Peripheral Metropolitan Areas in the European Union

The Case of Lublin

Edited by
ZBIGNIEW PASTUSZAK
MARIUSZ SAGAN
KRZYSZTOF ŻUK

ToKnowPress

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Introduction

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Cities and metropolitan areas have become the major centers of a new socio-economic order in the modern world. Their development determines the success of numerous national economies since it is large cities that integrate the key development processes, innovation and creativity, academic spirit and culture, networks and virtualization, participation and bottom-up civic initiatives. It is cities which generate the most of the global GDP.

The significance of cities and their being crucial for socio-economic development has been undeniable ever since the beginnings of civilization. However, never before have they been given so much attention in the world literature they enjoy today. Large cities and metropolitan areas have become points of interest not only for city planners or local politicians but also for sophisticated and carefully designed strategies focused on city development. The significance of cities for the EU's growth has been observed and incorporated in the provisions of the 'Europe 2020' strategy. In Poland the strategy has been specified in the documents of the 'National Urban Policy.'

A particular role in stimulating and diffusion of development is assigned to large municipalities in the peripheral areas, most frequently less economically developed. Exemplary are the regions located at the eastern border of the EU, Eastern Poland included. The region is characterized by the lowest GDP per capita in Poland, and the five voivodeships which form the area are listed within the worst twenty regions of the EU in terms of development, preceding only several regions of Romania, Bulgaria and Hungary.

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The major city and the only metropolitan area in Eastern Poland is Lublin. The city, being the region's largest demographic center, its primary economic, academic, cultural and administration center, has a major role to play in this area of Europe. Poland's national strategy documents, including the 'National Spatial Development Concept 2030' (Ministerstwo Rozwoju Regionalnego 2012), clearly indicate that Lublin is the primary engine of development for Eastern Poland. Numerous experts in Poland and abroad strongly support this role of Lublin. A prestigious weekly newsmagazine, *The Economist*, announces that it is Lublin which holds the potential to 'lead' the development of the entire Eastern Poland (*The Economist* 2014). Janusz Lewandowski, the European Commissioner for Financial Programming and the Budget, has compared Lublin to the Eastern German city of Dresden and Saxony Region, which have become the driving force as well as a development center for that part of Germany (Lewandowski 2013).

Today Lublin, which has long been indicated in various strategic documents, expertise analyses and scientific studies as a potential metropolitan area, is slowly becoming a real metropolitan area. The process will be completed by 2030 according to the governmental plan. A strong barrier preventing Lublin from becoming a metropolis quicker is its less prosperous regional environment (both the voivodeship and the entire Eastern Poland). On the other hand, the little socio-economic potential in the remaining cities of Eastern Poland (except for Białystok) results in Lublin having no real competition in this part of the country, and no counterbalance for being the development pole (Sagan 2013), unless Warsaw is considered (and Warsaw has been indicated occasionally in selected scientific studies to be a city of Eastern Poland).

Lublin, presently having 350 thousand residents within the city limits, and 715 thousand within the large metropolis limits, in 15 years should acquire the status of the 400–450 thousand city in a metropolis of over a million. It will be related to continuing the citygenic processes in the core of the metropolis, as well as with the development of new city functions and reinforcing its traditional roles. Consequentially, it will increase the inflow of people from the rest of Poland and from Ukraine to the area. The 'Lublin Development Strategy 2013–2020' (Urząd Miasta Lublin 2013) particularly emphasizes the city's metropolitan characteristics and observes the network

of partnership with the metropolitan area and other regional cities to be the key factor to increase the pace of Lublin's growth. A priority of this strategy is to form a single and cohesive territorial functional economic unit, highly institutionalized, and with true partnership networks within the metropolitan area.

As stressed so far, the development and success of Lublin, the only metropolis in the east of the country, is a significant factor to have beneficial effects on socio-economic transformations in this part of Poland. It is feasible on the condition that the city fully manages its development potential, although today Lublin has already been one of the fastest growing centers in Poland, having the highest rate of investment per capita among other large Polish cities.

There are numerous challenges to reinforcing the city's metropolitan potential and they are not only related to financial opportunities designed in the new financial perspective of the European Union 2014–2020. The most significant opportunity for Lublin is to reinforce its leading position as the Eastern competences center in Poland, which executes the mission of knowledge and skills transfer to the post-soviet region. Today, due to its geographical neighborhood to Eastern European countries and its achievements, Lublin has become a reliable model for numerous municipalities in Ukraine, Belarus, and even Russia, of how to transform the city and its institutional environment.

Hardly imaginable is the metropolitan Lublin without its academic function and its image of an education center with the highest standards in many disciplines and fields. Nevertheless, the difficulties encountered by the Polish higher education institutions have not passed by Lublin. Research fragmentation, poor internationalization of universities, demographic decline and other unfavorable conditions have made Lublin schools face financial and management difficulties. The hope, however, to eliminate the negative tendencies and strengthen the academic environment, naturally with the support of the city authorities, is in higher education institutions opening to partnerships with business, in promotional policy (more intense than it has been so far), and in attracting more international students. Another challenge, integrating the academic spirit, culture and entrepreneurship, is efficient support for creative classes and industries. Lublin – presently one of the most active culture creation centers in Poland – stands a chance to become the melting pot of

creative businesses due to well designed policy. Moreover, with its current dynamic internationalization of student and graduate population in universities, Lublin may soon become an international creative ecosystem. Developing business and academic entrepreneurship, transferring knowledge from universities to business, intelligent specialization of the city, and converging sectors are the next areas which Lublin needs to attend to and stimulate.

A city where people want to live and pursue their aims needs to have clear strategies of urban and spatial development as well as environmental and recreational policies. The quality of life also means high quality service in public institutions, and active social participation in the city's functioning, both on the operational and strategic levels. With its physiographic assets and beautiful location, Lublin is particularly predestined to create new models of quality of life in Poland, also due to its openness and gradual internationalization of the city.

The purpose of the study is to demonstrate the conditions and challenges to the development of urban metropolitan centers in the peripheral regions of the European Union on the example of Lublin. The range of the studied matters in this monograph is wide and includes economic, social (particularly partnership network issue), academic and cultural issues.

Part 1 – Forming the Metropolitan Area – concentrates on demonstrating the conditions of the Lublin metropolis growth particularly in the light of the presently executed regional policy of the EU and Poland, and the role Lublin plays in integrating enterprises from the Eastern Partnership and the Western European countries.

Part 2 – Friendliness and Academic Spirit of Lublin Metropolitan Area – demonstrates the challenges and recommendations for strengthening the academic potential of the city, particularly in the light of the current intense internationalization processes in higher education worldwide. Analyses were also carried out of the development level of academic entrepreneurship, transfer of knowledge to business, challenges to attracting foreign students and the Lublin students' general attitudes.

Part 3 – Economic Development of Lublin Metropolitan Area – refers to the development area 'Entrepreneurship' in the 'Lublin Development Strategy 2013–2020' (Urząd Miasta Lublin 2013) It discusses the question of reindustrialization of Lublin and the city's

selection of the optimal specialization direction based on industrial sectors and modern technologies, and further the issues of investment attractiveness of the city, its local labor market, creative industries, and entrepreneurship development.

The final part of the monograph – Opportunities for Lublin: Towards the Network Metropolis? – concentrates on the issue of Lublin network development, and the virtualization of municipal space.

The monograph is the collective work of researchers and experts in regional development, economic policy and strategic urban planning. We do hope that the examples, solutions and good practices demonstrated in the study, will be useful for researchers and authorities in other metropolitan areas in the peripheral regions of Europe and the world, which still struggle with challenges similar to those Lublin has encountered.

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Part One

Forming the Metropolitan Area

Contemporary Metropolitan Challenges towards Lublin

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Introduction

Lublin, with its 348,000 residents, is the biggest city of Eastern Poland and the centre of the Lublin Metropolitan Area (or, according to the up-to-date nomenclature, the Functional Urban Area[1]) which is now in formation. The area of Lublin, depending upon its delimitation, embraces either the town of Lublin and the districts of Lublin, Lubartów, Łęczna and Świdnik[2] (figure 1) or, in a narrower definition of P. Śleszyński,[3] the following towns: Lublin, Lubartów

[1] A functional urban area is defined as a spatially continuous settlement system, consisting of separate administrative units and embracing compact urban area with a functionally connected urbanized zone and surrounding centres. It is an area of the highest density and the most important functions in the country's settlement system. Four subtypes of functional areas have been singled out: (1) functional urban areas of provincial, incl. metropolitan, centres, (2) functional urban areas of regional centres, i.e. those which are not capitals of provinces, but still remain essential to the region, (3) functional urban areas of sub-regional centres (50,000–100,000 inhabitants) and, finally, (4) functional urban areas of local centres (Ministerstwo Rozwoju Regionalnego 2012).

[2] 'Lublin Metropolitan Area – Investor Friendly' is an example of a contract concluded in 2008 between the representatives of districts and the President of Lublin in order to jointly promote the Lublin Metropolitan Area as a place attractive for investors. The preparation of 'Strategy for Investment Promotion of the Lublin Metropolitan Area' (Bąk 2009, 7) was a result of the conducted analyses of the area's investment potential and intellectual capacity. The boundaries of thus delineated Lublin Metropolitan Area provided a basis for aggregating statistical data. In 2012 the Lublin Metropolitan Area had 717, 200 inhabitants (see www.stat.gov.pl).

[3] At the request of the Ministry of Regional Development, P. Śleszyński produced a delimitation of the functional urban areas of the provincial capitals in 2012. Delimitation was carried out (on the basis of the indices related to functional linkages, socio-economic and morphological features) in order to satisfy the pro-

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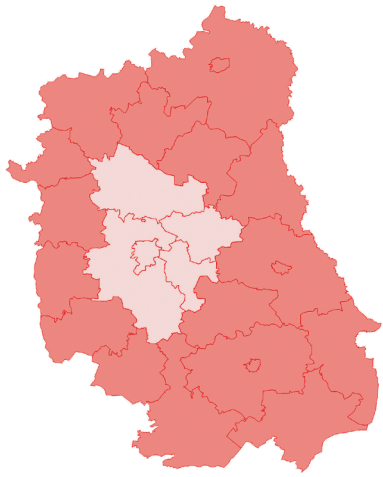

FIGURE 1 Lublin Functional Urban Area

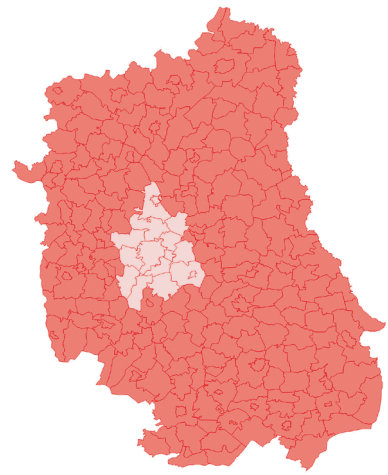

FIGURE 2 Lublin Metropolitan Area

and Świdnik, in addition to rural municipalities: Głusk, Jabłonna, Jastków, Konopnica, Lubartów, Mełgiew, Niedrzwica Duża, Niemce, Spiczyn, Strzyżewice, Wólka and the urban-rural municipality of Piaski (figure 2). The community of interests of Lublin and local governments of its metropolitan/functional area is connected with the overcoming of infrastructural barriers, boost in competitiveness, economic promotion, coherent spatial development and public transport, which requires that the main city assume the role of a leader of institutionalized cooperation. The coordination of shared activities in the metropolitan area is the first of the challenges for Lublin in the 2020 perspective. Moreover, the municipal authorities should focus on internationalising the position of Lublin, i.e. develop these functions which raise its prestige in a network of cities.

Lublin as a Coordinator of Shared Activities in the Metropolitan Area

Lublin should adopt a permanent role of a leader and coordinator of institutionalized cooperation in the metropolitan/functional area,

visions of the National Spatial Development Concept 2030. The functional area of Lublin, according to the delimitation of P. Śleszyński, comprises 15 municipalities and has the potential of 539,000 inhabitants registered for permanent residence (Śleszyński 2013, 173–197).

and not only fulfil this position for obtaining EU funds within the frames of Integrated Territorial Investments.[4] Big cities and their adjacent units of local government often develop in Poland by themselves, i.e. in isolation from the central city and, worse still, sometimes in competition with each other. Therefore, an appeal should be made to overcome local particularisms. Representatives of local governments must understand that this is thinking and acting in terms of agglomeration which brings benefits. It will not be an easy task to create an entity in charge of coordinating shared activities and ensuring its effectiveness. First of all, there is no tradition of such cooperation. Besides, it requires both the will to collaborate and maturity of the interested parties. It is crucial that representatives of the authorities can see a broader perspective than just the interests of a given city or municipality. Cooperation may take various legal forms. Below, relevant experiences of other Polish towns are described.

An example of economic cooperation is the Wrocław Regional Development Agency established in 2005 on the initiative of the President of Wrocław and representatives of six neighbouring municipalities. It is a commercial law company whose current shareholders are 30 units of local government. The advantages of this legal form include, firstly, lower costs of functioning and, secondly, the fact of not being bound by the Polish Public Procurement Act. The company's tasks embrace: integration of the offer for investors, complex services for the companies interested in investments as well as actions to the benefit of local governments: providing consultancy and services related to public procurements, public-private partnerships, EU projects and waste management.[5]

[4] Integrated Territorial Investments (ITI), as part of the financial perspective 2014–2020, are the EU support tool for actions in urban areas. ITIs will be carried out obligatorily in functional areas of 18 provincial towns and optionally in other towns of a regional or subregional character and their functional areas (provided that the provincial authorities take such decision). In order to realize it is, communal associations will be formed.

[5] The activities of the Wrocław Regional Development Agency come down to: (1) drawing up investment offers (investment plots, production buildings, storehouses, office spaces), (2) staging promotional campaigns, (3) organizing visits and arranging meetings with the authorities, scientists, and intermediate companies, (4) looking for sub-suppliers and trade partners, (5) lending support in administrative processes, e.g. obtaining permits and licenses, (6) helping in applying for visas, (7) advising on public aid (see http://www.araw.pl).

Another instance of the core city's involvement in agglomeration cooperation is Poznań. In 2007 representatives of Poznań, the district of Poznań and the municipalities adjacent to Poznań entered into an agreement whereby the Poznań Agglomeration Council was set up.[6] Next, as a result of an agreement between the local governments sitting on the Poznań Agglomeration Council and the universities of Poznań, the Centre of Metropolitan Research was founded.[7] With time, the Council, striving after bigger institutionalization, was transformed into the Poznań Metropolis Association. The Association, gathering now 21 municipalities and the district of Poznań, has the aim to support the idea of local government and cooperate in socio-economic development of the agglomeration. The Council, and subsequently the Association, has also coordinated the formation of special-purpose associations for rendering public services such as the Poznań Agglomeration Waste Management Inter-Municipal Association.

Upper Silesia and Upper Silesian Coal Basin (polycentric area) has different characteristics from the metropolitan area of the Lublin region. Cooperation in this area is organised as part of the Municipal Transport Union of the Upper Silesian Industrial Region and the 'Silesia' Upper Silesian Metropolitan Association. Additionally, scholarly circles set up the Silesian Metropolitanization Processes Observatory Association whose aim is to gather information on social, cultural, political, and economic processes, conduct research on metropolitanization processes, enrich public debate with challenges and threats to the Silesian conurbation, discuss its chances, create a platform for sharing information and experiences between those interested in the issues of the Silesian conurbation.

[6] Cooperation within the frames of the Poznań Metropolis Association concerned: economic initiatives, actions for marketing and promotion, municipal services management, public transport, education, spatial policy, health care, initiatives connected with tourism and ecology and resolution of inhabitants' problems.

[7] The objectives of the Centre of Metropolitan Research include: diagnosing problems connected with the functioning of the Poznań agglomeration; initiating cooperation between the institute and the community in order to foster further development and increase both competitiveness and integrated management in urban areas; coordinating university research on the Poznań agglomeration; finally, conducting interdisciplinary research on strongly urbanized areas in Poland and in Europe. The Centre's work resulted in, inter alia, a cycle of publications – the Library of the Poznań Agglomeration.

An area in the north of Poland, around the cities of Gdańsk, Sopot and Gdynia, is an interesting example of various legal forms of integration. Cooperation there takes place within the frames of: the Metropolitan Council of Gdańsk Bay, Metropolitan Transport Union of Gdańsk Bay, Gdańsk Metropolitan Area Association and NORDA Metropolitan Forum of Commune Heads, Mayors, Presidents and Starostes.

The Metropolitan Council of Gdańsk Bay, established in 2003, is a weakly institutionalized form, based on cyclic gatherings. It is composed of representatives of 13 municipalities and 5 districts. The head of the provincial executive board chairs its sessions which are intended to work out joint positions. The Council managed to form the Metropolitan Transport Union of Gdańsk Bay in 2007. The aims of the Association are: to introduce and establish prices as well as account for the revenues from metropolitan tickets;[8] do research into the market of public transport services; programme development and plan offers of local public transport; and finally, apply an integrated system of collecting fees in member municipalities (Kołodziejski and Pastucha 2009, 30–5).

Integration activity in Pomerania greatly intensified in 2011, when the President of Gdańsk put forward an initiative to set up the Gdańsk Metropolitan Area Association to act for common interests, ensure a harmonious socio-economic development and improve the inhabitants' conditions of life. Two days before the founding meeting of the Association, the President of Gdynia announced setting up the NORDA Metropolitan Forum of Commune Heads, Mayors, Presidents[9] (the current name is the NORDA Metropolitan Forum of Commune Heads, Mayors, Presidents and Starostes), an entity of a competitive character to the Association. The Forum is a cooperation of local governments of Northern Pomerania based on voluntary and regular meetings. The declaration of accession was signed by representatives of 16 towns and municipalities. Since 2013, the expanded Forum has gathered 21 units of local government.

To sum up, Lublin and its neighbouring local governments should

[8] The metropolitan ticket was introduced in the Tricity in 2008.

[9] Among the tasks allocated to the Forum there are: integrated municipal services and development policy, joint economic promotion and an integrated policy of education, tourism and safety etc. (see http://www.gdynia.pl/wydarzenia/70_71738.html).

work out a legal form of cooperation adjusted to the conditions of the Lublin region.[10] The experiences of other towns outlined above may become a hint in this respect. The first step towards integration could be to enlarge the membership composition of the Council so as to include the adjacent municipalities and transform the Development Council[11] into the Development Council of the Lublin Functional Area. Moreover, the academic environment, representatives of local governments and other interested parties need to become involved in research, on the pattern of the Centre of Metropolitan Research in Poznań or the Metropolitanization Processes Observatory Association. This will allow the establishing of the expert base for the integration process and the identification of the potential shown by each unit of the functional/metropolitan area of Lublin.

Each solution assumes that individual municipalities can define their long-term needs, interests and problems which require shared actions to be dealt with. It is a challenge and simultaneously a test of how well the local authorities function to build a formula for possible

[10] It is worth adding that the first integration actions within the frames of the Lublin Functional Area were taken on 14 January 2014 when representatives of Lublin government and adjacent municipalities entered into an agreement as part of the project 'Cooperation of local government units as a factor of the development of the Lublin Functional Area.' The aim of the project, financed at the amount of PLN 2.2 million from the Technical Assistance Operational Programme, is to map out a strategy for development of the Lublin Functional Area and, in prospect, to build an integrated bus station in Lublin, create a coherent and user-friendly public transport system and improve the road network(see http://www.um.lublin.pl/um/index.php?t=200&id=204882).

