potential. Here should be noted that short period "brain exchange" ad "brain circulation" can arise positive long-term dynamic economic as well as social effect in the sending country.

Nevertheless Massey (1993), Ferro (2006), Docquier, Marfouk (2006), Castles, Miller (2003), Wolff (2006), Lien, Wang (2005), Moguerou (2006), Panescu (2005) emphasize the complication of measurement of knowledge workers migration consequences.

The consequences of labour migration usually are assessed analysing migration theories. Akkoyunlu and Vickerman (2001) present several of them: neo-classical models; human capital models; household migration models; asymmetric information; networks; regional amenities, life cycle and household production. Therefore adapted theories should be used explaining the tendencies of knowledge workers migration. There are five basic theories which explain the reasons of knowledge workers migration:

- *neo-classical economic theory* – migration is caused by the supply and demand of labour ("push" and "pull" forces (Castles, Miller, 2003) and the resulting wage differentiation based on a country's economic conditions. In the micro level this theory measures that the decision considering migration or not migration depends on each individual solution. Individual actors migrate after making cost – benefit analysis. Migration is a form of investment in human capital;
- *dual labour market theory* – two labour markets exist in the country: the first one – market for high educated well paid local individuals (knowledge workers); the second one – low wage rate and insecure jobs market which seems not attractive for local habitants. Usually these working places are occupied by immigrants (Massey et al., 1998);
- *migration network theory* – the flows of migration are self generating phenomenon: migrants accumulate and disseminate information about the situation in labour market, the possibilities of employment, wages rates and so on. The growth of migration stimulates the decline of migration costs;
- *migration systems theory* – migration is a result of interrelations of micro and macro structures between two territories. Macro structures are considered as institutional factors, and micro structures as the believes and experiences of migrants (Castles, Miller, 2003);
- *world systems theory* – migration is coursed by the movement of workforce from periphery to the central regions. Periphery is considered as the region not developing market economy. Central regions are capitalistic, post-industrial countries.

The above theories obviously approach migration with different causal mechanisms and at different levels of aggregation, but they are not necessarily contradictory (Massey et al., 1998). In order to assess the *reasons and consequences of knowledge workers migration several theories should be combined*. Summarising the application features of presented theories the conclusion was made that the aspects of knowledge workers migration could be highlighted using duel labour market, migration network and migration systems theories.

Considering the research work of Straubhaar and Wolburg (1999) the scope of knowledge workers migration depends on three basic factors:

- *microeconomic factors* – individual's age; sex; family; education; qualification; incomes and physical property;
- *macroeconomic factors* – labour market situation; the possibilities to enhance the human capital potential; legal barriers for mobility;
- *non economic factors* – culture; language; religion; political situation.

Most scientists interpret these factors as "pushing factors" (manifest in the emigration country) and "pulling factors" (manifest in the immigration country). In order to ensure the positive migration effect both factors should exist. Here the main "pushing factors" could be: the decline of a number of able-bodied populations; high level of unemployment; the certain qualifications become not demanded; not adequate evaluation of intangible assets; law income level; diversity of wage level; slow progress of economic and social situation. The "pulling factors": highest income level; better and more attractive social environment and infrastructure; the ambition work with a highest qualification specialists; desire to use the modern ICT; the intention to be more visible (this is very important for scientists); desire to travel and work in different societies; the ambition to disseminate own knowledge and to acquire new one.

Experts affirm that knowledge workers migration causes positive and negative consequences both for "source" and "purpose" countries (see Table 1).

Lien and Wang (2005) analyse the problem of migration from the point of view of knowledge workers migration. The authors highlight the negative effect for the source country which rises after the skilled emigration. Lien (1988) suggested that brain drain problem is worsened when developing countries emulate the discipline reward systems prevailing in developed countries. Brain drain may raise the education and income levels of the source country. Stark and Wang (2002) found that skilled migration can bring the source country to a higher average level of human capital per worker. Studies emphasize that the effect of migration in the source country directly depends on probability of emigration. If there are many possibilities to leave the native country, it is expected that people will use this chance. Stark and Wang (2002) concluded that a strictly positive probability of migration is to a richer country. And this may enhance welfare and nudge the economy toward the social optimum. On the other hand, brain gains (or brain circulation) seem to be more plausible for developed countries whereas brain drains prevail in developing countries.

