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Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

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EDUCATIONAL MIGRATION AND THE LABOUR MARKET

Diana Rokita-Poskart
Opole University of Technology

Abstract

This paper focuses on the links between the educational migration and the labour market, in particular on the consequences of the educational migration connected with tertiary education on the labour market one of the academic city of Opole in Poland.

The empirical analysis for this paper was conducted based on the results of empirical research conducted among quota selected group of 1075 students of all universities in Opole. The paper employs approach based on calculations of the multiplier effect. The results of this research and the estimations obtained during the data analysis prove that educational migration connected with higher education can affect the supply and demand on the local labour markets of academic cities.

Keywords: educational migration, higher education, academic city, labour market

JEL classification: J21, J23, O15, O18, R23

Introduction

The processes related to the movement of people are one of the key elements of contemporary socio-economic reality. To some extent, this applies to such forms of mobility as migration for economic purposes, which undoubtedly became the subject of many researches just after intensification of migration related to the European Union (EU) enlargement due to accession of other countries of Central and Eastern Europe (CEEC). However, this also applies to such forms of mobility, having the character of internal population movements caused by other purposes than employment or higher earnings, namely educational migrations, which rely on movements of people from their current place of residence to an academic centre in order to undertake higher education. Such form of migration has become an important element of reality in Poland, in particular due to the fact that massification of higher education becomes a standard in Poland, which started early in the 1990s and due to an increased in the rate of movements of people undertaking education outside their current place of residence. It can be stated that the scale of internal migrations for high education in Poland do not vary significantly from the emigration scale of Polish citizens moving after Polish accession to the European Union, and even it can be states that in the corresponding period the first one was higher. According to the CSO's estimates, after Poland's accession to the European Union at the end of 2014, there were 2,3 million of Polish citizens living temporarily outside Polish borders (*Informacja o rozmiarach i kierunkach czasowej emigracji z Polski w latach 2004 – 2014*, 2015). Just in the academic year 2013/2014, approx. 1.5 million students were undertaking higher education studies. A year, which was culminated for the number of

students in Poland was academic 2005/2006 when 1.95 million students were engaged in the study. Most of them were educational migrants (*Local Data Bank*).

Educational migrations, like any other type of migrations, generate a number of consequences, exerting a significant impact on the shape, functioning and development of both, the outflow and influx areas. However, particular attention should be paid to implications of educational migrations for the influx areas, which undoubtedly – during the academic year – became academic centres. The abovementioned effects of educational migrations for these areas are related not only to the cultural life, but also to the social and demographic sphere of academic centres. However, taking explicitly into account the economic perspective of educational migrations, it can be assumed that – like any other influx of population - educational migrations will also impact the local labour markets in the academic cities.

The purpose of this paper is to present on the basis on the results of empirical research and estimates, the effect of educational migrations on local labour market of one of the academic cities in Poland – the city of Opole. The city is unique, because on the one hand every year it becomes an area of the influx of several dozen thousand students due to universities being placed in there, and on the other hand due to its unfavourable intermetropolitan location, it also becomes an area of the outflow of young people to other cities in Poland and abroad (Jończy and Rokita-Poskart, 2014).

This paper consists of several parts. In the first two parts, we present a review of the literature regarding the implications of the influx of population to local labour markets and there was shown the theoretical effect of educational migration on the labour market. The next part focuses on presenting the character of the Opolskie Voivodeship, as well as on the research methodology. Further section presents the results of research works and the results of estimates concerning the effect of educational migrations on the local labour market of the Opole academic centre. The final part of the paper provides synthesis of the analysis presented in the article and draws some comparisons.

Literature review

The impact of educational migration on local labour markets of academic cities rarely becomes a subject of an academic study. However, this aspect of migration should be regarded as a process of the influx of students to an academic city; and it has a lot in common with the immigration process, which is far more frequently undertaken in the literature concerning the issues of migration processes. In this context, literature research helps us to identify basic spheres of the influx of population affecting the local labour market.

The influx of educational migrants to academic cities and the fact that they are undertaking employment during their study and after graduation affect the labour supply growth in the area of the influx. Such an apparent impact of educational migration on the labour market demonstrates the ongoing research surveys and observations performed at the mesoeconomic level (Jøensen, 2007, Scott-Clayton, 2012). However, in literature on migration much more attention is paid to the effect of international economic migrants on the increase of labour supply in the influx area regarded in the macroeconomic perspective (Kustec, 2012; Hsieh and Kohler, 2007).