[11] The Lublin Development Council is a consultative and advisory body of the President of Lublin. It is composed of 59 members, including representatives of universities, local business and organisations acting to the benefit of the city's development. The Council's tasks include: to initiate cooperation between entrepreneurs, higher education institutions and business institutions for the sake of the city's development; participate in the works on the strategy of the city's economic development; support the policy conducted by the city's authorities which is intended to develop the Lublin agglomeration; give opinions on the applications filed by representatives of business and science as regards socio-economic development of the city; support local and regional institutions which serve to foster entrepreneurship, in particular through innovative sectors; support local economy development based on knowledge, taking account of the sustainable development and social cohesion rules (see http://www.lublin.eu/Rada_Rozwoju_Lublina-2-2323.html).

cooperation. The institutionalisation of cooperation will fail to bring success if representatives of local governments do not prove that they are ready for such collaboration and, above all, the self-limitation of their competencies for the sake of the common entity. The ability to conciliate, especially among the elites which exercise power, is one of the main problems in Poland. After all, thanks to the concentrated potential of individual local government units, barriers to the development are overcome, while economies of scale and development chances of both individual units of local government and the whole functional area improve.

Internationalisation of the Position of Lublin

The metropolitan strength of Lublin, compared with other big Polish cities, remains insignificant, in spite of some discernible growth dynamics. This is confirmed by the results of the Ranking of the Metropolitan Character of Polish Towns carried out by the Institute for Competitive Economy of Regions[12] (table 1). The development of the material and human resource infrastructure of metropolitan

[12] In order to analyse the metropolitan strength, the data about the following factors was used: (1) *infrastructure and quality of life* – defined with the data on the so-called economics of leisure time. The said data concerned: the number of showings, theatre performances and concerts, exhibitions and expositions in art galleries; the location of the quality-of-life institutions (concert halls, opera houses and theatres); quality of education; number of top class games played in the season; number of hotels of the highest class; and the scale of the airport. In 2009 one more factor was taken into consideration, namely modern commercial centres (shopping centres with entertainment services) per one inhabitant; (2) *strength and modernity of economy* – measured in 2008 with the statistical data on an average income in services for companies and real estate, share of the number of company employees in the whole population, granted patents, registered utility models, level of capital expenditures for market services, location of large enterprises, and seats of media companies. On the other hand, the following factors were taken into account in the analysis of the strength and modernity of economy in 2009: the number of employees in companies expressed as a percent of population, percent of total capital expenditures for market services, number of '500 of *Rzeczpospolita*,' GDP per capita, total capital expenditures in enterprises, balance of migration, share of students in the city compared with the total number of students in Poland; (3) while studying *business networks and concentration of processes*, enterprises of advanced business services were taken into consideration whose location decisions highlight demand on a given type and standard of services; these are companies from the top positions of trade rankings: legal services, consulting, advertisement, public relations, real estate agency, banking,

TABLE 1 Ranking of the Metropolitan Character of Polish Towns Conducted by Nordea Metrox

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2008	100	21.23	17.05	15.40	13.16	12.60	8.52	5.93
2009	100	21.86	18.11	19.68	16.13	16.35	9.01	6.45
2010	100	19.17	16.83	18.77	15.24	15.18	8.61	6.05
Year	(1)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2008	100	4.69	3.99	3.98	3.84	3.74	3.45	3.40
2009	100	4.76	4.12	4.20	3.70	4.52	4.20	2.82
2010	100	5.29	3.87	5.06	3.69	5.49	4.47	3.09

NOTES Column headings are as follows: (1) Warsaw, (2) Crakow, (3) Poznań, (4) Wrocław, (5) Silesia, (6) Tricity, (7) Łódź, (8) Szczecin, (9) Rzeszów, (10) Olsztyn, (11) Lublin, (12) Toruń, (13) Bydgoszcz, (14) Białystok, (15) Kielce. Adapted from Grociak (2008; 2009; 2010).

functions is hampered by an unfavourable economic situation of the whole province (Polska 2012, 39). In these circumstances, internationalization of the position of Lublin should have a selective character, geared towards realizing the chosen priority directions such as: to strengthen the role of the city as a centre for Eastern competences and develop cooperation between business and science.

Centre for Eastern Competences

The location at the eastern border of the EU and historically formed multiculturalism both highlight the need for Lublin to strengthen its role as a centre of eastern competences, especially that the city has already some pertinent experience. This is confirmed by the output of the Institute of East-Central Europe, activity of the European College of Polish and Ukrainian Universities (now the Centre for Eastern Europe, a scientific-research facility of Maria Curie-Skłodowska University), East European Studies offered by the Faculty of Political Science of UMCS or support for changes in the states of Middle and Eastern Europe as part of the Lane Kirkland Scholarship Programme.

It ought to be stated that not only experience but also real interest in continuing their education in Lublin, shown by citizens from

insurance, and teleinformatics (Grociak 2008; 2009; 2010; Kuć-Czajkowska 2010, 77–9), see also Kuć-Czajkowska and Michałowski (2009, 194–206) to learn more about the function of Lublin.

East-Central Europe, make it possible to create specialized fields of studies, educational institutions or focus research on the East. Actions to turn Lublin into an international academic centre (mainly for students from East European countries) have been already taken. Lublin authorities appointed the President's Plenipotentiary for Cooperation with Higher Education Institutions and the Eastern Partnership. Moreover, in 2011 the City Hall of Lublin launched a website 'Study in Lublin'[13] available in English, Ukrainian and Russian. The internet page allows students from abroad to check programmes which can be taken in English and scholarships which can be applied for. The role of guides through the website is performed by young people studying in Lublin (Łucyk 2014).

Another example of the efforts to encourage students from behind the Eastern border to study in Lublin is the establishment of the Information Centre of Maria Curie-Skłodowska University (UMCS). UMCS opened its Office in Lviv as the first university from Lublin. It imparts information about the studies at UMCS, recruitment conditions and language courses. The promotion of the university in the country bordering Poland is intended to entice young people to study in Lublin, especially that Ukrainians are already the largest group of foreign students at UMCS.[14] As far as the initiatives of other Lublin

[13] See: http://study.lublin.eu/en

[14] It results from the report 'Foreign Students in Poland 2012,' drawn up by the Perspektywy Education Foundation (Perspektywy 2012), that Ukrainians are the most numerous group of foreign students in Poland. They are one third of all foreigners studying full time: almost 10,000 from among the total number of over 29,000. If Byelorussians are taken into account, then students from the East constitute half of all foreign students. It is worth adding that the biggest number of foreigners from behind the Eastern border study in the higher education institutions in the Lublin Province and Podlaskie Province. In the very city of Lublin 67 students were enrolled in 2011, a year later there were 239 such students, while during the recruitment process in 2013 as many as 400 people registered (Łucyk 2014; 'Biuro informacyjne UMCS we Lwowie' 2013). Research conducted by K. Kuć-Czajkowska among public and non-public higher education institutions revealed that the number of students from abroad in the academic year 2008/2009 fluctuated around 1400 students and PhD students. The highest number of them studied at the Medical University of Lublin, which was followed in this respect by the John Paul II Catholic University of Lublin and Maria Curie-Skłodowska University. These were representatives of the Eastern European countries (Belarus, Ukraine, Lithuania, Russia) and Western Europe (France, Sweden, Great Britain, Portugal, Germany) (Kuć-Czajkowska and Michałowski 2009, 198). In the

universities are concerned, the Catholic University of Lublin (KUL) cooperates with the John Paul II Foundation which covers the costs of education for about 150 scholarship holders from the countries of Eastern Europe ('Biuro informacyjne UMCS we Lwowie' 2013).

It is a challenge for higher education institutions and the city's authorities to make Lublin attractive as a place for studying for young people from abroad. It requires, on the one hand, that new English-language fields of studies be created and an integrated international promotion of the universities from Lublin be led, but on the other hand, that efficient service and support for foreign students be available on the spot and 'start-up kits' be prepared for them which would include such information as where to find a flat, where to eat, what and where should be done (Urząd Miasta Lublin 2013b, 25).

Lublin as a centre for Eastern competences has a chance of fostering the development of relations with the countries situated on the eastern border of the EU. The city authorities should make efforts to locate the centres of EU administration which use the borderland position and are connected with e.g. economic exchange (Kociuba 2005). The city is a natural bridge between Eastern and Western Europe. Inhabitants and companies have experience in business contacts on the Eastern European markets which – due to language barriers – are not easily accessible for Western businessmen (Kuciński et al. 2002). This is a chance to set up a centre for counselling and trade intermediary services as well as publish expert studies on the Eastern European issues. There is also another interrelated possibility, namely to build Lublin-based expert centres for competences in the law, economy, and culture of the Eastern Partnership countries, e.g. specialized law firms, consulting companies and tax advisory offices. The institutions of Lublin (foundations, associations, local authorities, companies) should complement academic cooperation by carrying out training and advisory activity, sharing Polish experience of the political transformation, reforms of local government administration and economic changes. The main areas of cooperation can include: reforms of public administration, formation of civil society, cooperation between public administration and

academic year 2012/2013 the number of foreign students was almost two times so high. There were 2385 foreigners studying in Lublin, while the universities of the greatest popularity were: the Medical University, UMCS and KUL.

non-governmental organisations. The role of Lublin as a centre for Eastern competences should also embrace the organisation of cyclic meetings among cross-border cooperation practitioners representing various fields and institutions: local governments, non-governmental organisations, science, culture, and economy, on the pattern of the Eastern Partnerships Culture Congress and the Eastern Europe Initiatives Congress (Urząd Miasta Lublin 2013a).

Cooperation between Business and Science

Lublin is the greatest academic centre in Eastern Poland. In the academic year 2012/2013 there were 9 higher education institutions in the city. The potential of Lublin, i.e. the large academic community[15] and relatively low costs of work, provides a basis for its playing the role of an international centre of economic life. Entities belonging to the section of professional, scientific and technical activities are of crucial importance for boosting the economic potential. In 2012 39.9% of all such entities from the Lublin Province were concentrated in the city of Lublin. The above indices confirm that, in this respect, the city's potential is the largest in the whole region. The advantage of Lublin concerns also registered business entities belonging to the section of information and communication as well as financial and insurance activities which constituted respectively 43% and 33.1% of such entities in the whole province. What still remains a challenge is the exploitation of this potential, identification of the desired directions of progress and, above all, ability to focus on these aspirations and aims by the possibly greatest number of entities (Gaczek et al. 2011).

Expansion of a high-technology industry, e.g. as part of the existing ICT Eastern Cluster, gives Lublin the chance of speeding up its development.[16] The opening of the Lublin Science and Technology Park and the Lublin Special Economic Zone helps to realize more

[15] 77,200 people studied in Lublin in the academic year 2012/2013. Simultaneously, the number of graduates amounted to 23,700 people in the academic year 2011/2012 (see www.stat.gov.pl).

[16] The ICT Eastern Cluster is an organisation which gathers research units and the sector of regional small and medium enterprises in order to produce a competitive advantage and foster innovative undertakings. At the moment it is formed by 103 institutions, including micro, small and medium enterprises and higher education institutions (see http://www.ecict.eu).

effectively the research and development potential as well as the innovative potential.

The condition for building a competitive advantage is to enhance innovativeness and ensure modernisation of the economy's structure. One option could be to use research laboratories at the higher education institutions in Lublin. The intellectual capacity of academic staff, combined with practice offered by business units, may lead to the acceleration of scientific and introductory works and ensure the transfer of scientific research results to business practice. Cooperation between science and business requires that entrepreneurs be provided information about research conducted in research facilities[17] (Gaczek et al. 2011, 9). It is worth considering to prepare a 'guidebook' of cooperation between higher education institutions and business which would be useful when the entrepreneur puts forward an offer of cooperation on a specific project. The 'guidebook' with the elaborated outlines of procedure would contain: the rules of efficient selection of specialists in a given field, the extent of liability and competence of the parties, matters connected with copyrights, payments, the communication strategy and data safety management. Such solution would reduce time of establishing cooperation (Łukasik et al. 2012).

The financial perspective of EU 2014–2020 is a chance to overcome mistrust and stimulate cooperation between the spheres of business and science because the funds for the projects supporting such partnerships have been set aside from the Regional Operational Programme of the Lublin Region. Such opportunities are also afforded by the financial means from other programmes, e.g. 'Horizon 2020.' Consequently, from 2014 one should concentrate on developing multilateral cooperation, paying special attention to clusters, especially that now a 'philosophy of clusters' is expected to be a preferred organisational form while applying for funds for innovative development. A network, a cluster or a consortium gathering companies,

[17] Such initiatives include e.g. the Centre for Innovation and Commercialisation of Research which was set up at Maria Curie-Skłodowska University. The Lublin Science and Technology Park, on the other hand, published a guidebook on commercialisation of scientific research (Zubrzycki et al. 2011), which gives advice on how to use research findings in business. The publication also contains examples of relevant good practices drawn from the Lublin University of Technology and University of Life Sciences in Lublin.

higher education institutions or research facilities – due to their potential and an adequate capital of competences – are becoming important partners.

The Lublin Business Club, aspiring to support entrepreneurship development in cooperation with the world of science, entered into an agreement with, inter alia, Maria Curie-Skłodowska University. If only one idea or one project comes from such initiatives, it is worth forming partnerships, building mutual trust and turning declarations into real actions. The opportunities provided by the EU perspective should be taken advantage of. The present time can be a breakthrough for Lublin and the adjacent local government units.

Conclusions

The area's economic potential is built in the long-term perspective. The promotion of the brand of Lublin on an international scale is an essential challenge in all the actions influencing the internationalisation of the city's position. The consciousness of potential investors (mainly from abroad) about Lublin, its chief assets, quality of life and size is still small (Urząd Miasta Lublin 2013b, 23–24). This region can attract investors with vacant investment areas, low costs of conducting business activity, availability of office spaces,[18] and, last but not least, highly qualified employees.

It seems necessary to intensify its promotion both in Poland and abroad. Lublin is a product which should be sold well. The city needs a well thought-out promotional strategy such as 'Discover Lublin Anew.' Especially due to the fact that many investors perceive the city from the angle of the whole province, as an area rather unattractive for investments and with a poor communications infrastructure. This image must absolutely be changed. In this context one cannot underestimate the ideas, adopted in the 2013–2020 Lublin Development Strategy, on how to build relations with the all-Poland and international media regarding the city's promotion and development of programmes for promoting the brand 'Lublin, City of Inspiration' and 'Lublin, Inspires Business.'

[18] The supply of office spaces in Lublin is estimated to be 117,000 square metres. Lublin is a centre of considerable attractiveness for investments due to relatively low costs of buying and renting office spaces (headline rents for the best office space amount to EUR 10–12/m^2/month, see DTZ 2013, 24).

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Lubelskie Voivodeship Development Strategy for the Years 2014–2020: Context of Metropolitan Lublin

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Introduction

The new regional policy developed and adopted in the European Union and in Poland (Ministerstwo Administracji i Cyfryzacji 2013; European Commission 2010) substantially changes its functions and tasks existing so far. Building competitive advantage based on innovation as well as intellectual and social capital, while exploiting and utilising the endogenic potential of regions, is becoming a fundamental challenge. In the new regional policy, supporting cities as generators of development and diffusion of innovations to the surroundings is becoming the fundamental priority.

So far, urban policy has not been a priority in Poland, whereas it is the cities where the human, financial and innovation capital is accumulated. Cities should be skilfully developed, and their degradation should be prevented. Urban development is influenced by operations of public authorities at all levels of administration, i.e. central, regional and local level. In Poland, work is currently underway to develop a separate National Urban Policy (Ministerstwo Rozwoju Regionalnego 2013, 9). In this way, the necessity to define the place and role of cities within the development strategy and its underlying strategic documents has been acknowledged.

Due to their importance, cities are also the centre of attention of the national spatial policy the underlying framework of which has been defined in the 'National Spatial Development Concept 2033' (NSDC) (Ministerstwo Rozwoju Regionalnego 2012), and regional policy defined in the 'National Strategy of Regional Development 2010–2020' (NSRD) (Ministerstwo Rozwoju Regionalnego 2011). The pro-

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Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 31–39.
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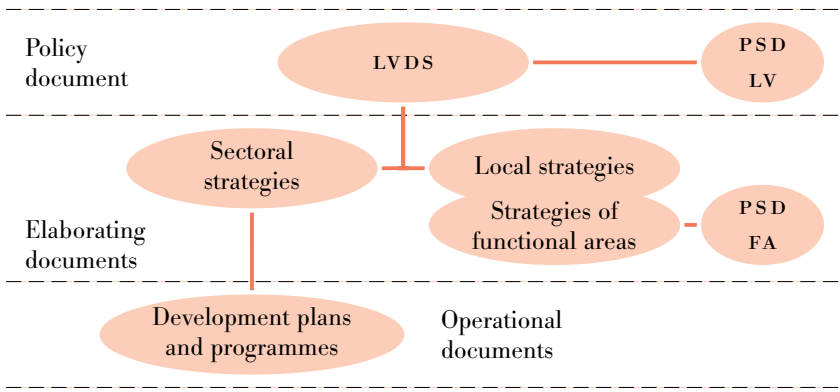

FIGURE 1 Order of Documents (adapted from Urząd Marszałkowski Województwa Lubelskiego w Lublinie 2012)

visions adopted in the NSDC and NSRD are the main premise for planned and systemic impact of public authorities on shaping the development policy for cities. These documents indicate the key elements of the policy as well as the potential activities with regard to the cities, the implementation of which directly implies the accomplishment of goals of the intended and desired regional and spatial policy also at the regional level.

Lubelskie Voivodeship Development Strategy: Underlying Assumptions

'The Lubelskie Voivodeship Development Strategy for the years 2014–2020' (Urząd Marszałkowski Województwa Lubelskiego w Lublinie 2014) is the most important policy paper which defines the vision, goals and directions for the development of the Lubelskie voivodeship. It constitutes the key policy paper for the region, and also the lead document for other documents, such as e.g. regional innovation strategy, spatial development plan, social policy strategy, strategy for cross-border cooperation, regional operational programme and other programmes.

The strategy has adopted a new time horizon until 2020, with the option to solve key and strategic problems until 2030. It is oriented to specific results and effects and puts emphasis on development-oriented activities and not those meant to equalise. The strategy is based on territorial approach, which is reflected in indicating Areas of Strategic Intervention (ASI) and Functional Areas (FA), is oriented

to mobilising regional and local initiatives – multi-level management. It also provides for the integrated approach, selectivity of choices and focusing the support on selected goals and tasks.

Special emphasis has been put in the Strategy on new elements of competitiveness, focus on regional specificity and regional development potentials plus seeking for synergic powers of external support. In addition, the Strategy contains a consensus with regard to difficult however the best choices for the region made in the course of the work, between the needs and the vision, focus and dispersion, equalising and effectiveness and protection and development.