Summarising the aspects mentioned above there the conclusion could be made that intensity of knowledge workers migration depends on probability to migrate; if the result of migration is positive, we speak about brain gain; otherwise – when country feels the loss of human

potential, it is affected by brain drain. The source countries usually are interpreted as brain drain countries or source countries and the effect of knowledge workers migration from these countries is obviously negative. The benefit from migration depends on human capital transferability across country (Lien, Wang, 2005). Brain drain may occur when the exogenously or endogenously determined probability to immigrate is large.

Table 1

Positive and negative effects of knowledge workers migration for "source" and "purpose" countries

		Effect for "source" country	Effect for "purpose" country
Long-term migration	*Dis-advantages*	Loss of investments in education of individuals Loss of high competence specialists The negative changes considering demographic situation Decline of producing amounts.	Declines the ambitions of local habitants to seek for the highest qualification Possibility to lose the know-how potential.
	Advantages	Return of migrants with new competence, new relations with foreign partners Decline of unemployment level The growth of average wages.	Knowledge workers invest in competence as well as in adaptation to new life circumstances Growth of GDP Growth of investment in R&D Total growth of economy.
Short-term migration	*Dis-advantages*	Decline of financing of social security Rapid growth of wages in those sectors where the shortage of workforce because of migration is obvious.	Loss of resources The consumption of immigrants is minimal as they expect to return to the "source" country.
	Advantages	Decline of unemployment level Return of knowledge workers with new competence.	Growth of GNP Payment of taxes Occupations which are not popular between local inhabitants are occupied by immigrants.

Analysis of Knowledge Workers Migration Tendencies in Europe and the World

Modern economies rely on human expertise and compete in attracting the best competencies. However, migration of the highly skilled remains limited as most international migrants are medium and low-skilled persons (OECD, 2005). In resent years there has been a growing move towards international recruitment and mobility of the highly skilled. While there seems to be a rather balanced pattern of international mobility among different countries, there is concern that "brain drain" occurs in some developing countries (Straubhaar, 2000). Furthermore, lack of data on the permanent and temporary flows of migrants according to skill levels in many OECD countries make international comparisons difficult (OECD, 2005; 2007).

According to OECD data migration of knowledge workers streams are primarily directed towards four destinations. The United States is first, with over 7.8 mln. highly skilled expatriates. The EU with 4.7 mln., follows Canada and Australia, with 2 and 1.4 mln. highly skilled foreign residents, respectively. Over half of these migrants come from outside the OECD area. In addition to the 6.7 million highly educated persons involved in intra OECD skill flows, the region has attracted 10.1 million from non-OECD countries. Non – OECD migrants make a greater contribution to the highly skilled than medium- or low-skilled migrants.

US, Japanese and Korean emigrants represent a very small share of the total population. European natives are more likely to go abroad, especially if they are highly educated. Two-thirds of OECD-area highly skilled expatriates are Europeans. *Emigration is particularly frequent from the United Kingdom and Austria, and also from Eastern Europe.* Whereas knowledge workers migration to and from Japan or Korea is limited, the share of immigrants to the United States exceeds by far that of US expatriates. The vast majority of OECD countries are also net beneficiaries of highly skilled migration when immigration from non-OECD countries is taken into account. However, a number of European countries have more highly skilled expatriates in the OECD than they host from non-OECD countries.

The United States, France, Portugal, Spain and the United Kingdom benefit from a strong colonial heritage or linguistic advantages and seem best able to attract highly skilled workers from non-OECD countries. The United States have one non-OECD highly skilled person for ten natives. In the EU, mobility of knowledge workers is primarily intra-European, although traditional inflows from North Africa and Eastern Europe are significant.

In the total OECD area, about 4% persons with tertiary education are immigrants from other OECD countries. Those from non-OECD countries account for about 6% of all current residents with tertiary attainment. Net stocks of foreign-born persons with tertiary attainment are highest in the traditional "settlement" countries of Australia, Canada and US, but also in Luxembourg and Switzerland. Other countries relatively with high level of immigrants with tertiary education are Sweden and France (8-9%). Quite a few countries have close to zero net movements overall, essentially because they gain as many as they lose to within-OECD migra-

tion (Austria, United Kingdom, Italy, Netherlands, New Zealand) or they do not show many movements in general (Japan and Korea) (OECD, 2006).

The situation of Lithuania's emigrants who did not declare the emigration is shown in table 2.