In the literature concerning this subject matter there are also research studies that consider the possible effect of the influx of migrants on wages in the influx area. However, economists do not agree on the subject-matter of the unequivocal direction of this effect. Some of them argue that the influx of immigrants and the fact of undertaking by them employment in the influx area affects impact on the decrease of wages in the local labour market (Camarota, 1997, Nickell and Saleheen, 2009, Borjas, 2004), while others show that the influx of labour

force to local markets does not affect the value of wages received by local workers, and certainly it does not lead to the decline in wages (Card, 1990, 2001, 2005, Butcher and Card, 2007). An explanation for lack of such an effect is the fact that poorly skilled immigrants are mostly undertaking jobs which are not demanded by the natives. The lack of the abovementioned effect is also explained by the case that the influx of migrants leads to the outflow of local workers from other regions causing return to the balance state in the local labour market (Greenwood and McDowell, 1986, Borjas, 2003).

The research carried out in this paper proved that migration can affect the demand for labour. The effect of migration on the labour demand is associated with the influx of people and the fact that they become consumers who increase the demand for goods and services on the local market which in turn leads to an increase of local demand for labour (Constant, 2004, Bodvarsson and Van den Berg, 2009, Somerville and Sumption, 2009). The same consequences can bring on influx of students connected with educational migration – the increase of demand for goods and services, which consequently leads to creation of workplaces is being confirmed by *Impact Studies* carried by universities and academic cities in the United States of America (Eesley and Miller, 2012, Steinacker, 2005; Fowler and Fuller, 2005, Fletcher and Morakabati, 2013).

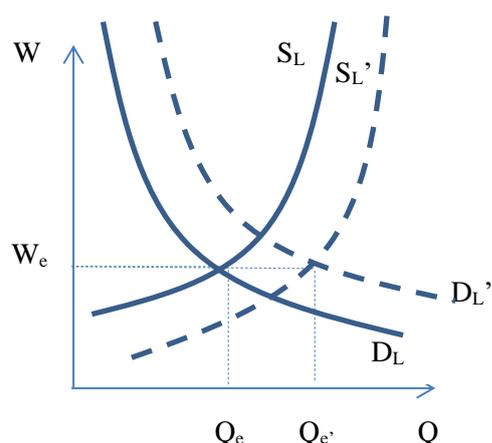
Theoretical perspectives: educational migration and the labour market

As it was mentioned before, the influx of migrants connected with educational migration to the academic centre can generate for that area a number of consequences. At this point, I would like to draw the attention explicitly on a single sphere of influence – on the local labour market of the academic centre.

The effect of educational migration on the economic situation of the academic centre can be demonstrated by using a simplified model of the labour market (Figure 1). This interaction should be considered in the light of two elements of the labour market – from the point of the impact of migration on the labour supply and from the perspective of migration affecting the labour demand.

One of the factors that determine the labour supply is the number of persons being at the work age. In the case when there is an influx of people caused by educational migration, one of the consequences associated with that influx will be an increase of the working-age population, which will most likely cause an increase in labour supply in the academic centre. This shifts the labour supply (S_L) to the right (S_L') (see Figure 1).

On the other hand, educational migrations – apart from the effect on the supply side of the labour market – also impact the demand side. This is directly attributable to the fact that the labour demand depends on the size of demand for goods and services and thus the influx of migrants to the academic centre the consumer demand in the academic centre increases. Consequently, this leads to an increase in revenues of local enterprises generating through this an increase in the demand for labour in companies satisfying the migrants' consumer demand. The process is shown in Figure 1 that demonstrates a shift of labour demand curve from the D_L to the D_L' .

Figure 1: Labour market after the educational migration

Source: Own elaboration

The consequences of educational migration on the local labour market of academic city are likely to result in an increase in the equilibrium quantity with a constant level of wages at the equilibrium point. Such effect of educational migration seems to be fairly similar as the reality of the Opole region because at the territory of the Opole academic city can already be seen an outflow of labour resources to larger centres in Poland and abroad (Jończy and Rokita-Poskart 2014). This process – to some extent – is compensated by the influx of educational migrants of whom a large number enlarges the labour resources in the academic centre.