As a result of the diagnostic analysis performed, the following key elements of the region's position have been identified:

- unfavourable social and occupational structure with the largest share of underperforming agriculture in Poland, insufficiency of high quality jobs, intensified emigration of young and educated people;
- low GDP per capita (the last but one position in Poland), outrunning only the Podkarpackie voivodeship), which permanently records the lowest GDP per capita in Poland;
- meager urbanisation;
- location (peripheral) in the low-development area;
- poor transport connection with the better-developed surrounding areas in the country and with foreign countrie;
- insufficient infrastructure which integrates space in the region;
- relatively considerable importance of Lublin as a national and international growth centre, a strong academic, scientific and cultural centre, the main Polish centre for contacts with the East, the main economic centre in the eastern part of Poland,
- considerable importance of sub-regional centres, such as Biała Podlaska, Chełm, Puławy, Zamość;
- relative abundance of natural factors, including energy resources, nature and landscapes, conditions for development of agriculture and specific industries;
- cultural heritage, e.g. base for developing tourism.

Based on the assessment and forecasts for the region it turns out that the Lubelskie voivodeship is facing specific, but also difficult

development-related challenges. If they are taken up successfully, the position of the region among voivodeships in Poland in terms of economic development and quality of life should improve. Improved ratios will be an adequate measure for the effectiveness of the Strategy implementation. Achieving the desired state which is outlined in the vision will require substantial efforts of the local self-government and as many entities interested in implementing the Strategy as possible.

The fundamental challenge adopted in the Strategy is to overcome the underdevelopment established through decades and visible compared to other regions. The following will serve this purpose:

1. accelerating structural changes through:
    - supporting development of companies and entrepreneurship,
    - supporting development of high-productivity sectors (technologically advanced and knowledge-based services),
    - improving qualifications of human resources to meet the needs of the region,
    - achieving functional, external and internal cohesion, e.g. by improving transport accessibility of growth centres;
2. neutralising and counteracting negative demographic trends,
3. rationalising and effective utilisation of human resources, including by counteracting 'brain drain.'

In the 2020 horizon (with the perspective until 2030), the following strategic goals for development of the Lublin region have been adopted:

- improving urbanisation in the region,
- restructuring of agriculture and development of rural areas,
- selective increasing of potential of knowledge, qualifications, technological advancement, entrepreneurship and innovation in the region,
- functional, spatial, social and cultural integration in the region.

The areas of strategic intervention (ASI) defined in the Strategy constitute a spatial reflection of development-related potentials and problems identified in the Lubelskie voivodeship. Defining ASI results from the assumed and adopted idea of focusing interventions

within the specific territory. Thus, through more detailed analyses the following seven Areas of Strategic Intervention have been identified. These are:

- Lublin Metropolitan Area,
- sub-regional cities,
- border areas,
- areas of economic utilisation of natural and cultural values,
- areas of potential exploitation of mineral deposits,
- areas of protection and development of water resources,
- modern villages.

Metropolitan Lublin in the Lubelskie Voivodeship Development Strategy

As global practice and experience show, cities are main centres of development in contemporary economy. Usually, they become 'development islands' both in terms of sub-regions and on the voivodeship scale. The accurate definition, ascribing great significance and role in the development Strategy may and should open new chances for additional funds to support development. Implementing a policy with regard to functional urban areas in voivodeship cities (FUA VC) is also necessary due to:

- accumulation of various phenomena, which frequently comprise spatial problems and conflicts,
- the level of complexity of social and economic as well as spatial issues which exist within their territory,
- development-related challenges in these areas.

It seems necessary to develop new planning solutions, i.e. the strategies and plans of spatial development of functional areas z (PSD FA). In addition, foundations should be prepared to develop better, more rational and effective management of the development policy in these areas, to improve coordination and effectiveness of public activities in these areas, as well as synergic use of EU funds under a new financial perspective.

Due to its demographic, social and economic, cultural and academic potential which is the greatest in Eastern Poland, Lublin is predisposed to become a flywheel for the development of not only

the Lubelskie voivodeship but also South-Eastern Poland. That being so, in the 'Lubelskie Voivodeship Development Strategy for the Years 2014–2020' Lublin is analysed in three dimensions:

- regional dimension as one of the main development potentials,
- national dimension as a centre of science and knowledge, innovation and economy for Eastern Poland,
- European dimension – functions of cooperation with the East, administrative and economic functions for Europe.

It should be stressed that in the Lubelskie Voivodeship Development Strategy, strategic goal 'Improving urbanisation in the region' is substantially dedicated to Lublin and will be accomplished by implementing a package of undertakings defined in the following operational goals:

- developing metropolitan functions of Lublin as the main city in Eastern Poland which gathers economic, scientific and cultural contacts with the world, especially with eastern neighbours,
- supporting supra-local functions of cities (e.g. scientific, academic, cultural, tourism-related) which contribute to the more dynamic development of these cities and their surroundings,
- improving transport connections between Lublin and metropolitan areas in Poland and abroad.

Apart from the goals and directions which are strictly dedicated to Lublin, we should see the chances arising from the provisions of other goals included in the LVDS, and in particular those related to e.g. entrepreneurship, regional integration and tourism. Examples of support directions may include:

- creating infrastructure for the business,
- development of the low-emission system of city transport,
- development of social infrastructure with significant development-oriented scope,
- comprehensive redevelopment and improvement of municipal infrastructure,
- supporting the most promising directions in research and commercialization of its results,

FIGURE 2 Transport Connections between Lublin and Other Cities Home and Abroad

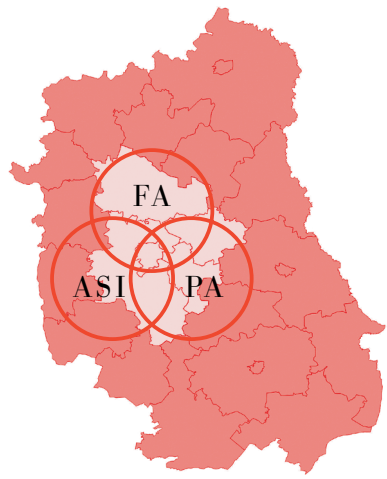

FIGURE 3 Context of Lublin in the Lubelskie Voivodeship Development Strategy

- supporting higher education profiles which are of particular importance for the future labour market in the region and which are of unique importance on the supra-regional scale,
- developing a system of scientific, expert and implementation-related support for development of selected economic sectors,
- developing the education system tailored to the specificity of the region,
- supporting small and medium-sized enterprises,
- improvement in transport connections between sub-regional centres and their connections with Lublin,
- building and modernisation of national and international roads,
- development of road infrastructure and modernisation of key voivodeship roads,
- modernisation and improvement in functioning of regional railway connections.

The 'Lubelskie Voivodeship Development Strategy for the years 2014–2020' (Urząd Marszałkowski Województwa Lubelskiego w Lublinie 2014) attributes a special role and considerable importance

to Lublin in terms of regional development. By that, the Strategy creates friendly surroundings and conditions for implementing development-oriented projects and for seeking various financing sources. Within the new Strategy, Lublin is perceived as (figure 3):

- functional area (FA – acc. to NSDC),
- problematic area (PA – where spatial, functional and other conflicts accumulate),
- area of strategic intervention (ASI – acc. to NSRD).

Summary

Development of the Lubelskie voivodeship is closely connected with development of the metropolitan area, i.e. Lublin. The provisions included in the Voivodeship Development Strategy, which were drawn up in close relation to the assumptions for the 'Lublin Development Strategy for the years 2013–2020' developed at that time (Urząd Miasta Lublin 2013, 7) are an example of good cooperation of Lublin authorities and regional authorities (Sagan 2012). This synergy is needed not only at the stage of the strategic planning process with regard to both self-governments, the culmination of which was development of key strategic documents for the Lubelskie voivodeship and for Lublin, but first of all at the stage of implementing both strategies. Metropolitan Lublin, which is the only city in Eastern Poland with such a status, owing to skilful absorption of EU funds from the 2014–2020 budget has a chance not only for quick development within its own administrative limits, but also for making use of the potential of the whole city and human resources accumulated there plus the aggregated demand of its inhabitants (which should be skilfully addressed also to groups of specialised services provided in Lublin). That being so, the metropolis of Lublin will not reach the same level of economic growth without well-functioning surroundings. On the other hand, a dynamic metropolis of Lublin will spur development and diffusion of affluence not only to the immediate surroundings but also to a substantial part of the region, in particular in its Western part. In the circumstances of good cooperation and developing a network which comprises Lublin metropolis as well as sub-regional and regional cities, it is also possible to accelerate development in these cities (also within their functional areas). Negative processes of metropolisation which are connected with the spread of

Lublin (losing inhabitants and taxes by the metropolitan area, transportation problems, etc.) can be overcome only through close, institutionalised metropolitan cooperation. It should be stressed that the Lublin agglomeration is still an attractive place of living for inhabitants of Eastern Poland – their number both in the so-called big agglomeration and in the Lublin Functional Area has been systematically growing since the beginning of the first decade of the 21st century.

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International Cooperation Networks as Development Impulse for Lublin

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Introduction

In the first chapter the author presents aspirations City of Lublin towards unlocking operational development potential by participating cities in international cooperation networks, international learning and exchange of good practices and experiences. Apart from theoretical considerations, the publication presents ongoing projects of the City of Lublin.

It is difficult to indicate what activity in building international links would be expected from the local government. Lublin City Office integrates various areas of activity of the inhabitants of the city – as shown by the data, it creates project networks involving activities related to support of entrepreneurship, transfer of good practices and local culture. There are also projects aiming at building relationships in the Areas of Development (for example Academic Spirit) specified in the 'Lublin Development Strategy for 2013–2020' (Urząd Miasta Lublin 2013) The data presented is intended to indicate the direction in which the Authority is developing its networks as a key player of the integration in the city.

Considering the development of modern cities, it should be emphasized at the beginning that this is a process that takes place on various levels. Multidimensionality of the city is a key element that must be examined in the process of strategic planning. Currently, detailed descriptions of various aspects of the functions that the city performs must be merged in order take clear view on this subject.

A great deal of scholars dealing with urban development emphasize that international processes exert an increasing impact on transformations in urban structures. As a result of early observations it was possible to distinguish a system of the cities of the world, a kind of urban 'elite' that has emerged due to the international division of labour. These cities have become controllers and coordinators of financial markets, creators of new services, provided to business which,

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at this moment, must meet management requirements imposed in a globalized world of cross-border flows of resources in a broad sense

The processes of globalization of markets also resulted in stimulating a process of creating innovative class of polycentric urban configurations – networks of cities. According to David Batten a network city is formed when two or more previously independent cities, competently and comprehensively performing their functions, considerably expand the scope of markets in which the network city can operate. Relationships activities in research, education, and development of creative arts. Mechanisms of cooperation between cities resemble the mechanisms created between companies in the sense that each urban player has an opportunity to benefit from synergistic flow of knowledge and creativity exchange. Looking at global cities as key nodes of the international system of cities is also related to rapid development of information technology and telecommunications. However, these operating powers exert influence more aspects and subjects than just on the greatest metropolitan centre in the world.

The connections between cities created across borders reflect selective inclusion of borderline areas into the global market system (Batten 1995, 313).

According to Christopher Wrana, a city is perceived by entities representing different sectors as space for action. However it is assessed from the perspective of opportunities and facilities supporting achievement of aspirations. The development of a city can be seen as the result of a *specific game* in which entities play with each other to establish good relationships. An image of a city results from entities producing effects. Additionally, a measure of strength of a city is its ability to create development in terms of quality, i.e. the ability to generate new solutions and new innovative processes. Krzysztof Wrana emphasizes that 'the pace of development and the character of contemporary cities is determined equally by unconventional ability to use the city's resources in order to produce innovative ideas, as well as the skills and competences of necessary to function in different cooperation networks' (Wrana 2013, 7).

At this point, the concept of integration in the internal dimension of the city should be mentioned as it is defined by the previously quoted Christopher Wrana. This involves 'creating a long-term vision of development that would be attractive for local entities –

heroic but doable and, leading to achievement of important breakthrough values' (Wrana 2013, 9). If 'Lublin Development Strategy for the Years 2013-2020' was considered in the above mentioned categories, it could become a manifesto of values and ambitious ideas since because it has been based on the assumption that openness to mental change is a key element in unlocking endogenous potential of the city. The main strategic document indicated that Lublin is a city (Urząd Miasta Lublin 2013, 24):

- open to external inspirations,
- open to internal inspirations, including the ones provided by the residents,
- being itself a source of inspiration – showing new patterns and directions useful for others.

This means that the inspiration within the integration space of the city will flow easily. Wrana defines this integration space, pointing its elements, such as vision of development, trust, dynamic space of the city, regional networks of cities, transregional networks of cities and local networks (Wrana 2013, 11). He also adds that 'the rank of cities depends on their ability to inspire and shape the environment and, consequently, to create cooperation networks whose axis is a specific city' (Wrana 2013, 11). Cooperation network created by a specific city is essential for its development. It is a kind of 'attractor' it attracts trajectories that are located in its close proximity. Transregional networks development, and in particular international cooperation networks make flow channels for the flow of resources.

It is worth refering to HVLT hypothesis (Hoover, Vernon, Lichtenburg, Thompson) according to which cities depending on their size, have different ability to concentrate innovative activities. This hypothesis emphasizes the unique competitive advantages due to which New York has developed great potential for producing goods whose innovation and continuous flow of information play the crucial role. The success achieved by New York results from strong links with external markets following from the relationships between companies. Due to such links it is now possible to stimulate economic growth of a city as a centre of financial services (Batten 1995, 315–6).

The above-mentioned example may meet with opposition that it should not be quoted in the context of Lublin. Although there is evidence that the size and capacity of innovation are interdependent

from and interrelated with each other, recently, it has been clear that some of the innovative economic growth, which traditionally resided in the United States and major European cities, can also develop in smaller towns. Innovative activity of multinationals can be stimulated in a variety of locations, as it is no longer reserved only for the largest cities. Such reversibility of the trend is consistent with the process of the formation of economy based on network connections. This results in plenty of changes, e.g. greater extent of internationalization simultaneously weakens and strengths the relative importance of the relationship established between regions international links (Batten 1995, 313–6).

It becomes natural that for larger cities building stronger links with creativity centers is equivalent to looking for markets and it can be strengthened by transferring innovation and creative exchange of knowledge in creative way. These trends mean that the size of cities becomes less important than it used to be in the past. For smaller cities there is a chance to 'start a career' and start establishing intensive contacts, participate in mutual exchange and market activity (Batten 1995, 316).

Saskia Sassen shows an interesting approach to the problem of international cooperation and exchange between cities. She presents, among others, a significant problem of the lack of complete knowledge, which becomes the driving force behind the exchange processes taking place between companies. She justifies that the more digitized and globalized business activities become, the more severe problem of incomplete knowledge becomes and causes more dependencies. With regard to the specificity of the problem of incomplete knowledge of the city, especially in the case of global cities, it becomes necessary to get engaged in a greater number of diverse networks. Thus, however, in the long term results in creating information loops. Sassen emphasizes that professionals from different parts of the world produce a type of knowledge capital, which she refers to *urban knowledge capital*, which is much greater than the total of knowledge demonstrated by professionals and business entities operating in cities involved in the flow process. According to Saskia Sassen, it is the said capital which is the key element of economic production of functions performed by a global city. Every global city is a part of network of producing urban knowledge capital. The process of globalization stimulates specialty differenti-

ation between cities. Sassen also points out that different types of knowledge generated by each city can be a valuable source of information for other cities. Each city acquires additional knowledge as a consequence of using knowledge and discoveries of other cities (Sassen 2010, 152–3). The above-mentioned arguments result in total change in the perception of the role of smaller towns in the exchange process. It means also that smaller towns; located in the centre of a which even used to be called 'peripheral,' not only are consumers of products made in global cities, but also, to a greater extent than ever, join the production and distribution of useful knowledge. In this perspective, Lublin's ability to engage in this process may be, among others specializing in managing relations with its eastern neighbours.

Lublin 'Europe's Gateway to the East?'

Development of external relations is the second objective in the Development Area: Openness in 'Lublin Development Strategy for the Years 2013–2020.' Fostering openness as well as economic, social and scientific relations is a necessary condition for positive development of each local community. External Relations do not only include mobility of members of the community, but also great opportunities for the flow (both high-tide and low-tide) of new ideas and knowledge. In the era of digititalization, building links was completely changed its character. Participation in collaborative networks connecting cities having similar features, problems and aspirations, such as Eurocities, Intercultural Cities, INTA and URBACT, is the key element in the learning process that cities go through. 'Participation in international projects carried out by various communities and institutions, contributes to development of their competencies, provides access to new ideas, helps to break the deadlock, facilitates evaluating changes civilization and respond to them with appropriate decisions.' (Urząd Miasta Lublin 2013, 32)

Referring to the aforementioned integration of the city, it is also worth considering the local potential of Lublin. The strategy covers the issue of eastern relationships being built by Lublin citizens. The document indicates that the flagship operation in this regard will involve the activity of the Centre for Eastern Competences. Important factors that determine the success of the project include location, cultural affinity, and, what results therefrom, 'understanding of the

problems of the Eastern Partnership countries' (Urząd Miasta Lublin 2013, 32). Transfer of knowledge and good practices will take place in such areas as: civil society, management and administration, culture, education, business relationships, social innovation, and sustainable development.

In the context of the provisions contained in the strategic document of the city, the most important questions that should be raised, include: whether Lublin is able to act as a gatekeeper in the rapidly emerging network of international cooperation and become a real 'Gateway to the East' for the European Union countries – a bridge between the East and the West; whether visitors from the West will need an intermediary in relations with the East it is and whether this Lublin with its potential that will be able to cope with such a task? When will discussed in the process of building relationships eastern make that Lublin reach critical mass and become a center of attraction for partners from western countries looking for cooperation opportunities with partners from eastern countries?

In an attempt to answer these questions, we can refer to social network analysis (SNA), which introduced the concept of gatekeeper (Monge and Contractor 2003, 32) it perfectly describes the aspirations of Lublin and the nature and position to which the city aspires to be in terms of international networks. Gatekeeper exercises power by controlling access. Fundamental questions related to the role played by the gatekeeper include: what determines the strength of the gatekeeper power over the client and how the real power can be measured? Does the 'guardian of access' have to monopolize access to reap the benefits of its position? (Corra and Willer 2002, 182)

The last question seems to be particularly important because of other competitors for the title of the intermediary in contacts with western countries and the countries in Eastern Europe. In the group of cities in Eastern Poland, i.e. – Białystok, Olsztyn, Rzeszów and Kielce, Lublin is the undisputed leader because it has the greatest economic, academic, tourism, cultural potential and attracts the greatest number of creative class representatives. Capital accumulated in form of tangible and intangible assets will allow the city to maintain its leading position in Poland and Eastern Europe and can bridge the development gap between the Eastern and Western Poland including Warsaw. 'Access to "locomotives of development" (domes-

tic access, as well as through "mechanism for internationalization of the city")' (Sagan 2012, 147–68) is indicated as the condition for development.