Table 2

Lithuania's emigrants considering former professions

Type of workers	In comparison with total emigrants (%)
Knowledge workers	21. 0
Service and trade workers	6.5
Qualified workers	28.3
Elementary professions	7
Without profession	37.2

Shown proportions of emigrants from Lithuania confirm the trouble concerning the problem of knowledge workers migration. 21 percent could be evaluated as dangerous for Lithuania's economy. Because of status of a small country as well as the source country (in most of cases) Lithuania suffers from brain drain. Policy changes encouraging the brain circulation or brain exchange should be made by appropriate policy makers.

The determinants affecting knowledge worker's decision to migrate

Many factors influence international migration but some may be more relevant for unskilled people than for highly-skilled migrants, particularly in the context of increasingly knowledge-based economies, the traditional push-pull framework identifies a number of factors affecting international migration. However, as Moguerou (2006) states, some specific elements related to the structure of national innovation systems might be more relevant for understanding the international mobility of knowledge workers in particular. The author emphasizes that a push-pull framework is traditionally used by researchers to study international migrations. On the one hand, favourable conditions in the receiving countries, such as high salaries, high living standards, good work conditions and career opportunities, pull migrants to the receiving country. On the other hand, unfavourable conditions in the sending country push the highly skilled people to leave. Here Moguerou (2006) suggests some simple methods how to affect knowledge worker's decision to move. *First*, it is necessity to eliminate income differences between home and destination country and to ensure relevant rewards for skills. *Second*, to create attractive labour market conditions. *Third*, coordinate immigration incentive policies. According to Mahroum (1999), immigration legislation remains very important in the international mobility of the highly skilled. Special legislation favourable to skilled immigrants are likely to allow countries to benefit from a growing international pool of knowledge workers. In addition to immigration legislation, other factors, such as taxation, openness in communication, business expansion overseas, safety, political determinants, are other important factors in the choice of migrants to relocate. *Fourth*, it is very important to create stabile and efficient national innovation system and the agglomeration effects. The quality of research infrastructures, the financial support for academic research, research policies favourable to the development of R&D, or the reputation of universities or public labs, are some factors affecting the decision to migrate. High salaries, good opportunities for high-tech entrepreneurship, employment opportunities in innovative sectors, the perspective of having a successful scientific career, are other factors outlined by the literature (Mahroum, 1999; Technopolis Group, 2001).

The private sector may also play a role in attracting foreign talents. The quality of research staff, working conditions and wages in the private sector are important factors. However, even in the private sector, reputation may have in influence on decision to move. Agglomeration effects and the existence of "knowledge intensive clusters" may be crucial in explaining the international mobility of knowledge workers in the context of increasingly knowledge-based economies.

Mahroum (1999) highlights the classification of knowledge workers or as he points – highly skilled migrants and types of influencing factors and policies of them migration (see Table 3).

Table 3

A Classification of knowledge workers mobility, types of influencing factors and policies
(Mahroum, 1999)

Group	Type of push & pull factors	Type of policies
Managers & Executives	Benefits and remuneration	Business-oriented
Engineers & Technicians	Economic factors (supply and demand mechanisms) The state of the national economy	Immigration legislation Income tax
Academics & Scientists	Bottop-up developments in science Nature & conditions of work Institutional prestige	Inter-institutional and intergovernmental policies
Entrepreneurs	Governmental (visa, taxation, protection, etc.) policies Financial facilities Bureaucratic Efficiency	Governmental and regional policies Immigration legislation
Students	Recognition of a global workplace Accessibility problems at home Inter-cultural experience	Intergovernmental, and inter-institutional policies Immigration legislation

As the mapping of Table 3 reveals, different policies should be tailored out to suit the very different organisational and cognitive structures of the various sectors and professions. Various groups of professions are driven by different push and pull factors. Therefore, supplementary and complementary immigration and non-immigration legislation, such as income-tax allowances, investment capital tax relief, and copyright legislation should be introduced to encourage the inward flows of skills and expertise.

Conclusions

It was newly stated that a knowledge worker is a highly skilled individual who is able to convert knowledge, intellect, wisdom and ideas into tangible innovative product or service; he or she can create intangible products, to teach other people by transferring own competence and skills. Knowledge worker is not only the one who thinks how to work. Knowledge worker can use others' intellect for the creation of innovative, value added products.