Opolskie Voivodeship and the Opole academic city

Opolskie region is the smallest – in terms of population and the surface area – voivodeship (province) among other sixteen voivodeships in Poland. It is situated in the South-Western part of Poland between the two economically very strong regions – the Lower Silesia Voivodeship in the West and the Silesia Voivodeship in the East. Both provinces bordering with the Opole region belong to the group of major European regional structures with developing – the Upper Silesian and Wrocław metropolises (*Strategia rozwoju województwa opolskiego*, 2012) which causes a number of difficulties related to shadowing the development potential of the Opolskie Voivodeship. Although both regions neighbouring the voivodeship attract majority of the investments and the drain the human capital resources of the Opolskie region. The special character of the region, except its intermetropolitan location – is also cause by the fact that residents have two citizenship or origins – Polish and German, which was – especially in the nineties of the 20th century and at the beginning of the 21st century – a determinant for resettlements and economic migrations – mainly to Germany. Both these factors: the intermetropolitan location and the high scale of foreign emigration caused that the voivodeship becomes the area of deteriorating demographic situation and the area of demographic crisis, which relate to cities, towns and villages suffering from depopulation, mass emigration abroad and high variability in demographic structures (Rauziński, 2012). Similar problems concern the capital of the Opolskie Voivodeship with approx. 120,000 residents, but at the same time – every year the city experiences a declining process in the number of inhabitants (*Opole w liczbach w latach 2013 i 2014*, 2014, 2015) and the outflow of young people to the nearby metropolitan centres, including Wrocław as well as abroad (Jończy and Rokita-Poskart, 2014).

Beside the fact that the city fulfils a number of administrative functions, it is an academic centre, where five institutions of higher education are located being a home to more than 25,000 students (*Local Data Bank*). It is estimated that 90% of these students are educational migrants (own results). Although, the number of students engaged in tertiary education in Opole is not impressive – when it comes to absolute values – then when analysing the share ratio of students, majority of whom are educational migrants per number of inhabitants, it turns out that the value of this indicator puts the Opole academic centre in the first place among all nonmetropolitan provincial cities in Poland and in the third place among all provincial cities. The number of students in relation to total inhabitants – in the case of the Opole academic centre – allows us to assume that the impact of students, especially educational migrants, affecting the (demographic, economic and social) situation of the academic city is relatively high.

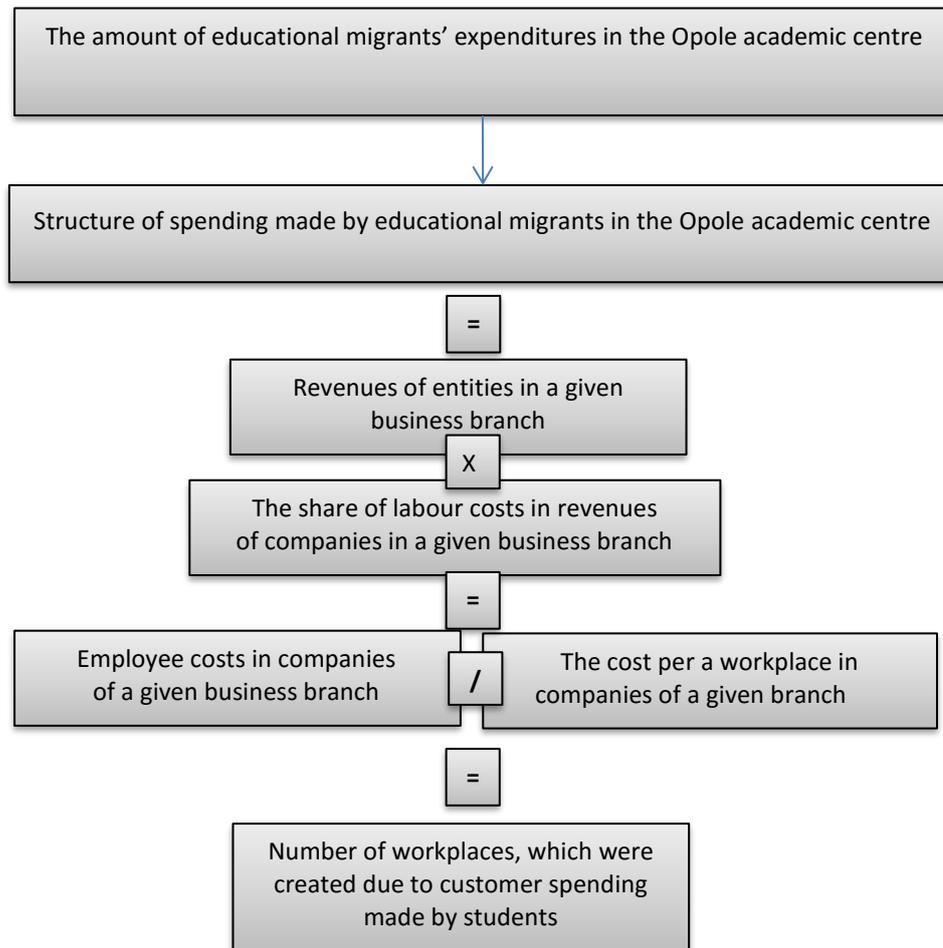
Methodology of the estimates and surveys