Trying to answer the question about Lublin's role: can Lublin become a leading expert in the field of relationships eastern it is worth mentioning Grewal's opinion, who presented the process of globalization and internationalization from the perspective of network analysis. According to him the globalization process concerns social coordination between multiple-networked actors. This unique coordination requires defining of standards that facilitate global coordination. These standards are reflected in the concepts power and authority of network, which combine two ideas:

- firstly, the value of coordination and integration standards is proportional the number of people using them,
- secondly, this dynamics can lead to progressive elimination of other alternatives, by which free choice can be practiced collectively.

The emerging global standards provide solutions for emerging problems of coordination arising between various interaction participants, yet this process of attaching more importance to one specific solution also means that the other alternative solutions to the same problem must be eliminated (Grewal 2008, 5). Therefore, the ability to insist on using a specific solution also depends whether of all stakeholders of the process will accept this particular solution. Moreover, it is conditional to impose a standard that is widely accepted by most stakeholders involved in the process, e.g., accepting by all competing cities the fact that a city has the greatest competence to be a mediator in the network.

Castells claims that the shape of social institutions and organizations influencing human actions is dependent on the interaction of power (he uses the concepts of power and counterpower). Therefore, power in the network is also a multidimensional phenomenon and occurs around the multidimensional network programmed in any field of human activity, referring to interests and values of the actors involved. The most crucial forms of exercising power in the network are formed based on two basic mechanisms: first, ability to constitute a network, as well as program and reprogram it in the context of objectives assigned to be attained by a network. Second,

ability to connect and confirm cooperation between different networks by sharing purposes and combining resources in order to fight off networks by establishing strategic cooperation. Castells refers to actors located on the first kind of position of power as 'programmers' whereas the second type is called 'switchers' (Castells 2011, 773–6). At the same time, he raises the following question: Is Lublin more of 'a network programmer' or is it more of an intermediary? The first way of network development is synonymous with clear concentration of activity in the networking process focus on Eastern Partners. The second way involves balancing and developing the relationship in two ways: with partners in the western and eastern countries.

Analyzing data on foreign trips taken by employees of the City Office in the City of Lublin, clearly indicates the main direction in building relationships. The number of trips abroad remained in the years 2010–2013 at similar level. 2013 was a particularly intense year, mostly due to launching and running new projects in partnership with other countries. The direction of developing eastern relationships is clearly emphasized here but the western direction does not differ significantly from that level. Hence, one could state that there is a relative balance – the relationships fostered with the West have remained constant for the last four years, but relations with the East have significantly strengthened over the past two years.

Table 2 (pp. 50–51) presents projects participated by foreign partners (projects led by the City of Lublin). The data clearly demonstrate the gravity towards the east, whereas project networks concern various development issues. Nine projects are funded from the resources available within the CBC Poland-Belarus-Ukraine Programme. The second group, in terms of importance, includes projects carried out within URBACT II network, e.g. among others, 'EUniverCities' project presented below.

It is particularly worth mentioning two projects. Why? Because as a result of them local action plans for Lublin will be developed. This is also very important from the perspective of disseminating culture of planning (not just strategic planned).

The first project is an international Swiss project 'Lublin for All,' resulting in integrating environment having contact with foreigners. The aim of the project is to develop and implement participatory management of cultural diversity in the city. The Lublin City Office has entered into partnership with the NGO sector and other ac-

TABLE 1 Directions of Foreign Missions of Employees of the City of Lublin

Directions of foreign missions	2010	2011	2012	2013
Ukrainian and Belarusian cities[a]	42	39	40	56
Russian cities[b]	1	1	2	5
Other cities outside the EU[c]	4	5	5	14
Cities of EU countries[d]	44	37	38	44
Non-European cities[e]	3	4	5	2

NOTES [a] Ukrainian and Belarusian cities: closest neighbours, projects with CBC Programme Poland-Belarus-Ukraine 2007–2013 (and European funds prior to the program), development level cities objectives of the Eastern Partnership (since 2009), cooperation with Polish organizations. [b] Russian cities: growing interest of both parties in establishing lasting contacts, successful exchange with Omsk. [c] Other cities outside the EU started in recent years and developing contacts among other things, with the towns of Georgian, Serbian, Turkish. [d] Cities of EU countries: the twin cities of Lublin, activities of the network of European cities 'Eurocities,' participation in European projects of the Town-Twinning program, Youth in Action, URBACT and others; in subsequent years 2007–2010 – intensive cooperation with foreign partners in preparing of applications for the competition Lublin ECOC 2020 contest. [e] Non-European cities: economic missions and presentations, especially organized by PAIiIZ. Based on data from Lublin City Office (www.um.lublin.eu).

tors in various aspects of serving foreigners. Together they form a Support Group, whose mission is to develop solutions for a broad-based coalition. Project implementation involved conducting qualitative and quantitative research on the attitude adopted by the citizens of Lublin to other nationalities and ethnic groups. One of the results involved preparing educational materials on multiculturalismin the context of Lublin. The Group is planning to create a system of training workshops for teachers, students, and officials as well as an internal system of diversity management for offices. This system is to consist of the following elements:

- Multiculturalism coordinator working in the City Office, who will be responsible for issues concerning 'care' and integration and will be a point of contact for organizations, minority groups and universities in the said scope.
- Integrated tool to inform people interested in multiculturalism, such as a website or a calendar of public bonding events.

'Lublin for all' is not the exclusive project in which major role is played by strategic planning and creation of new reality based on

TABLE 2 Projects Implemented by the City of Lublin with Foreign Partners in the Years 2010–2013

Name of the project	Programme	(1)	(2)	(3)	(4)
Department of Non-Investment Projects					
1. Cities for Business Innovation – Network of Urban Procure	7th Framework Programme	275541	255234		20307
2. SOS – safe coexistence of people and homeless animals in the Polish-Ukrainian borderland Lviv, Lublin, Lutsk and Ivano-Frankivsk	PL-BY-UA	205976	185377		20599
3. Improving the provision of administrative services for the residents of border regions by creating a network of centers providing administrative services and developing cooperation between the Centre of Providing Services Administration in Lutsk, Centre of Providing Administrative Services in Ivano-Frankivsk and Office Citizen Service Office in Lublin	PL-BY-UA	423456	373615		49841
4. Cooperation of municipalities from Równe and Lublin as part of the developmental process of the cross-border area	PL-BY-UA	564743	552106		12637
5. A student with an initiative: energy saving vector	PL-BY-UA	375776	338200		37576
6. Development of SMEs in Równe and Lublin	PL-BY-UA	279661	264939		14722
7. HERMAN – management of cultural heritage in Central Europe	Programme Central Europe 2007–2013	825350	701547		123803
8. Experience exchange – Swiss benchmark in Lublin	Swiss-Polish Cooperation Programme	761471	685323	29636	46512
9. USER – sustainable and efficient urban revitalization	URBACT II	24990	19992		
10. USER – changes and conflicts in the public spaces	URBACT II	194460	155568		38892
Mayor's Office					
1. EKOWAS – awareness of environmentally friendly behavior in the field of waste management	Europe for Citizens	76104	76104		
2. Cultural heritage and development of sustainable tourism – experience exchange and good practices	Ministry of Foreign Affairs Nancy	46410	16216		30194

3. Improving HR skills in project management the Cultural sector in Lublin and Lviv	PL-BY-UA	201244	191435		9809
4. PAS – innovative tool for the socialized process monitoring	The Operational Programme Human Capital 2007–2013	60000	51000	9000	0
5. Lublin for All – participation as a model of diversity management	Swiss-Polish Cooperation Programme	747997	673190		74807
Culture Department					
1. Investment in culture	PL-BY-UA	3437040	3276597	160443	
2. Closer together: three cultures, one Europe – collaboration of cultural institutions, NGOs and entertainment institutions	PL-BY-UA	732879	659591	73288	
Organisational Department					
1. Cities of development – Polish and Ukrainian experiences in building a modern local government	Polish Aid Ministry of Foreign Affairs	420367	0	317447	102920
2. European standards for project collaboration in Lutsk and Lublin	Programme for cross-border projects in the Bug Euroregion	106373	90417	0	15956
Department of Strategy and Investor Assistance					
1. EUniverCities – city university partnership for development of sustainable economies and urban communities	URBACT II	63000	50400		
2. eUnivercities – city university partnership for the development of sustainable economies and urban communities	URBACT II	219660	175728		43932
Planning Department					
1. Hero	URBACT II	14350	121975		
European Funds Department					
1. My city in our Europe – international meeting of youth councils of partner cities organised in Lublin	Regional Operational Programme Lubelskie Voivodeship 2007–2013	79985	55990	0	23996

NOTES Column headings are as follows: (1) the total value of the project (PLN), (2) the funding from the EU (PLN), (3) co-financing from national funds (PLN), (4) amount of downpayment (PLN).

the communication between project stakeholders. Another project, which is worth mentioning is 'EUniverCities' which is carried out by cities participating in the URBACT network. It will result in launching a long-term cooperation programme between universities and the city. It aims at creating a Local Action Plan. Lublin benefits from the experience of cooperation with other cities and European universities participating in the project. The programme will be also a sectoral strategy enabling strategy guidelines to be applied in the Area of Academic Spirit specified in 'Lublin Development Strategy for the Years 2013–2020.'

The main project objective to be accomplished is to create conditions necessary for development of universities in Lublin by making the city more attractive in terms of appropriate technical infrastructure, cultural, business and labor market and international cooperation. In addition to the main theme, there are also four subject-area axes common to all partner cities:

- Creating a living laboratories; providing assistance in solving social and economic problems of the city. Structural solution: creating new structures common to the city and the university.
- Making the city more attractive for students and researchers: internationalization, hospitable city, marketing and promotion.
- Promoting and supporting knowledge-based economy, technology transfer, cooperation with local government units across the region.
- Effective partnership – a university-city and its determinants.

Finally, it worth mentioning yet another important project, i.e. 'Study in Lublin,' run by the Department of Strategy and Investor Services of the City of Lublin launched in September 2011. The main objectives of the project include increasing the number of foreign students attending universities in Lublin, developing of intellectual capital in Lublin and Lublin Province (increasing the number of people who speak foreign languages fluently), carrying out extracurricular activities promoting language learning (free Polish lessons for foreigners, language 'exchange' between the Polish and the English, Chinese, Norwegian and Ukrainian people.). It is important to provide reliable information about Lublin academic offer of universities and procedures for legalizing the stay in Poland. One of the effects of

the project involves internationalizing the entire urban community. After graduation, foreign students become ambassadors of Lublin and may advertise the city as a place offering great opportunities for studing and development. With reference to the internationalization of universities in Lublin, it should be emphasized that the Medical University of Lublin ranks fourth in Poland among the leading universities in terms of the number of foreign students learning in Lublin in 2013 in the academic year 2013–2014. Lublin took third place, after Cracow and Warsaw in the ranking of academic cities, with the greatest number of foreign students.

In the recent years, we have observed a specific phenomenon of 'Ukrainianisation' occurring on some Polish universities. According to the *Study in Poland: Foreign Students in Poland in 2013* report, the number of students coming from Ukraine has increased almost fivefold since 2005, and in the 2012/2013 academic year studied 9,747 Ukrainians at the Polish universities (Perspektywy 2013, 8). Over a year ago, a document on migration policy was adopted by the government. It acquired status of a strategic document in which foreign students were for the first time considered a priority group. Moreover, it was decided to create a package of preferential solutions for this target group (Perspektywy 2013, 9).

Conclusion

The considerations presented in this article are just a tip of the iceberg, since currently, entities active in each area of activity, e.g. business and science-related, and NGOs undertake initiatives related to building international relations. With the passing of time, the role of the local government will be limited to stimulating the process encouraging integration and inclusive process, as well as being a reservoir of resources developed to date as a result of several projects with foreign partners. Internationalization of business and education as well as attracting professional foreign investors will also be the subject of one of the pillars of developing a new 'Strategy for Economic Development of Lublin.'

To date stored in the strategic documents of Lublin purposes of internationalization and openness of the city of Lublin, you can add the following to the existing objectives of internationalization and openness of the city of Lublin defined in the strategic documents of Lublin one can add following activities:

- identifying and promoting 'internationalization capital' already existing in the city,
- strengthening efforts to share the knowledge of all stakeholders involved in the internationalization process,
- 'celebrating of success' in the area of internationalization, which will facilitate building public trust in the process and awareness of the necessity of making efforts aiming to strengthen the city's position in international cooperation networks.

Creating a foreign relations management plan requires asking questions about the effects we expect, as well as the formulating measurable and achievable objectives.

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Part Two

Friendliness and Academic Spirit of Lublin Metropolitan Area

Univer-City: Academic Character as the Factor Determining Sustainable Growth of a Region or City

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> In a society of shifting goals and uncertain values, the university must stand for something more than accurate data and reliable information; more, even than useful knowledge and dependable standards. The university is the custodian, not only of knowledge, but also of the values on which that knowledge depends; not only of professional skills, but of the ethical obligations that underlie those professional skills; not only of scholarly inquiry, disciplined learning and broad understanding, but also of the means that make inquiry, learning and understanding possible. In its institutional life and its professional activities, the university must reaffirm that integrity is the requirement, excellence the standard, rationality the means, community the context, civility the attitude, openness the relationship and responsibility the obligation upon which its own existence and knowledge itself depend (Group of Eight 2013).

What would the modern world look like without universities? They have grown so much into our culture, social life, and city landscape that it is by no means possible to make such a separation. Every year, millions of young people of all races, religions and cultures make their way to the cities, where – as the inscription on one of the most renown universities – Stanford University reads, there is the 'air of freedom,' to search, in this unique *universitas studiorum et studentium*, the community of teachers and learners, for answers to the fundamental questions about: the truth, good, beauty, justice, about how to live decently, care about the common good and build a civil society. Universities experience a revival every year with their youth; they become enriched with the inquisitiveness of their fresh minds and maybe within these elements there lies the secret of their longevity; and on the other hand, the embedding of universities in the urban fabric becomes the source of sustainable growth

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and competitive advantage of those cities which have given them shelter.

At times referred to as the most excellent product of the European civilization, on the eve of the third millennium the university must face new challenges; however, these are so overwhelming that some doubt whether the university shall survive the forthcoming century. What was once began in Bologna and Padua, and which, reformed by Humboldt in the 19th century, allowed to effectively face the needs of the industrial society, may prove inefficient when confronted with expectations of the 'learning society.' The classic model of a university relied upon conservative values, on the master-student relationship and on teaching focused not on the labour market's needs but on the current interests of the body of scholars. In our knowledge society, this model becomes a relic of a bygone age when confronted with hundreds of thousands of candidates eager to learn at all Polish universities every year, which I have to conclude with genuine sadness, myself being brought up by and to a certain extent a model product of this system. Modern universities have begun to increasingly resemble enterprises rendering various educational services. Market orientation, treating students as consumers with all (positive and negative[1]) consequences thereof; the standardisation and parameterisation of the offered courses, of the system of evaluating classes and research – these are all the signs of our time, regardless of whether we are dealing with a non-profit or for-profit higher education institution. It is the external environment, the emergence of a global education market, uncommon growth in the number of students and shift of their expectations that force internal transformations of higher education institutions (Sursock and Smidt 2010).

Leaving the 20th century, we are irrevocably parting from the 'industrial society' where a low-per cent population of educated people was sufficient. We are entering a new era of the 'information society,'[2] a 'knowledge society,' where knowledge is the real source of prosperity and progress, the major factor of economic growth to a

[1] 'In crowded auditoriums, the voice of the Master trails away, replaced by the voice of a trainer' – wrote Tadeusz Sławek (2002), former Chancellor of the University of Silesia. In his opinion, the Academy slowly turns into an 'institution of silent professors,' no longer offering 'education' but 'training' instead.

[2] This term was first introduced by Simon Nora and Alain Minc in 1978 (1981).

larger extent than work and capital were in the 20th century. In the knowledge economy, knowledge is created, assimilated, transmitted and used more effectively by enterprises, organisations and natural persons, which increase their competitiveness on the market. The successful building of such a society conditions the economic welfare of any country and the quality of life of their citizens.

Is there a Future for Universities?

The debate over the future of the university is essentially focused on its location within the existing (and future) social structure. As aptly observed by Heinz Sünker, it is about 'relationships between the system of education, the society, and education policy, and between reconstructing and transforming social relations. This is particularly transparent when we talk about neo-liberal interventions in the academic system and consequences thereof' (Sünker 2010, 192–3). Therefore, a frequently posed question is whether a higher education system continues to be for the public good or has it become a private investment, a demanded product, which makes references to the discussion over the famous book by Allan Bloom *The Closing of the American Mind* (1987) which stirred up the debate with its subtitle: *How Higher Education Has Failed Democracy and Impoverished the Souls of Today's Students*. 'Academic conservatives'[3] give a straight diagnosis about the death of universities: that it is being killed, falls into ruin, which it is dying, etc. And it does not matter which country their conclusions refer to. In England for example, one of the recently famous publications is entitled: *Killing Thinking: The Death of the Universities* (Evans 2004) in France, publications refer to a 'dead system of higher education,' in Canada to 'the university that fell into ruin' and a Japanese author persuades the reader that precisely in 2004 Japanese universities came to an end. Similar conclusions accompany analyses related to, among others, Spain, Italy, Germany and Poland (Lock and Lorenz 2007, 406–18). In my opinion, all those statements express longing for the golden age of universities founded on assumptions of the Humboldt reform and they absolutely fail to meet the challenges the Academy has to face in modern times. What we need is a completely new university

[3] I use this term to refer to those participants of the debate who recollect the university model developed by Humboldt with nostalgia.

model, enabling us to find our place in the network society and innovative economy, where knowledge is the basic capital and big data management is needed in a given moment.

These new expectations are very aptly reflected by the title and content of the last 'Glion Colloquium' 2011, famous for its analyses of the higher education market (Weber and Duderstadt 2012). The authors put forward a thesis that it is universities that are destined to play the key role and bear responsibility for sustainable economic and social growth on the global scale, but only those, however, that on the one hand deserve to be called research universities, and on the other they are able to adjust themselves to a new situation and become entrepreneurial universities.[4]

In a well-known report by Barber, Donelly and Rizvi published in mid-2013, and bearing the meaningful title *An Avalanche Is Coming: Higher Education and Revolutionary Ahead*, the authors point out that soon there will come an avalanche that will sweep away nearly all that has been so far regarded as a standard in higher education, as trends observable today already herald changes so radical that we may speak about an impending revolution at universities. This applies to both research and teaching. The authors of the report draw our attention to mass unemployment among young and educated citizens of numerous European countries, the source for which they find, among others, in anachronistic university model developed by Humboldt, which obstinately gets stuck in a trap of erudite, narrowly specialised education, which by no means is related to the changed (also as a result of the last economic slump) situation on the labour market.

A modern economy needs frequent and flexible changing of qualifications, as well as the ability to learn over a lifetime. Knowledge gained at the university no longer suffices for the rest of our lives, as it used to be. It needs to be updated every couple of years. Formal education at a higher education institution is, therefore, only one of the many educational stages in our lives which are important yet not sufficient. The university is expected to switch into a completely different model of education. It must stop being the provider of 'ready-made' (vocational) knowledge, as it becomes outdated very quickly,

[4] Therefore, it should be mentioned that there are about 25,000 higher education institutions worldwide, of which only 10% are regarded as full universities.

but rather become a provider of teaching methods and methods of quick adjustment to changes imposed by the development of the e-economy and a new civilisation based on being a smart, e-civilization and net-society.