Five basic theories which explain the reasons of high skilled migration. In order to assess the reasons and consequences of knowledge workers migration, several theories should be combined. The conclusion was made that most theories for the analysis of consequences knowledge workers migration are duel labour market, migration network and migration systems theories.

Effects of knowledge workers migration for "source" and "purpose" countries are different. Negative affect manifests when "brain drain" occurs with the main consequences of "brain waste". However the "brain exchange" or "brain circulation" positively affects both "source" and "purpose" countries.

The analysis of knowledge workers migration is quite complicated because of data shortage. However it is possible to highlight the main directions of knowledge workers migration: USA, EU, Canada and Australia. USA, Japanese and Korean emigrants represent a very small share of the total population. Emigration is particularly frequent from the United Kingdom and Austria, also from Eastern Europe. The most benefit from the knowledge workers immigration receives such EU countries as United Kingdom, Sweden, Finland, and France. Nevertheless, the most knowledge workers emigration countries are Ireland, United Kingdom, France, Germany and Italy. Lithuania in many cases should be interpreted as "source country" which feels economic and social damage because of "brain drain".

The determinants affecting knowledge workers decision to migrate are concerned with income differences, conditions of labour market, immigration incentive policies, stabile and efficient national innovation system. These factors should be efficiently regulated by proper governmental policy. Different types of policies should be applied to different groups of knowledge workers. For example, business-oriented policy should be applied for managers and executives, inter-institutional and intergovernmental policies should be applied for academics and scientists, etc.

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Rasa Daugėlienė

Žinių darbuotojų migracijos ypatumai Europoje ir pasaulyje

Santrauka

Žinių darbuotojų migracijos problema žinių ekonomikos sąlygomis yra itin aktuali. Naujieji ekonomikos varikliai – žinios, išmintis – sąlygojo ir naujos darbuotojų klasės atsiradimą. Kaip teigia mokslininkai (Drucker, 1989; Baldwin, 2001; Beckstead, 2003; Lavoie, 1998; Lee, 1996; Mahroum, 1999; Massey, 1998; Tam ir kt., 2005; Kriščiūnas, 2006), finansininkų, vadybos konsultantų, informatikos technologų, projektų inžinierių, kompiuterių technologų atsiradimas buvo sąlygotas globalizacijos iššūkių bei darbo jėgos paklausos žinių ekonomikoje.

Straipsnyje nagrinėjama nauja žinių darbuotojų migracijos problema Europoje ir pasaulyje. Daugelis mokslinių darbų (Tam ir kt., 2005; Alvesson, 2000; Kanter, 1998; Zuboff, 1988; Causer, Jones, 1996; Raelin, 1985, ir kt.) yra orientuoti į žinių darbuotojų pozicijos ir reikšmės išryškinimą organizacijų lygmenyje. Todėl stokojama teorinių ir praktinių tyrinėjimų apie žinių darbuotojų poveikį šalies ekonomikai, o ypač tokių, kurie atskleistų žinių darbuotojų migracijos pasekmės „kilmės“ bei „tikslo“ šaliai.

Aukštos kompetencijos darbuotojų migracijos tendencijos analizuojamos užsienio mokslininkų (Ferro, 2006; Docquier, Marfouk, 2006; Castles, Miller, 2003; Massey, 1998; Sassen, 1994; Lowell, Findlay, 2001; Straubhaar, 1998; 2000; Wolff, 2006) darbuose, taip pat Ekonominio bendradarbiavimo bei plėtros organizacijos (angl. *OECD*) ir Europos Komisijos ekspertų studijose. Daugelis jų pabrėžia žinių darbuotojų migracijos pasekmių vertinimo sudėtingumą dėl statistinių duomenų trūkumo. Todėl, straipsnyje keliamas *tikslas* – išryškinti žinių darbuotojų migracijos ypatumus Europoje bei pasaulyje. Tikslui pasiekti keliami *uždaviniai:* iškristalizuoti žinių darbuotojų sampratą; išanalizuoti teorines žinių darbuotojų migracijos interpretacijas; išnagrinėti žinių darbuotojų migracijos tendencijas Europoje ir pasaulyje; išryškinti veiksnius ir galimas sprendimo priemones, darančias poveikį žinių darbuotojo apsisprendimui migruoti.