The results presents in this study are based on the quantitative empirical studies performed in one of the academic cities in Poland – in Opole. These studies were conducted in the period of 2013-2015 with more than 1000 students in their last academic years from all universities located in the Opole academic centre by using measurement techniques (the auditorium questionnaire). It was decided to adopt quota selection of individuals as a sample being based on the available knowledge concerning the ratio of certain characteristics of students. For this selection the criteria accessible from the available statistical data regarding students and chosen due to the results of the pilot research were applied. The first criterion was the shares of women (61%) and men (39%) among all students taking up studies in Opole. The second criterion was the share of students undertaking full-time (65%) and part-time (35%) studies in the group of students taking up studies in Opole. Apart from the described test selection criteria among full-time students, the research was also focused on the share of individual subgroups of study majors according to the International Standard Classification of Education. As a result, 1200 students were surveyed and 1075 questionnaires were selected for further processing and analysed considering the mentioned criteria, which show the characteristics of students from the Opole academic centre. Taking into account the objective and scope of the research study, there were explicitly selected the questionnaires filled by educational migrants (967 respondents). The questionnaire which was used during survey consists of several questions: apart from the questions concerning vital records, the most important questions were concerning such issues as professional activity of students during their studies, in particular the jobs undertaken by them in the Opole academic centre, the amount and structure of expenditures in the city in which they are studying, future plans for the workplace, and the place of residence after graduation.

First of all, on the basis of the obtained research results it was possible to determine the size of labour supply reported by migrants in the academic centre and the amount and structure of consumer demand indicated by migrants in the city. Subsequent stage in determining the effect of educational migration was to estimate the size of economic multiplier effects being generated due migrants' consumer spending that consist on the number of workplaces created in enterprises due to the demand reported by migrants in the academic centre. The estimation was made based on the concept of multiplier effects presented by Wiedermann (2008). In the United States, direct and indirect estimation on factors affecting the local and regional economy is performed by using the *regional input-output* modelling system (RIMS II). The Central Statistics Office in Poland does not publish such data, so one of the possibilities to estimate the impact of spending made by educational migrants is the Wiedermann method of multiplier effects. In order to estimate the effect of educational migration on the labour

demand in the academic centre, apart from the results of empirical studies on the structure and the amount of the demand from migrants reported in the academic city, selected statistical data were also employed in the concept (Diagram 1).

Diagram 1: The concept of calculating the multiplier effect



Source: Own elaboration based on Wiedermann (2008)

In order to determine the impact of migrants' spending on the labour demand, and therefore to estimate the number of workplaces which were created due to educational migrants' expenditures in the local economy, the first step was to use the research results concerning the amount and structure of spending and the structure of expenditures spend by migrants in Opole. It can be assumed that the amount of this spending is the amount of the revenues earned by companies satisfying the migrants' consumption needs. Further in the study, an estimation on the share of labour costs in the revenues of economic entities in various branches was performed based on the data from the CSO (*Wyniki finansowe podmiotów gospodarczych I-XII 2014*, 2015). The next step was to multiply the amount of migrants' spending, constituting the revenues of enterprises operating in the local market by the derived estimation of the share of labour costs in the entities' revenues, and the obtained result was subsequently divided by the cost per single workplace in a given branch (*Koszty pracy w gospodarce narodowej 2012*, 2013). Subsequently, after adding appropriate estimates

utilizing the previously mentioned data, it was possible to estimate the number of workplaces created due to the spending of educational migrants in the academic centre (Rokita-Poskart 2016).