This trend is the most transparent in the United States, where over 62% of young people born in a given year go to university. What is important, about 70% combine learning with having a job. A statistical US citizen has to change his or her qualifications four times in their lifetime, which is why it is not surprising that a graduate returns to their alma mater every three and a half years on average, to take up specialist courses and postgraduate programmes. The idea of life-long learning is something completely natural; it is a common need universities try to satisfy as best as they can.

Challenge One: Revolution in Teaching

'To be "e-" or not to be. That is the question' – this is a metaphorical dilemma of our times, as put by Bill Gates. Indeed, if you are not 'e-,' you have no digital identity, and you are not just passé but you simply don't exist. UNESCO experts report that in 2020, the body of knowledge will double every 73 days. At the same time, today 2/5 of humans have no access to such resources. Before our eyes, the world is being divided into an info-rich and an info-poor world.

In a sense, the Internet has freed education. Not only has it given access to knowledge resources 24/7/365, but it has predominantly revolutionised the very manner of learning. It has created a new, rapidly developing space for multi-dimensional educational activities. A space which on the one hand that may be filled in by Internet users with all the new educational resources, and on the other, becomes an increasingly attractive alternative for the learning channels we have used to date. What is equally important is that Internet gives you the choice – you can learn whatever you want to, any way you want to. This allows a student to make choices related not only to substance and formal aspects, but also to their personality – he or she can match a given learning style to their personal preferences. For hundreds of years, academic teachers transmitted information to their students during lectures and using traditional textbooks. The new generation of mobile devices (smart phones, tablet computers) has changed this picture by enabling dynamic, customised learning through provision of educational tools to individual users.

It is worth to recall the road we have travelled:

1. 1987 – University of Phoenix together with Connect-Ed launched the first *online* study programme.[5]
2. 1997 – The California Virtual University – first ever, completely virtual university offering students over fifteen hundred *online* courses.
3. 2000 – USA – Internet-supported distant study programmes were offered by over 260 higher education institutions and the number of students approximated one million.
4. 2010 Massive Open Online Courses (MOOC) offered by top American universities,[6] provide absolutely unique conditions for assimilating knowledge apart from traditional forms of education. The number of students using this form of education exceeds 20 million in 2012 (Kolowich 2013).
5. 2012 – USA: debt in respect of student loans is one billion dollars. The EPIC 2020 project gives a solution. By using the latest technologies, and owing to the vocation and passion of a few professors, students will be able to extend their knowledge *without any tuition fee*.[7]

From that time, e-learning has gone through at least three phases of development:

1. Pioneer phase – simple digitalisation of the course content, i.e. placing relevant resources, e.g. academic textbooks, on the Internet. In this manner, the first e-libraries were developed.
2. Second phase of e-learning development – emergence of specialist, distance learning platforms, allowing organising and managing the entire teaching process.

[5] In 2012, the number of students at this university using the e-learning system only, exceeded 200,000.

[6] Universities belonging to the American Ivy League, such as Harvard or MIT, offer hundreds of integrated, top quality tuition programmes available online.

[7] EPIC 2020 project (http://epic2020.org) assumes higher education to change radically over the next decade. Current forms will be replaced by *online* teaching, which shall eliminate the tuition fee and other costs incurred by students. Grades and scientific titles will be gradually redefined. Competences acquired during implementation of the learning modules, prepared according to the project method, will become the essence of higher education.

3. Third phase of e-learning development is based on a new teaching concept assuming not an objective but subjective approach to a pupil or student. It is the student, not the teacher, who is the most important element in this process. He or she needs to be equipped with specific skills, preferably confirmed by external (in relation to the university) certification institutions.

It should be added, that in Europe a similar concept constitutes the foundations of the Bologna Process and the so called qualification framework. They are characterised by (Christensen and Eyring 2011):

- organisation of the teaching process from the point of view of a student,[8]
- the role of an e-teacher as a tutor and trainer, not a mentor who always knows best,
- replacement of the teaching process where knowledge is ready-shaped and the student only needs to assimilate (remember) it, with the learning process where the teacher and student are partners, and the basic objective is acquisition of subsequent skills,
- development of a team working skill, the skill of working in a group and learning the project method in teaching, which teaches innovation and gives better preparation for the vocational work than the classical method.

MOOC (Massive Online Open Courses) are presented as phenomena that may very quickly lead to fundamental changes in terms of the manner and organisation of the teaching process in higher education (Doug Lederman 2013), and consequently threaten the functioning of traditional universities. In this context, the following (start-up-like) undertakings are considered as particularly important:

1. Khan Academy
2. Mozilla: 'Badges' instead of grades
3. Udacity (http://www.udacity.com)
4. Coursera (http://www.coursera.org)
5. MITX (http://mitx.mit.edu)
6. TEDED (http://ed.ted.com)

[8] Unfortunately, at numerous European universities, this is a dead rule.

Khan Academy

In 2009, Sal Khan decided to produce interactive educational videos presenting mathematical questions at different levels of advancement. The videos are available on YouTube free of charge and they have become extremely popular. This is how Khan Academy comes to life – a non-profit educational organisation. The main purpose and slogan of Khan is providing education to people from all over the world. 'My Academy may be an alternative to a real school where pupils will spend 20% of their day on watching videos and doing exercises, and the rest of their time on painting, doings sports, composing music and any other things.'

Currently, Khan Academy website features about 3,200 short lectures in the form of videos uploaded on YouTube and devoted to subjects such as Maths, History, Medicine, Physics, Chemistry, Biology, Astronomy, Economy and Computer Science. Each video is an interactive training, proving that knowledge may be acquired without a mass of lecturers and the need to maintain expensive infrastructure. Exercises available for the students and an innovative grading system are the strongest points of Khan Academy. After logging in to Khan Academy website, every user gains access to the 'map of knowledge.' The material is divided into modules, and a computer program does background tracking of the time and progress of every pupil.

Every problem being a component of a given module is presented in the instruction video. Any student commencing with exercises, in case of difficulties and doubts, may use the help and suggestions of the tutor or his or her colleagues with whom he or she is working together on a given task. Step by step, task by task, students make progress reflected in the reports, worksheets and diagrams.

Mozilla: 'Badges' Instead of Grades

In 2011, Mozilla launched a new skill evaluation system, designed to be universally applied. Badges available for individuals, enterprises and institutions. They represent skills gained in given areas. Badges are an alternative to the grades and diplomas we with which are familiar.

Udacity (http://www.udacity.com)

In 2011, Professor Sebastian Thrun, a lecturer at Stanford University, conducted an experiment. He started teaching two courses of Intro-

duction to Artificial Intelligence at the same time. One of them was a traditional university course. The other, was a free of charge *online* course. Both courses were 10 week long. 200 participants were enrolled on traditional classes. On the *online* course, on the other hand, 160,000 students were enrolled from all over the world. 23,000 of online students decided to take the final exam which they passed with excellent results. The traditional course, on the other hand, was completed by 41 participants. The professor concluded that during the experiment he managed to train more students than the majority of professors did during their lifetime career. Since one course made available on the Internet exerted bigger educational effect than his entire academic career to date, Professor Thrun decided to quit his job at Stanford University after 10 years of academic career, and in January 2012, he founded Udacity, which to put it simply, is intended to be an online university offering free education in exact and engineering sciences.

As he said: 'I can no longer teach at Stanford. I could have taken the blue pill and come back to the university, to lecture twenty people, but I took the red pill and I saw paradise.' In the first two months, Udacity organised six online courses. All of them were extremely popular. How does it work?

1. During the course, students ask questions on a group blog.
2. Questions are evaluated using the system of: Like/Don't like – used by Facebook social networking service.
3. Answers given by students are also evaluated by users logged in to a given group.
4. Therefore, the system of questions and answers is operated and evaluated by students themselves.
5. Participants choose the best questions and answers.
6. Students teach students, and the entire process is controlled by the teacher.

Coursera (http://www.coursera.org)

Coursera is another programme based on co-operation between a number of US universities (Princeton, Stanford, Penn, and Michigan). They offer courses to people from all over the world, free of charge. Because of the latest technologies, professors can teach not hundreds or thousands but millions of students eager to learn. Students form

a global group mutually supporting each other. Their education, irrespective of the latitude, will change the future of each of them individually and of communities in which they live.

Mitx (http://mitx.mit.edu)

In October 2012, MIT (Massachusetts Institute of Technology) began enrolment on free online courses under the MITX brand. 120,000 of potential learners from all over the world had already enrolled in the first month following the announcement of the project. Project advantages include:

- no entrance fee and no tuition fee,
- use of the latest technologies,
- MIT certificate after course completion.

The success of the project made MIT launch, together with Harvard University, another e-education undertaking named edX. This project is a result of collaboration between specialists from Harvard University and the previously mentioned MIT. *Online* courses are available for all takers free of charge. Their purpose is to create a global community of students (http://www.edxonline.org).

TEDEd (http://ed.ted.com)

In April 2012, TED (Technology Entertainment and Design) – an American foundation having the purpose of promoting 'ideas worth spreading' – announced the emergence of TEDEd. The best lecturers worldwide, in collaboration with top graphic designers, created videos and educational films available for all users free of charge.

All undertakings presented above, together with many other less popular, comprise components of the global EPIC 2020 Project, the implementation of which is expected to solve problems faced by humanity in the 21st century, due to the need of providing mass and lifelong education.

And What Does Europe Have to Say about That?

The European Higher Education and Research Area (EHERA) is sometimes referred to in the literature as conceptualisation of the project of European integration in the area of education and science, which in the organisational and institutional aspect comprises background for what we came to call the 'Europe of Knowledge.'

In a practical sense, the EHERA project is expected to connect to the Bologna process[9] (creation of the European higher education area based such attributes as: comparability of learning outcomes and their quality, three-level study programme: bachelor, master's and doctoral programmes, mobility of students and lecturers, sensitivity to labour market needs, lifelong learning, European aspect of education), as well as numerous undertakings and initiatives under the 'Lisbon Strategy' (creation of the European research area as the foundation for the European model of knowledge economy) and the 'Barcelona Strategy' (implementation of the European higher education model based on the Qualification Framework, that is a determined set of skills a graduate is expected to posses in order to find his or her place on the European labour market) It may be stated that in a sense, the EHERA is a model example of European policy with its fundamental principles/values: subsidiary, cultural and social responsibility, deliberative democracy and post-national European citizenship.

In Europe, a lot has been said, especially recently, about necessary *modernisation of the higher education system* in the context of the economic slump and the need of adding to the mission of the university, so far resting on two pillars: research and training, of the third pillar: 'making connections with the business sector – including on the regional level – and taking social responsibility.'[10] This last term was introduced to the academic debate in 'Erfurt Declaration of the Conference of Chancellors of European Universities' of 1996. In the declaration, we read: 'The University must conduct itself as a responsible and cohesive community, not an anarchistic or irresponsible association. The University is under an obligation to so structure itself that decisions are capable of being reached after full consultation but with a minimum of delay, and that agreed actions

[9] The Bologna process was initiated by signing the *Magna Charta Universitatum Europaeum* on 18th September 1988. In the charter, we read: 'Freedom in research and training is the fundamental principle of university life, and governments and universities, in so far as it is possible for them, must ensure respect for this fundamental requirement. To meet the needs of the world around us, its research and teaching must be morally and intellectually independent of all political authority and economic power.'

[10] The plan of such reforms was approved at the meeting of the Education Board on 28–29th November 2011 (The Council of the European Union 2011)

are implemented fully and conscientiously, at minimum cost. As a community of scholars and students, the University will accept corporate responsibility for actions taken with its authority and in its name.' Taking these assumptions into account, works on e-learning development have been taken.

In Europe, about 1.2 million people use various forms of distant learning. The major initiatives include:

- UK: the Open University today, this means approx. 120,000 students (and 5,000 e-teachers) in 21 countries, and 30% of the enrolled come from outside UK.
- Netherlands: The Erasmus Virtual University – 20,000 students.
- In Spain, the two largest virtual universities are Universidad Nacional de Educacion a Distancia (UNED) and Universitat Oerta de Catalonia (UOC) – in total about 180,000 students.
- France: National Centre de Education Distances – 60,000 students.
- Portugal: Universidade Aberta in Lisbon – 110,000 students.

Distant learning standards in Europe are determined by the British Open University. They are based on the following principles:

- accessibility – the possibility of finding and gaining access to content in a distant location and delivering it to target destinations,
- adaptability – the possibility of adjusting training to the needs of an individual and organisation,
- affordability – reducing costs and increasing effectiveness of e-learning,
- durability – no need to introduce far-reaching changes to adapt the system to the occurring technological progress,
- inter-operability – making the training content independent of the hardware and software e-learning platform and content building tools,
- re-usability – the possibility of using components of existing courses in new applications and contexts.

It should be noted, that one of the first initiatives in Poland in this respect, complying absolutely with these principles, was the project

of the Polish Virtual University (www.puw.edu.pl) developed at UMCS, Lublin in 2000, of which the author has been a co-originator.

Challenge Two: Towards the Entrepreneurial University

Making studies a mass convenience, emergence of non-university research centres and corporate universities (providing instruction and creating knowledge for specific needs of a given corporation only), orientation of economic growth based on the society and knowledge economy, expansion of a business approach in many areas of social life that so far have been free of commercialism, have caused the emergence of a model of 'the entrepreneurial university.' Already, at the beginning of the 1990's, while conducting research together with his colleagues on the then appearing 'knowledge factories,' M. Gibbons observed a significant transformation from production of knowledge at universities only (referred to as model 1 functioning to that date, to its co-creation with active participation of the academic environment (model 2) (Gibbons et al. 1994). Interdisciplinary research teams have been solving problems stemming not only from purely academic discussions (basic university studies), but also from the expectations of university stakeholders (*content-driven and problem-focused universities*). The use of knowledge becomes equally important as its discovery. This is what modern society expects (Leja 2006; Beck 2002). This approach requires transformation: from understanding the university in traditional terms as rigid and hierarchical organisational structures, to supporting structures of flexible and self-arranging project teams, set up to solve specific teaching and research problems. This leads to acknowledgement of a thesis that nowadays the connection of the university with its social and economic background is the fundamental factor (foundation) of its development and mission.

In the literature, this thesis was developed by, among others, Burton Clark (1998), H. Etzkovitz and L. Leydesdorff (1997), who using numerous specific examples, showed a strict and mutual relationship of the university with its environment. The authors have called it a triple helix mission. Etzkovitz claims that an entrepreneurial university is one that implements the idea of the triple helix. J. Wissema (2005) on the other hand, while considering possible strategies for universities, proves in a convincing manner, that universities have two ways of development: they can transform into international tech-

nology transfer centres or reduce their role to the local players on the education market.

An entrepreneurial university is aware that it ceased to be the shrine of knowledge, and so it needs to fight for its survival, as it is one of many knowledge providers and that it has to compete with other entities. Its purpose is to satisfy the needs of its clients: students and university stakeholders, whilst the basic criterion and standard of action is their satisfaction. It has to give reasons for its significance not by referring to tradition but by showing its usability here and now, for which it is responsible before the group of its stakeholders. Its community is no longer the classic *universitas studiorum et studentium*, but a social group related to it via corporate interest and aware of its intellectual potential. It is an open and usually mass institution, maintaining, however, high quality standards of training and research. Knowledge and innovation created therein are subject to intellectual property rights; there exists a market where they can be exchanged, and also a financial exchange market. It provides various kinds of (research, educational, expert, implementation) services for a charge, paying attention to its economic efficiency. It is, obviously, managed in a professional manner (Etzkovitz et al. 2000; Barnett 2009, 103–20).

This is the character that is assumed by distinguished US universities such as Stanford, MIT, Berkeley or Caltech, and in Europe, e.g. by Warwick. At these higher education institutions, implementations and collaboration with the fast growing environment – enterprises using their output and staff (staff flow is by the way two-directional), by no means restricts their involvement in basic studies and offering top quality education, but rather on the contrary: it favours achievement of excellent results in both of these fields. Today, I believe no one will be shocked by the fact that one of the largest universities in the world, The University of Phoenix, is a listed company, and there are at least a few hundred similar examples on the market. Around universities, there have emerged technology transfer centres and business incubators having mutual capital and organisational relations, where professors and students carry out their business projects before they set off on their personal conquest of the free market.

Burton Clark (1998, 5–8) identified the following five characteristics of entrepreneurial universities:

- strengthening of the control centre, to efficiently search for opportunities to make changes and use them, and not only act as a dummy accompanying changes in the environment,
- development of peripheral segments, necessary to overcome divisions existing at the university into disciplines and extend collaboration with the environment,
- diversification of the sources of funding, especially necessary in terms of the acquisition of funds from beyond the budget,
- stimulation of the academic centre, consisting in the making of structural changes, breaking with stereotypes of thinking about teaching in terms of disciplines and traditional organisational units of the university,
- integrated business culture – universities, just as companies, should develop their organisational culture to favour entrepreneurship.

Entrepreneurial universities are at the same time knowledge-based universities; they are characterised by the flexible use of tangible and intangible resources, and especially human and relational resources. This type of university approximates the model of a learning organisation (Bowden and Marton 2006; Jabłecka 2004). They are also sometimes referred to as third generation universities (Etzkovitz et al. 2000; Barnett 2009].

They may be identified according to:

- treating technology commercialisation as the third mission of the university, equally important as its training and research activities,
- striving to obtain the status of an international transfer centre for innovation, technology and know-how,
- organisation of interdisciplinary teams as basic organisational units, created and dissolved as the need arise,
- providing elite next to mass education,
- treating English as the basic language for communication,
- evaluating quality using the peer review system,
- co-petition (co-operation+competition) related to human resources and funding,
- autonomy, understood as freedom of acquiring and using the

resources, on condition that effects significant for the university environment are achieved.

It should be noted that Krzysztof Pawłowski introduced the term of fourth generation university, where 'all three components, i.e. teaching, research and relationships with the environment are equally important, and the university is distinguished by the fact that through the transfer of knowledge, technology and ideas, it plays an active role of a creator, thus changing its immediate and more distant environment' (Pawłowski 2007). This, however, is a lonesome opinion in Poland, as the concept of entrepreneurial university has few supporters in our world.[11]

In the paper 'Development strategy for the higher education system in Poland 2010–2020, Academic project,' in the section devoted to the mission and vision of higher education, we read: 'Success of modern societies depends, to an increasingly large extent, on universality and quality of higher education as well as on the level of development of the life-long learning system. This is the fundamental condition of the cultural and economic growth of a country, of effective formation of the intellectual capital, consolidation of the rule of law structures and building the civil society. The mission of the higher education system is creation, dissemination and use of knowledge for the benefit of humans and the society. This stems from the traditional idea and identification of the university as an autonomous and self-governing institution, fulfilling universal training and research tasks. In the present day, the mission of the university needs to be redefined. It is essential to confer new meaning on the concept of mission and servitude of the university. Implementation of the social mission of the higher education system refers to the value of academic

[11] The most severe criticism of the concept of entrepreneurial university was expressed by Tadeusz Sławek (2002), former chancellor of the University of Silesia in his book *Antygona w świecie korporacji* [Antigone in Corporation]. In this context, a representative opinion of Jerzy Axer should also be quoted: 'The level of technology complexity, and the knowledge economy reveal extensive possibilities before universities of transforming know-how into profit. In the face of these temptations, universities jeopardize their mission, in pursuit of the profit, offering more and more extensive concessions to corporations funding their research and compromising on the fundamental academic values, also by taking morally controversial research and scientific activities.' This view is shared by many chancellors of Polish higher education institutions.

ethos; however, it needs to consider obligations imposed by the state acting for the benefit of the public interest, by the needs of the social environment of the university, including the labour market and educational market, as well as by other external factors affecting the operation of the university. Strategies for development of higher education and higher education institutions must consider these factors' (*Strategia rozwoju* 2009).