Straipsnyje analizuojami mokslininkų darbai (Kriščiūnas, Daugėliene, 2006; Drucker, 1989; Baldwin, 2001; Beckstead, 2003; Lavoie, 1998; Lee, 1996; Mahroum, 1999; Massey, 1998; Tam ir kt., 2005; Zhao ir kt., 2000; Baldwin, 2001, Beckstead, Vinodrai, 2003), kuriuose mėginama apibrėžti žinių darbuotojo sampratą. Apibendrinus analizuotą literatūrą, prieita prie išvados, kad *žinių darbuotojas* – tai aukščiausios kompetencijos individas, gebantis konvertuoti turimas žinias, intelektą, išmintį į apčiuopiamą novatorišką, pridėtinę vertę kuriantį produktą ar paslaugą. Straipsnyje pabrėžiama mintis, kad žinių darbuotojas – tai aukščiausios kompetencijos, o ne kvalifikacijos (kaip dažnai interpretuojama) darbuotojas.

Ieškant atsakymo į antrąjį uždavinį, nagrinėjami Akkoyunlu, Vickerman (2001), Castles, Miller (2003), Massey ir kt. (1998), Straubhaar, Wolburg (1999), Ferro (2006), Docquier, Marfouk (2006), Wolff (2006), Lien, Wang (2005), Moguerou (2006), Panescu (2005) moksliniai darbai, kuriuose akcentuojamas žinių darbuotojų migracijos pasekmių išryškinimo sudėtingumas. Mokslininkai dažniausiai siūlo nagrinėti migracijos teorijas (neoklasikinė ekonomikos teorija; dvigubos darbo rinkos teorija; migracijos tinklų teorija; migracijos sistemų teorija; pasaulio sistemų teorija), kurios straipsnyje apibūdinamos. Prieita prie išvados, kad žinių darbuotojų migracijos tendencijas tinkamiausiai paaiškina dvigubos darbo rinkos, migracijos tinklų bei migracijos sistemų teorijos. Straipsnyje taip analizuojami makroekonominiai, makroekonominiai ir neekonominiai veiksniai (Straubhaar, Wolburg, 1999), sąlygojantys žinių darbuotojų migraciją. Išryškinamas teigiamas ir neigiamas žinių darbuotojų migracijos poveikis „kilmės“ bei „tikslo“ šalims. Vartojamos tokios kategorijos kaip „protų nutekėjimas“, „protų nuostolis“, „protų apytaka“.

Žinių darbuotojų migracijos tendencijų analizė atlikta naudojantis OECD (2005; 2007) tyrimais, Straubhaar (2000) bei kt. mokslininkų darbais. Straipsnyje teigiama, kad daugiausia žalos dėl žinių darbuotojų emigracijos patiria Afrikos šalys, o pagrindinės aukštąjį išsilavinimą turinčiųjų migracijos kryptys yra JAV, Kanada, ES ir Australija. Šios tendencijos nesikeičia nuo 1990 m., kai žinių darbuotojų migracija tapo viena iš modernaus pasaulio problemų. Mažiausiai žinių darbuotojų emigruoja iš Japonijos, JAV ir Korėjos. Didžiausios žinių darbuotojų emigracijos šalys Europos Sąjungoje yra Jungtinė Karalystė, Austrija, Prancūzija, Vokietija, Italija bei Rytų Europos šalys. Nepaisant to, didžiausia naudą dėl tokių darbuotojų imigracijos patiria Prancūzija, Švedija, Jungtinė Karalystė ir Suomija. Lietuva šiuo atveju traktuojama kaip „kilmės“ šalis. Todėl jos ekonomika dėl žinių darbuotojų emigracijos patiria didelių nuostolių.

Straipsnyje išryškintos pagrindinės žinių darbuotojų kategorijos, migraciją „stabdantys“ ir „skatinantys“ veiksniai bei priemonės šiems veiksniams kontroliuoti. Teigiama, kad skirtingas žinių darbuotojų grupes (aukščiausio lygio vadybininkai; inžinieriai ir technologai; akademikai ir mokslininkai; antrepreneriai; studentai) sąlygoja skirtingi „traukos“ ir „stūmimo“ veiksniai, todėl kiekvienos valstybės vyriausybės turėtų imtis atitinkamų priemonių, kurios stabdytų „protų nutekėjimą“, skatintų „protų apytaką“, susigrąžintų „protus“ bei taptų „protų bankais“.

Raktažodžiai: *žinių darbuotojai, žinių darbuotojų migracija, migracijos teorijos, „protų nutekėjimas“, „protų nauda“, žinių darbuotojų migracijos veiksniai.*

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