Impact of educational migration on the local labour market

A significant sphere of educational migration influencing the economic situation of the Opole academic centre is the local labour market. In this case, educational migrants staying in the academic centre during their study can affect the economy bidirectionally. On the one hand, they can do so by undertaking employment in the local market they affect its supply-side increasing the supply of labour resources; while on the other hand they can do so-by implementing consumer spending in the academic centre and thus by increasing the local demand for goods and services, they impact on the increase of labour demand, thus determining the amount of employment in businesses, which cater the demand being requested by migrants.

When analysing the impact of educational migrants on the supply side of the labour market in the Opole academic centre, it should be stated that in accordance to our results, $\frac{1}{4}$ of educational migrants were engaged into some kind of employment within the territory of the academic centre and this was affecting the size of the labour supply in the city. By considering the number of educational migrants in Opole, which – based on the number of students and research results – should be equal to 22,500 students, and by taking into account the share of the respondents who declared that they were during their study employed in the academic city, it can be assumed that labour resources in the Opole academic centre might include additional 5,600 people. Therefore, comparing the number of educational migrants taking up employment in the Opole educational centre with the number of working age population (79 106 persons), representing potential labour resources then it turns out that the proportion is just over 7%. Then, it can be concluded that migrants provide labour services in Opole and thus affect the growth of real labour resources in the city.

The influx of educational migrants to the academic city also impacts the labour supply in particular sectors of business activities. According to our results educational migrants in Opole are mainly engaged in trade and catering services' providers – more than 52% of migrants were employed in companies acting in these business fields. Migrants also create an additional labour supply in Opole for other companies acting in such spheres as: production (8%), IT services' providers (7.2%), companies providing administration and office services (6.8%), civil engineering (5.6%) and in finance and banking services (4.8%).

The influx of migrants into the academic centre and what is connected with it, their consumer spending in the place in which they undertake educational studies also impact on the demand for labour. As it was already mentioned, migrants by becoming customers, impact the demand for goods and services. Consequently, they also affect the demand for labour in the local companies, which satisfied the demand of migrants. To estimate the number of workplaces that arise by expenditures spent by educational migrants in the Opole, the mentioned concept of multiplier effects was adopted. The procedures and results of the estimates on the number of jobs that were created due to migrants' expenditure are presented in Table 1.

Table 1: The estimation of the number of jobs that were created due to spending made by educational migrants at the Opole academic centre

	A	B	B	D
	Estimated revenues of local companies gained from expenditure made by educational migrants undertaking tertiary education in Opole	The share of labour costs in revenues of enterprises (based on <i>Wyniki finansowe podmiotów gospodarczych I-XII 2014, 2015</i>)	The cost of a single workplace (based on <i>Koszty pracy w gospodarce narodowej 2012, 2013</i>)	Number of jobs created due to spending made by educational migrants undertaking tertiary education in Opole ((A*B)/C)
Trading enterprises	PLN 7 991 294	8.0%	2550.12	251
Enterprises providing catering	PLN 1 869 134	22.0%	2330.39	176
Enterprises providing services related to sports, arts and recreation	PLN 433 357	25.0%	4908.38	22
Enterprises providing public transportation, bicycle renting and taxi services	PLN 280 623	13.0%	3232.80	16
Enterprises offering photocopying services	PLN 285 746	15.1%	4391,31	10
Other service enterprises	PLN 404 993	9.0%	2612.64	10
Total number of created jobs				485

Source: own calculation based on empirical research and data provided by the Central Statistical Office of Poland: *Wyniki finansowe podmiotów gospodarczych I-XII 2014, 2015, Koszty pracy w gospodarce narodowej 2012, 2013*