As can be seen, a thought about the need of thorough reforms is formulated here very carefully: language of the strategy is full of references to tradition, growing on the values, academic ethos, in order not to hurt the supporters of the Humboldt university model. If new ideas appear, they are presented in the old format, to reduce resistance from this environment. And higher education system in Poland has had to face challenges never experienced before.

According to the latest report by Ernst & Young (2012) on Scientific productivity of public higher education institutions in Poland as much as 87% (Jagiellonian University – 61.3%) of revenue recorded by higher education institutions in Poland comes from teaching activities. It should be stressed, that we are currently facing demographic decline, with the expected peak in the years 2020–2022. In case of the majority of Polish higher education institutions, revenue from teaching ranges from 92–96%. In technical education institutions, this ratio is somewhat lower and amounts to about 80% (a record-breaking result – AGH University of Science and Technology – 65.2%); however, in other public schools it always exceeds 90%. Their operation is possible due to grants and paid study programmes only. Top non-public higher education institutions (University of Social Sciences and Humanities – 87% and Kozminsky University – 78%) do only slightly better in this respect. For comparison, tuition fees in the United States are on average less than 40% of the revenue, and in top European higher education institutions, this ratio fluctuates around 50%. This is a standard in the knowledge economy. Just as is the need to adjust to the labour market demands when we speak about the quality of training and the qualification structure on leaving the university.

The question asked by the global economy to new generations starting their career on the job market is not longer the classic: what and how much do you know? – But: how can you use/implement these skills and knowledge in practice? This means that there needs

to occur a radical change in the way of thinking and conduct applied by the university. Previously, it was the prestige of the university and grades put on a diploma that played a decisive role in getting of a well-paid job. Right now, professional experience gained while studying at the university is getting more and more important; sometimes its significance exceeds the position of the university brand. Learning becomes inseparably linked with having a job (Barber, Donnelly, and Rizvi 2013, 57). That is why, with regard to educational functions, programmes of study should not depend on the interests of academic staff only; to an increasing extent, offered courses should respond to the social needs, including the need of employers. Student expectations, in light of the growing unemployment rate, derive to an increasing extent from job market expectations.

A study conducted as part of the project 'Tuning' (2008), has shown that divergence of expectations in relation to knowledge and skills of graduates is the highest in the case of academic teachers, graduates, and employers. Finding the 'common language' and planes of connection between these three groups of stakeholders is and will always be a prerequisite to an effective higher education reform. Not much is done however, in this respect. The latest report on competences and qualifications searched for by employers among graduates of higher education institutions entering the job market (Ernst & Young 2012), is another confirmation of this fact. The list of demanded competences and qualifications fails to include hard and/or vocational knowledge, for employers assume graduates to have a minimum, good or very good general knowledge, general vocational and specific sector-related knowledge as well as the skill of assimilating new knowledge, for it becomes outdated very fast. They also assume that they will transfer this advanced, specialist know-how to the graduates on the job, during in-house training sessions. What is important for them, on the other hand, is the potential of graduates, their motivation to grow, and their soft skills, which are especially important in team working. These include: effective communication (including communicating in different languages), openness to learning and development, involvement and ability to work in a team, the ability to organise one's work and manage time effectively, the ability to set out priorities, ethical conduct, responsibility as well as flexibility and the ability to adapt. Competence development is of key importance, if Poland wishes to continue to level the differences in civilisation

and economic growth – state authors of the Report and it is hard not to agree with them.

Connection with the Region and the City

Universities become more and more integrated with political and economic structures and this is done mainly on the local level. In this manner, they become the special 'New Triple Helixes' of their development. Etzkovitz and Leydesdorff (1997) used to define 'Triple Helix' as triple (business, authority, university) initiatives taken for purposes of developing the knowledge economy. As claimed by Ellen Hazelkorn (2010, 63–75), re-establishment of the relationships between business, political and academic entities has been present more and more often in projects comprising solutions to the local problems of the city and region. *University* and *City* meet together to co-operate under *Univer-City*, which assumes the opening of universities to the social environment and work for the benefit of others. A responsible university, serving the society anew, pursues talents already at the level of school education, provides opportunities for the fullest possible development, deepening passion and interest in the world. This is done by children's universities or 'exploratories' where students have the first contact with real science. This education is a lifelong process, ending with third age universities comprising an excellent form of co-operation between generations. Universities have to continuously expand their area of influence, step beyond their walls in order to build multiple and diversified relationships with institutions and organisations. They should be present at schools, be able to provide patronage for cultural projects, to initiate and become involved in significant public debates, in order to produce the air of widespread creativity. This will not only contribute to the promotion of the city of Lublin, but it will also activate city residents, by increasing the attractiveness of the offers of spending time in a creative manner. Let us remember the commandment of R. Florida who wrote that in the long term 'those who can create and never stop creating are the winners' (Florida 2010, 28), and the task of academic Lublin is to stimulate this creativity in all areas of the social life. Implementation of the idea of a creative city or region, entrepreneurship and innovation will contribute to the building of a competitive advantage of the regions and they will affect the life of their residents in a positive way. These assumptions also comply with the policy of regional

strategies, including the strategy of Lublin and the Lublin Region until 2020, with smart specialisations, guiding initiatives of the 'Europe 2020' growth strategy, i.e. modernity (European Digital Agenda, Innovation Union), open-mindedness (European Digital Agenda, The Mobile Youth, Innovation Union, The Agenda for New Skills and Jobs), innovation (Innovation Union, European Digital Agenda), as well as in creative industries. Technological and economic creativity supports cultural and artistic creativity and they mutually co-operate (Newbigin 2010, 18). Creative Cities on the other hand, is a city management concept based on the use of high technologies, clever use of the social and creative capital, as well as tolerance and openness to otherness. All of them apply to the academic Lublin.

I would like to close my considerations over the condition of the modern university and chances for sustainable growth of the city, offered by the presence of the university, by recalling the air of the Congress of Chancellors of European Universities convened in Lublin between 28th April–1st May 2004, on the occasion of the enlargement of the European Union. In a group of representatives of nearly three hundred higher education institutions from 32 European countries, we were discussing the condition of the university and responsibility of the academy for the future of Europe. We asked questions about the boundaries of today's Europe, about the kind of upbringing we should offer to ensure European citizenship, about what *universitas studiorum* means today and what should the university of 21st century should be like. We have listened to the words of the Holy Father John Paul II addressed to participants of the Congress with great attention:

> For centuries, universities determined the spiritual form of Europe as it is today, and the Christian bringing of the Good Tiding maintained the air of openness to the truth, kindness and beauty. This allowed discovering humanistic values essential for the integral growth of a human being and formation of civilized societies. Also today, universities embedded in the great historical tradition take up a responsible task of building a new Europe, where academic freedom and critical reflection are expected to create a more humane world. Academic ethos, making references to the glorious historical tradition, directs attention of the young generation to the values going far beyond the sphere

> of consumerism subjected to the laws of the market. Formation of attitudes sensitive to those values has long been the concern of university chaplains and professors, making references to the most exquisite tradition of masters.
>
> Currently, in the times of thorough cultural transformations, this is a highly ambitious challenge for the academic world. It is faced with a difficult task of extending the utmost care in order that prevalence of technology and pragmatic thinking does not lead to negligence of those spiritual values which influenced the shape of the European culture to a considerable extent. The academic world in Europe is entrusted with a mission of extending special concern over values that once played the fundamental role in a creative dialogue between the logos of the rational interpretation of science and the logos of sense and integral truth revealing spiritual greatness of the world of human culture, showed by Christianity. This dialogue needs to be continued in the European culture. For it reveals an alarming loss of memory and Christian heritage which is accompanied by specific practical agnosticism and religious indifference, evoking among many Europeans an impression that they live without any spiritual background, like heirs who squandered the heritage they had been left by history.

'Declaration of Lublin' adopted at the end of the Congress made direct references to the afore-mentioned words of the Holy Father, by speaking about Europe whose eastern borders were delimited by the presence of monasteries and universities, which made the Academy to comply with both traditions: the logos of rational interpretations and the logos of searching for sense. I hope that traces of this presence can also be spotted in academic Lublin; however, the Declaration also speaks about the need for a change, about knowledge economy and about a new model of a university open to the needs of all its stakeholders. Implementation of this model in Lublin is still before us. Already today, in the form of services ordered by the local government and companies, new specialisations are created at higher education institutions in Lublin, which phenomena will be extended along with commissioning specific research, expert and implementation topics, subsequently carried out by students and doctoral students in their bachelor, master's and doctoral theses. Nowa-

days, the majority of these theses are written 'for their own sake' and it would be worthwhile to use the time and energy put in by students and doctoral students to serve some purpose, so that the effects of their intellectual effort could be used in practice, contributing to the development of Lublin and the knowledge economy. This knowledge is to be provided exactly by higher education institutions from Lublin, as well as to local governments, by teaching how to use it for commercial purposes in the form of expert opinions, best practices, patents, implementations or creation of artistic and cultural events. This is the essence of academic entrepreneurship. Liberation of this entrepreneurship is the concern of the Mayor and the Marshall. This should also be the concern of the Chancellors and Business, or even more: of all city residents, for it is us who will benefit from this new academic entrepreneurship of Lublin in the end.

The academic potential of Lublin is enormous indeed: after its consolidation, we may be one of top five strongest academic centres in Poland, and among the top hundred in Europe. This chance should definitely not be wasted.

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Lublin as a Student Destination? The City in the Eyes of Foreign Students

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Foreign Students in Poland

The assessment of changes in education systems worldwide reveals at least two global trends. Firstly, as a result of economic developments that require professionals with superior knowledge, higher education is becoming more and more popular. Secondly, a growing number of students decide to study outside their home countries. These trends stem from socio-economic transformations, such as the scientific and technological revolution, and political advancements, including the growing liberalisation around the world. The outcome of these changes is globalisation, which has received considerable interest recently and which has manifested itself in the growing freedom of choice in the selection of one's place of study or work.

Poland has also been part of this global process for over 20 years. In our country, the rise in the number of students has been particularly steep because of the low starting point in the 1980s.[1] Over the first ten years, from 1991 to 2001, the number of students grew fourfold to 1.584,804 (table 1). The academic year 2005/2006 recorded the highest figure in history (1.953,832). Since then, the number of students has been falling slowly, to 1.6 million in 2012. The rise in the overall figure has been accompanied by an increase in the number of students coming to Poland from abroad. In 1990/1991, they comprised 1.3% of all students but this proportion gradually decreased until 2005, when the overall number of students in Poland reached an unprecedented level.

From 1990/1991 to 2005/2006, the number of foreign students in

[1] In the 1980s, Poland and Romania were the only countries to record a decrease in the number of students per ten thousand residents. In Poland, this figure dropped from 166 in 1980 to 142 in the academic year 1990/1991. In Romania, the decrease was from 87 in 1980 to 83 in 1990/1991. See http://www.stat.gov.pl/gus/5840_11285_PLK_HTML.htm

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 81–94. Bangkok, Celje, and Lublin: ToKnowPress, 2015.

TABLE 1 The Number of Students in 1990–2013

Academic year	Number of students		
	Total	Foreigners	% of foreigners
1990/1991	403824	5202	1.3
1995/1996	794642	6563	0.8
2000/2001	1584804	7380	0.5
2002/2003	1800548	7608	0.4
2004/2005	1926122	8829	0.5
2005/2006	1953832	10092	0.5
2006/2007	1941445	11752	0.6
2007/2008	1937404	13695	0.7
2008/2009	1927762	15862	0.8
2009/2010	1900014	17000	0.9
2010/2011	1841251	21474	1.1
2011/2012	1764060	24253	1.3
2012/2013	1676927	29172	1.7

NOTES Based on the data from the Central Statistical Office (2013).

Poland grew twofold. Over the next seven years to 2012/2013, it rose by nearly three times, from 10,092 to 29,172, to reach 1.7% of the overall figure (table 1). The data on the recent increase in the number of foreign students show a clear trend which appears to have a markedly 'compensatory' character. Faced with the falling number of candidates from Poland, domestic universities have made increased efforts to attract foreign students in an attempt to maintain their quota of learners. Previous years, characterised by a high candidate-to-admission-capacity ratio, did not prompt universities to attract students from abroad. This is also confirmed by the comparison of the proportion of foreigners in the overall number of students at major Polish universities (table 2). Only the two largest universities, the University of Warsaw and the Jagiellonian University in Kraków, as well as the Warsaw University of Technology, with the proportion at 3% exceed the national average of 1.7%. What is interesting in this respect is the difference between three universities of technology, namely the AGH University of Science and Technology in Kraków, the Wrocław University of Technology (WRUT) and the Warsaw University of Technology (WUT), in terms of their foreign-student ratios. With the figures ranging from 0.4% at the AGH and 2.2% at the WUT,

TABLE 2 Universities by the Overall Number of Students and the Proportion of Foreign Students (2012)

University	Number of students	% of foreign students
The University of Warsaw	50707	3.0
The Jagiellonian University	45498	3.0
The Adam Mickiewicz University	43249	1.3
The University of Łódź	41068	1.1
The AGH University of Science and Technology	35569	0.4
The Wrocław University of Technology	35252	1.3
The Warsaw University of Technology	34030	2.2
The University of Warmia and Mazury	30337	0.5
Nicolaus Copernicus University	29854	0.8
The University of Silesia in Katowice	29258	0.6
Maria Curie-Skłodowska University	23640	2.0

NOTES Based on the data from the Central Statistical Office (2013).

these three prestigious universities with similar educational profiles, show the largely untapped potential shared by Polish universities.

UMCS, as the largest university in Lublin, fared well in comparison to other major Polish educational establishments. In 2012, it was the Alma Mater for 472 foreigners (including 337 women), which corresponded to ca. 2% of all students. However, what is the most optimistic about this fact is that over four years (2008–2012) the number of foreign students grew fivefold from 0.4% in 2008 to 2% in 2012.

Foreign Students in Lublin: An Unlocked Potential

The increase in the number of foreign students in Poland has been coupled with an exponential rise in the number of students in the Lubelskie Voivodeship (and in Lublin in particular). These substantial developments are confirmed by statistical data. In 2008, the various universities in the Lubelskie Voivodeship had a total foreigner count of 1205 (table 3). These accounted for 1.1% of all students (103,209 overall). Over the next four years, i.e. to 2012, this number grew nearly threefold (3,231) to reach 3.5% of all learners across all universities in Lublin, with a growth of nearly thirty percent in 2011–2012 (2,500 students in 2011). In 2012, foreign students comprised 3.5% of the overall figure for Lublin (compared to 91,685 students in total).

These developments can be attributed to two primary factors. First of all, for the majority of universities, foreign students are slowly becoming a desirable and sought-after substitution to replace the diminishing population of domestic learners, the shortage of which is due to the fall in the birth rate in the generation reaching academic age. This process can be observed at nearly any university in Lublin, except for the University of Life Sciences (UP), where, despite the drop in the overall number of students from 12,288 to 10,075, foreigners have continued to account only for a tiny fraction of all students (0.2%). At the largest Lublin universities, UMCS and KUL (the John Paul II Catholic University of Lublin), foreign students constitute about 2% of all learners, whereas in smaller establishments, such as WSS-P (the Vincent Pol University) in Lublin and PWSZ (the Pope John Paul II State School of Higher Education) in Biała Podlaska, they comprise as much as 5.7% and 6.3%, respectively. However, an undisputed leader in the Lubelskie Voivodeship is PWSZ (the State Higher School of Vocational Education) in Zamość, with nearly one in three (31.7%) students being of foreign origin.[2] This last university is a good example of not only how the decline in the number of Polish students can be mitigated by the enrolment of students from abroad, but also how it can increase the overall population of students.[3] For the smaller universities, and especially those who emerged when the so-called baby-boom generation entered adulthood, the recruitment of foreigners can soon become essential to their survival.

Secondly, for some universities (such as the Medical University of Lublin and the Lublin University of Technology), which have not experienced any major decrease in the number of students.[4] foreign students are becoming an additional segment in their academic structures, and given the fact that, unlike Polish students, they are admitted on a commercial basis, they are even more valuable. The issue of promotion is also of considerable importance. An asset in the form of a large group of foreign students contributes to the uni-

[2] At PWSZ in Zamość, nearly all the foreign students come from Ukraine.

[3] In 2008, PWSZ in Zamość provided education to 956 students (including 6 foreigners) and in 2012 to 1024 (with 325 foreigners). As can be easily calculated, without the foreigners the university would have 25% fewer students.

[4] In 2008, the Medical University of Lublin provided education to 6,227 students, while in 2012 to 7,312 students. In the corresponding years, the Lublin University of Technology welcomed 10,006 and 10,788 students, respectively.

TABLE 3 Foreign Students in Relation to the Overall Figures for Universities in Lublin

University	Number of foreign students						
	2004	2008			2012		
	Total	Total	%	Female	Total	%	Female
(1)	185	610	9.7	259	1055	14.4	451
(2)	384	235	1.3	128	346	2.2	168
(3)	178	130	0.4	91	472	2.0	337
(3)	–	6	0.6	5	325	31.7	198
(5)	–	13	0.3	10	221	6.3	136
(6)	–	13	0.4	9	156	5.7	98
(7)	9	6	0.0	1	140	1.3	46
(8)	7	5	0.0	3	23	0.2	15
(9)	–	187	–	108	493	–	156
(10)	–	1205	1.1	614	3231	3.5	1705

NOTES Row headings are as follows: (1) The Medical University of Lublin, (2) KUL, (3) UMCS, (4) PWSZ in Zamość, (5) PWSZ in Biała Podlaska, (6) WSS-P in Lublin, (7) The Lublin University of Technology (PL), (8) The University of Life Sciences (UP), (9) other, (10) total. Based on data from the Statistical Office in Lublin (Urząd Statystyczny w Lublinie 2009; 2013).

versity's image, adds to its prestige and gives it a more international character. With over a thousand students from abroad, who account for nearly 15% of all students, it is undoubtedly the Medical University of Lublin which exemplifies such a school. Even though it has been spared the consequences of the fall in the birth rate, over the four years (2008–2012) the university increased the number of its foreign students to become the third-leading university in the country in this respect, after the University of Warsaw and the Jagiellonian University in Kraków.

The assessment of the previous developments in terms of 'education for foreigners,' reveals two evident issues: (1) the unquestionable success of the MU, with its rapidly expanding package of paid programmes for foreigners, and (2) the untapped potential of other universities. Suffice to say that the three state-funded Lublin universities (UMCS, PL, and UP) and KUL together provided education to a smaller number of foreign students than the Medical University of Lublin alone. What is the reason for this gap? The failure to prepare an attractive package? Its unsuccessful presentation to the

target audience abroad? These questions, interesting primarily from the practical point of view, will have to be addressed promptly by the authorities of these universities.

Why Lublin?

In addition to its purely cognitive value, the analysis of reasons behind choosing Lublin as a study destination has a very practical application. It can streamline communication with the identified categories of target groups interested in Lublin's educational package. Therefore, what has prompted foreigners to choose Lublin? The findings indicate that among a number of motives, as provided by study participants, several basic types can be distinguished, based on the type of university selected. The first type are pragmatic and economic motives. This is characteristic especially of the students who choose the Medical University of Lublin. It is based on a clearly and well-defined life goal (i.e. being a doctor) and using the appropriate means in terms of time and money required to accomplish that goal. Studies in Lublin are exactly such a means. Below you will find several opinions characteristic of this type of motivation:[5]

> […] I was interested primarily in the medical profile of the university. I have heard that Lublin is one of the leaders in Poland in this respect. Wrocław was also one of my options. I have heard that it's a very nice city. […] The most important thing was that you have 6-year study programmes, while in the US it's 8, so not only do I save two years of learning but also a lot of money, because medical studies are much cheaper in Poland […]
>
> UM in Lublin, Kaushal, 20, USA

> […] I would like to be a doctor one day. Unfortunately, I didn't take up studies at a medical school in the US. The only option left to make my dream come true was to study abroad. I had considered two possible destinations, the Caribbean and Poland. […] So I came here […]. I can complete my internship in the

[5] The interviews quoted in this work were carried out by Ms A. Markiewicz and Ms K. Góra (with UM students). Other interviews were conducted by Ms M. Słoniewska and Ms E. Reszczyńska. The study was carried out as part of the 'Research Project Preparation and Implementation' classes conducted by the author at the Institute of Sociology during the academic years 2009/2010 and 2010/2011.

> USA, because the Lublin university is recognised in many states in the USA. […]
>
> UM in Lublin, Nirali, 22, India – USA

> […] My decision was rather quick and my parents had a lot to say about this. I didn't follow anyone to Poland. My decision was purely based on time and money, which determine my education. […] I have heard that Lublin has the best university in Poland. This was what I had found on the Internet and what my friends told me.
>
> UM in Lublin, Kashmal, 22, USA

A variation on this type of motivation is the 'pragmatic and family' type, characteristic of those who chose Lublin universities also due to having family here.

> […] I studied scenography back at home and after a year I came to the conclusion that I didn't want to pay for my studies and that if I could apply for citizenship here, I would fly here. And I wanted to see the world. I thought that if I didn't go abroad at that time, then I would never go – and so now I'm here. […] Because of the money and I also wanted to take a more classical approach to this. I was at Seattle University. It didn't provide enough painting and drawing practice for me. I believe that an artist should have painting or sculpting experience when it comes to work. My grandfather graduated from this university, so it was his idea, and my aunt studied here, so I was told like: 'Kasia, if you want to practice, come here […].'
>
> UMCS in Lublin, Katarzyna, 21, USA

> […] I wasn't admitted to my favourite schools in the USA. […] In Poland, the programme in this field is shorter. I can study for 6 instead of 8 years, and it's also easier financially to come to Poland. I chose Lublin because I have family here […].
>
> UM in Lublin, Wojtek, 19, Canada

> […] It was my plan from my childhood. I only came to Poland for the first time when I was 11, I think. […] So I came back to study here […]. I am of Polish origin, I have a Polish background. Firstly, I study here free, and back home I would have to pay for it, because it's very difficult to get admitted to free

> studies, you really have to excel at your secondary-school exam. And secondly, I received a scholarship, so why not? It's an enormous help to my parents – they don't pay for me, they don't even see me, I go out when I want, come back when I want, do what I want. […]
>
> UMCS in Lublin, Sergei, 21, Kazakhstan

> […] I have family here and didn't even consider any other option. I remember that when I came here to Poland when I was 9, I liked it so much that I said to myself that I will come back here for my studies. My father studied in Lublin, he also graduated from the UM. I didn't even take my chances there [in Israel, author's note], but applied here straight away. […]
>
> UM in Lublin, Ola, 23, Israel

Some choices are largely determined by certain ideals. This was the case for Mervin from Germany:

> […] You know, at the end of my secondary school I enrolled in a Polish-German organisation. We just … how do I say this? We bridge the gap between Poland and Germany. I mean, generally it's about the past, our history, because Poles have continued to see us in a bad light, they don't like us. Even though you can't feel this among young people, it's still out there. And generally, there is the Majdanek camp here. I work there now. There was a vacancy, so I came here for my holidays and I thought that I will stay here and study. […]
>
> UM in Lublin, Mervin, 21, Germany

There are also students who treat their studies as an adventure, an opportunity to travel around Europe or a chance to discover new countries and cultures:

> […] I just wanted to see what it looks like here, what is university education like. I just wish to see what's it like to study in different countries.
>
> *So you are not going to stay in Lublin after your studies, are you?*
>
> Well, no, because I'm not even going to finish my education here. I'm already thinking about another country.

Do you know where you are going to go next?

Spain, I think. But it's not like it's carved in stone […].

KUL, Max, 22, Austria

Finally, it is important to note that some students (those from Belarus) have undertaken their university education in Lublin due to the political repression they faced in their home country. This motivation is interesting enough to mention, as it seems valid again in view of the developments in Ukraine. Polish universities are being presented with an opportunity to persuade an even greater proportion of young Ukrainians[6] to pursue their educational and professional ambitions in Poland.

How Attractive is the City?

Respondent views on the conditions of their studies and stay in Lublin can, similarly to the motives, be divided into several distinct groups. The first, with predominantly negative experiences, comprises mainly those students of the Medical University who come from outside the European cultural background. They are characterised by having no competence in Polish (they study in English) and, reportedly, commonly lacking time to explore the city they study in and its culture. The only place identified by nearly all of them was the 'Plaza Centre,' where they not only do shopping but also eat out and spend their free time (Cinema City). It seems to be the only place, which bears any functional and design resemblance to their motherland:

> […] I don't know where the majority of museums and theatres are, and when it comes to cinemas, there is only one decent movie theatre, […] there's not much to do around here, but the theatres and cinemas are OK. […] there's only one cinema. Poor, but cheap […].

However, for students from the USA, and especially those of Indian origin, the biggest problem seems to be the feeling of cultural alienation. A recurring issue all of them report is the alleged unfriendliness or even hostility of Poles towards 'outsiders:'

[6] Indeed, Ukrainian citizens are the largest group of foreigners studying in Poland.

> […] people seem to be intolerant of foreign nationals. […] I believe this might be caused by a different skin colour and foreign language. They are very different from people living in the US, they are not friendly and seem to be stuck in a different mode of life. It appears to me that Poland is far behind the US. People are rather depressed and they worry about everything. […]
>
> Kashmal

> […] I don't have any Polish friends. […] Some Polish students are nice, others not really. It's OK, I understand their perspective, we're not from here, so it's difficult for them to see us learning at their university. […] They are not friendly. But I've gotten used to it by now. It doesn't bother me any more. […]
>
> Nirali

> […] I've noticed that the majority of Poles are nice and tolerant, but sometimes I feel like an outsider. One time, some guy on the street made fun of my skin colour. In my home country I've never experienced something like this.
>
> Kaushal

Interestingly enough, a completely different impression is reported by Ken from Taiwan:

> […] Generally, people are very nice here, not only those I know but when I look at other people on the street sometimes, I think these are generally nice people. I don't know. They are open, I think. When I go out with someone, they don't treat me as an outsider, but everyone wants to talk to me, everyone's interested in me, so I'm never bored at parties! [laughs] Yeah, but I can't speak about everyone, only those I know, and these are young people.
>
> *Have you experienced any problems connected with the fact that you are not a Pole?*
>
> No, I can't think of any … Sometimes someone stares at me, or looks at me curiously, but I'm not surprised since I do look differently. […]
>
> UM in Lublin, Ken, 21, Taiwan

Less jaundiced views on the living conditions in Lublin are represented by students with a European cultural background, including

not only those from Eastern Europe but also Germany, Austria and Israel. However, it is the students from Eastern Europe who feel the most comfortable in Lublin, as they frequently have plans to stay in Lublin or elsewhere in Poland. Their positive assessment of Lublin is also due to having family here and, generally, some competence in the Polish language. Below you will find several examples of the most typical opinions to describe Lublin as an attractive destination.

> […] You know … Each place has something in it, right? Take Kraków, for instance, there is a nice Old Town there. In Warsaw, it's the city centre, and in Lublin, I don't know … I think I just like it here. I like walking those streets. The city itself is not big. You can stroll across the city centre within an hour or so, in no hurry. There is no big-city hustle and bustle here. […] I can't stay in the countryside for more than two days, but I can't stand too much noise either. […] I think that's why I like it here. And you know what else? The blocks of flats in Lublin. They are colourful, yellow and whatnot, repainted or something […].
>
> UMCS in Lublin, Sergei, 21, Kazakhstan

> […] I just don't miss the big city any more. In general, Lublin is a nice place, I like it. It's nice here. Everything's nearby. Actually, I don't have to drive anywhere. You can walk everywhere within, I don't know, twenty minutes perhaps, well, sometimes maybe more, but in general everything is within a short distance, especially from my flat […]. The city has it's unique atmosphere – there are many streets, lots of nooks and crannies. This is cool. And let me stress this again – this is a fairly small city, which is nice, the quiet, I mean. There are no crowds like in Germany […]
>
> UM in Lublin, Mervin, 21, Germany

> What I like in Lublin is that it's not a big city. It's quiet and peaceful. It seems like no one is in a hurry here. In Austria, on the other hand, everyone walks very fast, looking at their watches all the time. You don't get that impression around here. […]
>
> KUL, Max, 22, Austria

> […] I love nature. I like it very much that I live near the Poręba housing estate and I can go for a walk to the nearby forest, or to

> the Lipniak housing estate, which is also more rural than urban. And it's so pretty around here, you can experience nature, which is what I like a lot. […] Well, this is a small but nice town. I feel very comfortable with its size. […] I just love such towns, not too big, I mean. […] before, when I came here, there was no Tesco, no Leclerc. Now, I'm a little bit concerned, with all those large streets constructed everywhere Lublin will not be so nice and cosy any more. But I don't know. If only such places as the Saski Garden are maintained, it'll be OK […]
>
> UMCS, Katarzyna, 21, USA

By a large part of foreign students Lublin is viewed as 'an ideal city for studying.' It is a city without the big city hustle and bustle, while at the same time, one with a well-developed informal student life and a wide array of cultural events, which create its unique atmosphere of a city which 'never sleeps.' Thanks to its moderate size, Lublin is perceived as a 'comfortable' student destination. With its compact urban development, it is a city where everything is within walking distance. What is also emphasised is the attractive and visually appealing cityscape, with many green areas and an atmospheric Old Town.

The decision on whether to stay in Lublin after studies was determined largely by the respondents' country of origin. Virtually all of the students from the broadly defined West did not plan to settle in Lublin. This was not only due to the sense of cultural alienation (emphasised by students from the USA), but, above all, because of the income levels in Poland:

> […] If I had to choose my university education again I'd have my doubts about coming here. I just want to finish my studies here and leave. I don't like Poland so much as to stay here, and the States are awesome.
>
> Kaushal

> […] It may not have been the best decision but I have everything I need to complete my studies quickly and cost-effectively. […] I don't have any plans connected with Poland. As soon as the next year is over I'm going to leave. I don't like Poland enough to live here. […]
>
> Kashmal

> […] Not really, no. I don't think I'm going to stay here. First of all, I'm not going to live here because of the economic conditions. Earnings are poor here and everything's expensive in comparison to your wages. So, no, I didn't even think of staying here. […]
>
> UM in Lublin, Mervin, 21, Germany

> […] No, I'm not going to stay. Because of one reason – the money. Doctors are very poorly paid here. Compared to what my sister earns in Taiwan. I'm definitely not going to stay here.
>
> *Do you miss anything here that you have at home?*
>
> Family, for sure. And food. Although there is a Chinese restaurant here. But it's not the same.
>
> UM in Lublin, Ken, 21, Taiwan

Students from Eastern Europe are much more ready to settle in Poland, to look for a job and pursue their ambitions here:

> […] well, I don't want to go back there [to Kazakhstan, author's note], it's hard back there and all. Here, it's easier to find a job or something. I'm not talking about making a killing, but with two languages, plus I think I will improve my English, so with three languages I think I should find a nice job.
>
> Sergei, 21, Kazakhstan

> […] well, I will probably stay here. I thought I will go somewhere West, but since I'm starting a family here, I don't think this will be solely my decision. […]
>
> Vadim, 21, Ukraine

From an Academic Campus to a City of Students

The importance of students to Lublin is most readily observable in early July, when the summer break starts. You can get the impression that the city has become empty.[7] It shows how significant the academic campus is for the city. Can Lublin develop the campus to become a city of students? It is difficult to provide a clear-cut answer to this question. On the one hand, it already is one, given the proportion of its residents to its students. On the other, though, a city

[7] And given the population of students in Lublin (ca. 80 thousand in 2012/2013) this course of action should not come as a surprise.

of students is one which exploits the full potential of its scientific resources and university graduates. And in this respect the situation is much less favourable. In order to maintain its position as an academic city, Lublin needs to attract investors to establish new, or develop the existing, business operations in the city to create jobs for professionals with higher education. An academic city is a city where universities not only serve as educational centres, but also initiate economic transformations (scientific and technological innovations) and cultural developments (not only during student festivals). So far, Lublin universities have quickly opened up to foreign students. This holds out a lot of hope that it is but one of many steps towards being 'a city of students.'

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Activation of the Academic Potential of the City: 'Student in the City: Culture and Education' Project

Agnieszka Ziętek
Maria Curie-Skłodowska University in Lublin

In recent years, we could observe a decreasing level of student and academic participation in social and cultural projects set in motion by cultural institutions in Lublin (Bielecka-Prus 2013, 111–3). Research results clearly indicate that the level of student participation in culture is relatively low given the potential and opportunities offered by the above-mentioned institutions. Despite the fact that cultural institutions in Lublin propose an open and participatory model of cultural involvement and go beyond the purely didactic and exclusive model of cultural dissemination, the potential seems underexploited by students and academic community alike. This tendency is observed despite the multitude of various cultural events available and continuously growing, ever since the city's attempt to secure the title of 'European Capital of Culture 2016.' Although Lublin was ultimately not selected, the efforts themselves have undoubtedly been a particular kind victory in themselves. Never before had Lublin been able to offer such an interesting, broad, comprehensive and varied range of opportunities to participate in activities implemented in the field of culture. Exhibitions, vernissages performances, theatre and film festivals, outdoor events, meetings, informal group initiatives – all these elements contribute to a tightly packed cultural map of the city. One should also not forget the large number of organizations operating within the framework of the so-called third sector, which also operate within the broadly understood sphere of culture. It would seem that rather than shortage, it is the excess of cultural and artistic events that could constitute a particular specific problem potentially bothersome to residents, including students at Lublin's universities.

The mentioned disinterest is observed despite the fact that participation in the broadly understood sphere of culture, social activity or local involvement is an important factor in the development of key individual competencies. As noted by Ken Robinson, 'in a special

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Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 95–106.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

way, art is associated with aesthetic experience and aesthetic experience is one in which our senses are working at the highest speed. This happens when we experience a moment, compassion excitement of what we see, when we really feel that we are living. In contrast, anesthesia is when we cut sensations and blunt our reactions to what is happening. And many of these drugs works in that way. We push children through education and make them insensible. And yet, it should be quite the opposite: we shouldn't make them drowsy, but wake (them) up to discover what they have in themselves.' (Robinson 2011, 63). We have to deal with a similar situation at the level of higher education, which has in recent years been under a strong pressure from the labour market. The situation can be seen as a specific surrender to free market rules (a 'survival of the fittest' mentality) but also the rules prevailing in the labour market (focusing on education, or rather the 'production' of future workforce). Colleges and universities, and indeed most degree programmes and courses, mainly in humanities (philosophy, and cultural studies) must therefore to cope with the expectations of both employers (the delivery of skilled manpower) and the future employees/current students (educating an employee that is efficient, effective and tailored to the needs of the labour market). Universities or fields of study that fail to meet these requirements and are unable to produce 'measurable' educational results in the form of specific professional skills, are being closed down.[1]

Therefore, activity in this sphere of social life significantly affects not only individuals but also the level of development of the local community. It also shapes skills that are conducive to the formation of the so-called creative class. As Richard Florida says: 'Qualities that confer merit, such as technical knowledge and mental discipline, are socially acquired and cultivated. Yet those who have these qualities may easily begin to believe that they were born with them, or acquired them all on their own or that others just "don't have it". By papering over the causes, of cultural and educational advantage, meritocracy may subtly perpetuate the very prejudices it claims to renounce' (Florida, 2012, 57).

Active participation and involvement in activities implemented in the field of culture may therefore provide an excellent way to stim-

[1] For example philosophy at the University of Białystok.

ulate the development of individuals and social groups. It can also develop sensitivity, stimulate creative thinking, and bring to light the normally imperceptible dimensions of the surrounding, everyday reality. It is also a tool of social change.[2] Active participation stimulates 'divergent thinking,' which is open to a multiplicity of interpretations, cognitive interest and the desire to 'broaden one's horizons,' which in turn is the very basis of creativity (Robinson 2011, 64).

The purpose of this article is primarily to draw attention to the role of local and municipal cultural institutions in the process of activating the academic community and improving the level of their progressive participation in activities carried out by said institutions. The analysis was carried out primarily on the basis of the conclusions of research conducted under the project 'Student in the City: Culture and Education' implemented in Lublin in 2013.[3]

The Idea behind the Project

The Idea of the project 'Student in the City: Culture and Education' grew out of observation of the cultural life in Lublin and particularly the academia's participation in it. The starting point of the project has to assume that lack of knowledge of common cultural codes, the difficulty in establishing a dialogue and a critical reflection on the complex social and cultural phenomena and processes, which have been ever more frequently observed among the student community in recent years, and which can be largely overcome through direct participation in cultural and social events. Participation in broadly understood culture can thus contribute not only to improving the integration of student community with the city and its institutions, but also to acquiring the ability to critically view the reality and processes that take place within its context. It can also contribute to creating the new habit of being more consciously 'present' in the socio-cultural sphere as well as to developing creativity and the capacity for original thinking.