In accordance with the results, it should be estimated that migrants spent monthly approx. PLN15.8 million in the Opole academic centre, whereof PLN11.3 million (this is the sum of money spent by migrants on housing was omitted, while it is the revenue of households offering apartments for rent or it is a part of revenues gained by universities owning students' hostels) consist the revenues earned by companies in various business areas. Taking into account, both the share of labour costs in the revenues of business entities (column B in Table 1) and data indicating the amount of monthly labour cost per person employed in companies acting in particular branches (column C in Table 1), it can be estimated that in companies satisfying consumer demand of educational migrants in the Opole academic centre exist additional 485 full-time jobs. It should be emphasized that the presented estimates consider explicitly the first stage of the impact of educational migrants' implemented spending. These estimates do not cover subsequent stages of multiplier effects' impacts – that means – the number of workplaces being created due to the fact of implementing consumer spending by employer, who have job thanks to spending made by educational migrants in the academic centre. These estimates also do not include the number of workplaces that is raised at universities due to tuition fees. It should also be noted that the estimated demand for labour does not include one additional sphere, namely expenses of educational migrants allocated for renting rooms and apartments in the academic city. After taking into account these additional expenses (greater than PLN 3.2 million per month) and by assuming that these expenditure become – as a whole the income of households and are – when adding certain assumptions spend on consumer purposes, it can be estimated that this spending can contribute to creation of even 80 additional jobs in the local economy. By performing these estimations it is assumed that households that offer rooms, apartments and homestays for renting behave as average households surveyed by the CSO, which 82.7% of their income spend on consumer expenditures and 11.3% on savings; in this case, this assumption does not have to satisfy the reality, because the revenue gained from renting is not -in most cases- the main source of household revenues and in reference to that is uncomplimentary. This can have the impact on the manner in which the abovementioned revenue is redistributed, which differs from the structure of the revenue on which it is spent by a standard household being surveyed by the CSO in Poland

Conclusions

Academic cities that become the area of the influx of thousands of students undertaking studies at universities within these cities, receive in return many economic benefits. Some of the benefits are being ripped off by the abovementioned centre are the withdrawals for the local labour market. We show that one of the cities which encounter the influx of educational migrants is the capital of the Opolskie Voivodeship – Opole, characterized by one of the highest in Poland share of students in the number of inhabitants.

First, as the research indicates, the influx of educational migrants to the academic city affects its labour resources. Additional labour supply in Opole was formed thanks to educational migrants estimated at 5.600 people and it amount to approx. 7% of the potential labour resources in Opole and 8.5% in relation to the number of employees in Opole. At this point, it should be emphasized that the employment of migrants is not a threat to the stability of employment of residents of the city, due to the fact that migrants undertake mainly jobs that do not require high qualifications and at the same time they are not highly paid. Therefore, it can be concluded that the influx of migrants to the academic city and the fact that undertaking by them the employment does not affect the decrease of wages of local workers.

Second, educational migrants, both – the temporarily living in the academic city as well as the circular migrants, by making the consumer spending in the local market affect the demand for labour within the area of the inflow. As our results indicate, the spending made by educational migrants, which becomes automatically the revenue of local enterprises can contribute to the creation of numerous jobs in the local market. By analysing comprehensively the impact of educational migrants on the local labour market, the mutual interaction of elements of the local labour market can be observed. Educational migrants do not only affect the labour demand but they also create additional labour supply, especially in these economic activities, which basically benefit from migrants' expenditures. In turn, the fact of undertaking the employment and generating the revenues by educational migrants affects the capability of implementing higher consumer spending and leads to the creation of subsequent jobs in the local economy.

It is also worth remembering that educational migrants also affect other spheres of the academic city life, including the demographic situation. Besides the population growth of the city at the moment of undertaking by educational migrants' studies at universities, there is also a high probability that they will stay in that place after graduation, and this will cause in the future, an increase of labour resources in the city. By being aware of the impact of educational migrants that influence not explicitly the labour market but also other migration-based spheres, including the condition of the academic city, future image of the city seems to be not so optimistic because the number of students in Poland is constantly decreasing. This phenomenon can be also observed in all other academic cities in Poland and it is the result of demographic crisis that becomes intensified in Poland.

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Information about the author:

Diana Rokita-Poskart (d.rokita(at)po.opole.pl) is an Assistant Professor at Opole University of Technology, Opole, Faculty of Management and Economics, Luboszycka 7, 45-036 Opole, Poland.