There was also a deep and justified need to create opportunities for an interdisciplinary meeting and open discussion to exchange ex-

[2] I.e. The studio of socially engaged art 'The Districts,' see http://rewiry.lublin.pl

[3] The project 'Student in the City: Culture and Education' was implemented between March and December 2013 by Stowarzyszenie im. Stanisława Brzozowskiego in cooperation with the 'Labyrinth' Gallery, Faculty of Philosophy and Sociology at UMCS, with financial support from Lublin municipality.

periences, between both the representatives of different academic communities and research areas related to the socio-cultural sphere of city life, and representatives of cultural and artistic institutions, participants and recipients of this sphere – i.e. the students.

The 'Student in the City: Culture and Education' project had therefore become an interdisciplinary program of activating Lublin's student community to more intensively and more consciously participate in the cultural life of the city. The project focused on three areas: (1) exploration of the level of participation of Lublin's students and academic community in the social and cultural life of Lublin; (2) creating a forum for open discussion and cooperation between representatives of cultural, social and scientific institutions in the matter of creating a standard model of social and cultural participation; and (3) organising practical workshops to enhance the participants' skills in the fields of social engagement and cultural activity in the city of Lublin.

An important objective of the project was also the stimulation arrangementt of deeper cooperation between the city's universities and cultural institutions in order to develop an attractive cultural offer, as well as to strengthen the cultural, social and didactic competence of people involved in those spheres of action. One of the aims of the project was also to emphasise the importance of the socio-cultural sphere as a potential forum for a more meaningful cooperation between the city's universities and cultural institutions with the view of developing an attractive cultural offer and strengthening the cultural, social and didactic competence of all persons involved in said areas of activity.

The project was therefore to develop and strengthen good practices aimed at improving the level of participation of university students in Lublin's city life, as well as stimulating the involvement of representatives of the municipal authorities, socio-cultural institutions and the academia in the work towards socio-cultural activation of the city's student population.

In this article I would like to focus primarily on the first of the three fields of activity implemented under the project, i.e. the study of the level of Lublin[4] universities students and lecturers' participation

[4] The other two areas of activity, i.e. creating a forum for the discussion and cooperation between representatives of the cultural, social and academic/scientific

in the cultural and social life of the city. The results of this study may in fact lead to interesting and valuable observations.

The Research Methodology

The research operationalised 'participation in culture' with respect to, among other elements, the issues concerning the use of the cultural offer, the knowledge and its assessment, and factors affecting the decision to participate in it. From the selected research perspective, the way of spending free time (including the scope of new media use) was also important.

It was necessary to analyse the test group members' social engagement, i.e., whether they become involved in the works of NGO's, student governments/councils or student organizations. When observed, cooperation of this sort was provided important information regarding the respondents' potential willingness to become involved in other forms of activity as well.

The initial hypothesis was as follows: despite the fact that the cultural institutions of Lublin offer an open and participatory model of participation in culture and go beyond a purely didactic and basic model of cultural dissemination, this potential is not sufficiently exploited by the Lublin's student and academic communities.

The most important research questions that we tried to answer in the course of the research were as follows:

1. Are UMCS students and academic community familiar with the offer of Lublin's cultural institutions?
2. To what extent do young people and academic community partake in this offer?
3. What outlays are allocated by the respondents to participate in such events?
4. What are the most often indicated barriers that prevent or significantly restrict participation in cultural activities?

institutions, in the context of creating a standard model of social and cultural participation, and workshops improving the participants' skills in the matter of social engagement and socio-cultural activity are further described on the project website. At this point it should only be noted that within the framework of building a discussion forum, a series of lectures and expert panel discussions were organised, which were attended by representatives of scientific, cultural and municipal institutions.

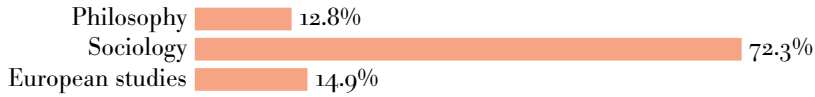

FIGURE 1 Field of Study

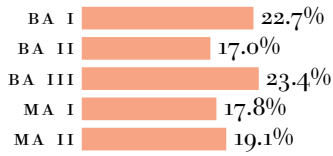

FIGURE 2 Academic Degree

5. What are the factors largely determining the specific level of participation in the cultural life of the city?
6. How do students and academic community assess the cultural offer of Lublin institutions?

Answers to these questions were sought through qualitative and quantitative research. Quantitative research were conducted in the form of surveys carried out among students of the Faculty of Philosophy and Sociology (sociology, philosophy and European studies). Qualitative research included individual in-depth interviews with the academic staff at the Faculty of Philosophy and Sociology. The quantitative research was conducted through stratified random and proportional sampling; for each researched field of study, proportionally to the number of students (at the Bachelor's and Master level), the appropriate number of questionnaires was calculated. A total of 47 questionnaires were filled out by Philosophy and Sociology students majoring in the three fields (sociology, philosophy and European studies), which represented 10% of all students in these three fields of study (in June 2013). Ten individual in-depth interviews were also conducted with scientists working at the Faculty (a detailed breakdown into particular fields of study and academic degree is presented in figures 1–2). It should also be noted that the group of respondents was not representative and the conclusions reached therein may not allow for viable generalisations?

One of the first questions asked concerned the sources of information about cultural events in the city. The possible answers included: posters and flyers, social networking sites, student portals, friends, websites of cultural institutions, newsletters, websites cultural guides,

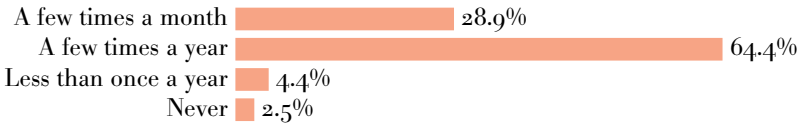

FIGURE 3 Going to the Cinema

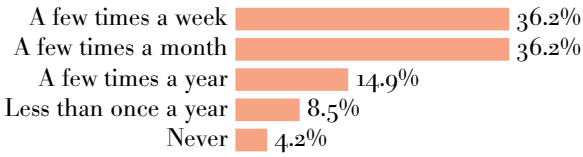

FIGURE 4 Watching/Downloading Movies from the Internet

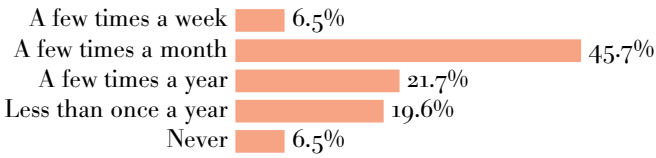

FIGURE 5 Borrowing Books

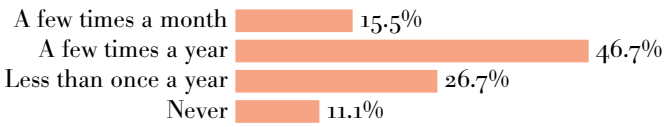

FIGURE 6 Buying Books

radio stations, television, newspapers and cultural brochures. The answer 'most often' was most prevalent with regard to 'social networking sites' and 'friends' (29.79% indications as 'the most often'), while newsletters (82,95% indications 'never') and student portals (97,87% of the indications 'never') were the least common answers.

In terms of participation, one of the most important questions pertained to its individual areas and forms. The detailed answer to this question is shown in figures 3–9. Among answers indicated frequently we can mention: watching or 'downloading' movies from the internet (36.17% indications of 'several times a week' or 'several times a month'), as well as borrowing books (45.65% of answers 'a few times a month') – which, however, in the case of students seems to be rather understandable.

The issue of respondents' participation in social events and activities seems also very interesting from the cognitive point of view. The

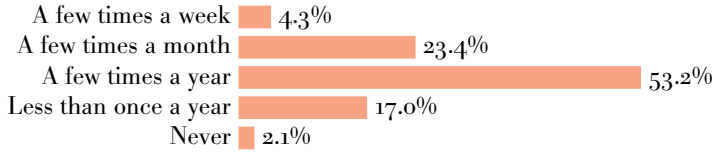

FIGURE 7 Going to Concerts and Festivals

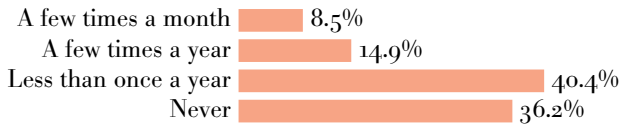

FIGURE 8 Going to Theater

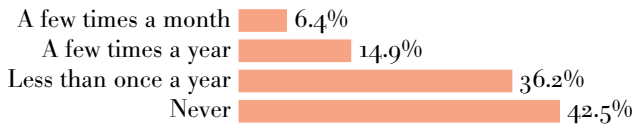

FIGURE 9 Participation in Social Activities

obtained answers lead to the conclusion that almost half of the respondents (42.55%) have never participated in this type of activities.

It seems that cultural institutions' program and offer has a significant impact on participation in the cultural sphere. On the question of its quantitative evaluation/assessment almost 2/3 of the respondents (61.7 percent) stated that it is 'very good' or 'rather good' (figure 10). In turn, a vast majority of respondents (68.1%) identified its level as 'average.'

Interesting responses were provided to the question concerning the frequency of actually using the offer of particular cultural institutions in the city. A detailed distribution of responses to this question is included in the research report, at this point it should be noted, however, that the most visited 'cultural' institution is 'Cinema City' cinema located in one of the shopping malls (34.78% indicated 'most often' and 23.91% 'quite often'). The 'Bajka' cinema and the Academic Cultural Centre 'Chatka Żaka' were far behind with only 10.87% of the 'most often' indications to both (Ziętek 2013).

Taking into consideration the expected low levels of student participation in the offer of local cultural institutions, we also asked about the importance of participation in the cultural life of the city. A little over 1/3 of the respondents rated it as important. However, to the

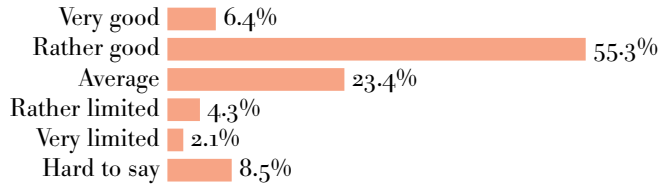

FIGURE 10 Evaluation of the Cultural Offer: The Number of Events

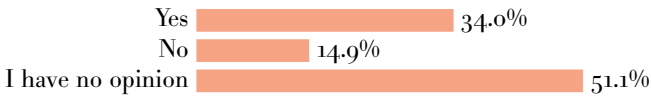

FIGURE 11 'Participation in Cultural Life of the City is Important'

FIGURE 12 'The Cultural Offer is Too Hermetic'

same question, more than half of the respondents were not able to give a specific answer (figure 11).

In light of the obtained research results, it seems relevant to attempt to determine the factors which may facilitate stimulating the interest in the cultural events in the city, as well as increasing the level of participation in it. In this context the answers to the questions on adapting the offer to the needs and capabilities of the audience as well as the factors conducive to increasing the level of participation, seem to be particularly interesting. The first issue was operationalised in the research by gauging the respondents' to attitude to the following statements: 'the cultural offer is too hermetic, addressed exclusively to experts;' 'I do not participate [in cultural events] because of fear of misunderstanding;' 'I do not participate because of the fear of alienation, "not fitting in;"' 'there is limited group of people attending cultural events.' The distribution of responses is presented in figures 12–15.

The results may indicate that the conviction of the 'closed/private' and exclusive nature of cultural events, in the respondents' opinion, to a selected, hermetic group of people, might be an important factor limiting the research group's participation in cultural events. In

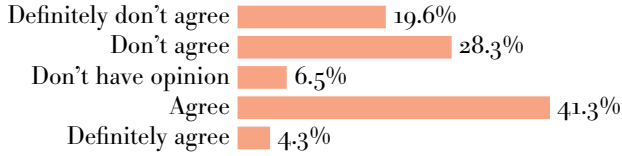

FIGURE 13 'I Do Not Participate Because of Fear of Alienation'

FIGURE 14 'There Is Limited Group of People Attending Cultural Events'

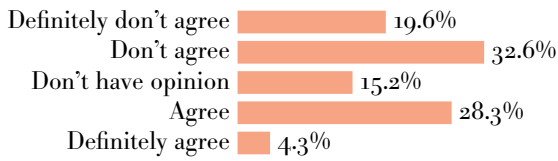

FIGURE 15 'I Do Not Participate [in Cultural Events] Because of Fear of Misunderstanding'

other words, the institutions that prepare the cultural offer are seen as closed and highly specialized, theoretically open to all interested parties, but in fact dedicated to people from the so-called 'circles.'

Answers to the question concerning the factors that stimulate an increase in the frequency of using the cultural offer of the city also provided a wealth of important information. More than 1/3 of the respondents indicated that lower ticket prices would be a welcome change (34.04%), as well as more leisure time available (25.53%) and better promotion of events (21.28). These results are particularly interesting in the context of well-known 'multiplex cinema' and the fact that it was indicated as the most visited 'cultural institution,' (especially given the relatively high price of admission), as well as the fact that many of the important and interesting cultural events in the city are free of charge.

Conclusions and Recommendations

Research efforts undertaken under the 'Student in the City: Culture and Education' project, including the performed quantitative study, lead to at least four fundamental conclusions.

Firstly, the studied group seemed generally somewhat disinter-

ested in the cultural offer of the city. The respondents usually attributed the fact to the lack of sufficient information on cultural events, high prices of admission and lack of spare time. Interestingly, the lack of reliable and precise information concerning current cultural events in the city was also reported by the surveyed members of the academia (who participated in individual in-depth interviews).[5]

Secondly, the respondents appeared to be hard-pressed to seek relevant information on their own, they do not know where to look or where it is made available. It should be added at this point that in the reality of common availability of internet access (which is used by 100% of the respondents), said conviction of the limited accessibility of information seems somewhat implausible. More likely the respondents have simply never developed the habit of independently researching and discovering the offer of cultural institutions and various cultural events available as its simply transcends the scope of their present, familiar experience.

Thirdly, the relatively low level of participation observed in the described study may also result from the prevailing perception of cultural institutions as hermetic, exclusive and 'closed' to the 'average consumer,' providing a highly specialised offer aimed at an experienced and adequately prepared audience.

The emerging picture of rather limited interest and participation in the cultural life of the city is further strengthened by the scarcity of the respondents' involvement in the initiatives of municipal cultural institutions, NGOs or even student organisations, i.e. an overall low level of activity in the context of broadly understood social life.

It seems that in the light of the above findings, more effort should be invested in improving the promotion of events and finding ways to communicate information to wider groups of potential audiences. A possible solution may be found in conducting dedicated courses on the cultural topography of the city, aimed mainly at first-year students, that would be supplemented by a short guidebook/information booklet advertising various cultural institutions and events in Lublin.

It is also undoubtedly recommendable to continuously implement

[5] Common answers included: 'I feel that the residents are barely informed of the available forms of spending free time, and besides even if there is information it is often unclear who the organiser is, whether it is a municipal or private initiative,' 'I don't know where to find information,' or 'There is no website that would gather all the information in one place.'

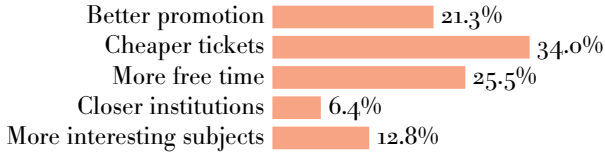

FIGURE 16 Reasons for More Frequent Participation in Cultural Events

particular programmes/projects facilitating active involvement rather than merely encouraging passive participation in the city's broad cultural offer. The same should also emphasise active contribution of academic circles to the development and realisation of socio-cultural initiatives. What we therefore need is the introduction of course/workshop based programmes aimed at stimulating 'grass-roots' social processes, facilitating activation and participation as well as the general willingness to become involved in and co-create various socio-cultural endeavours. An important element of said efforts should be the establishment of a dedicated platform that would allow for meetings and exchange of experiences between students, the academia, representatives of cultural institutions and municipal authorities. On the one hand, such a platform would facilitate mutual communication, on the other – it would allow for more effective action aimed at the activation and genuine involvement of all parties concerned in the development of a well thought-out cultural policy.

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Academic Lublin Regarding Unemployment of Graduates of Universities

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Introduction

Academic is one of the basic advantages of Lublin. According to Polish language dictionary, academic is an adjective (lat. academicus) that is (*Słownik języka polskiego* 1978, 19):

1. relating to universities or university students;
2. theoretical, not related to practice in real life;
3. holding a hackneyed formulas, stereotyped.

There are 10 universities in Lublin now. On the one hand, as the largest employer of the region, they hire employees and create the demand for labour. On the other hand, they release every year a number of graduates to the job market and create the supply of labour. In this context, it seems justified to ask the question, what to do in order that 'the diploma of the profession does not become the disappointment with the diploma' ('Przemówienie Rektora' 2013). And interpret academic Lublin as related to universities which prepare the best-qualified employees in particular professions, not detached from reality, since it provides the basis for the specific employment and decent life, not creating a threat of unemployment.

Unemployment means the imbalance on the labour market expressed in the surplus of labour over the demand for it. In contemporary economic literature usually three characteristics of an unemployed person are emphasized (Kwiatkowski and Bezrobocie 2002, 13): being unemployed, looking for a job, readiness to work. Having the relevant level and the domain of education are extremely important in search for jobs.

The purpose of this article is to analyse the connections between the level and the domain of education with unemployment. The time scope includes the years 2002–2013 and the spatial scope – the city of

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 107–117.
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Lublin in its present administrative area, with addition that in some analyses Lublin was shown as compared to the Lublin province and Poland in total. Tendencies of changes in academics and unemployment in Lublin are the same as in the whole country, therefore sometimes due to missing statistical data for Lublin, national tendencies were presented.

Data used come from the Central Statistical Office (GUS) in Poland, Statistical Office in Lublin, province labour offices in Poland and City Labour Office in Lublin.

The Academic Potential of Lublin Due to Statistics

In Poland after 1989 a very large growth in the number of universities (from 92 in 1988 to 453 in 2012) and the number of students (from 353,000 in 1988 to 1677,000 in 2012) took place. Both the number of universities and the number of students increased almost five times over this period. The highest increases were observed up to 2005, and after this point the growth trend of the number of universities weakened and the number of students slightly decreased (figure 1). Additionally, the participation of students in full-time programmes increased (from 45.8% in 2002 to 57.9% in 2012) and so did the percentage of studying women (from 51.8% in 1988 to 58.7% in 2012). University education on such a large scale resulted in changes in the education level structure in the population. In 1960 university education was received by 2.1% of the country inhabitants, in 1970 2.7%, in 1978 4.5%, in 1988 6.5%, in 2002 9.9%, and in 2011 as much as 17.0%. Similar tendencies were observed also in Lublin and the Lublin province (table 1).

Until the change of names of medical, agricultural and economic academies to universities took place, Lublin was the only Polish city with two universities (Marie Curie Skłodowska University and Catholic University of Lublin (KUL)). Today, Lublin is the largest academic centre in eastern Poland. 10 universities operate here, including 4 public and 6 non-public. In the whole Lublin province 18 universities operate, including 7 public and 11 non-public.

The largest universities in Lublin and in the whole Lublin province are: UMCS (23,600 students in 2013), KUL (15,200), Lublin University of Technology, (10,800) University of Life Sciences (10,100) Medical University (7,300) and University of Economics and Innovation (7,700). They all are located in the area of Lublin (table 2). The

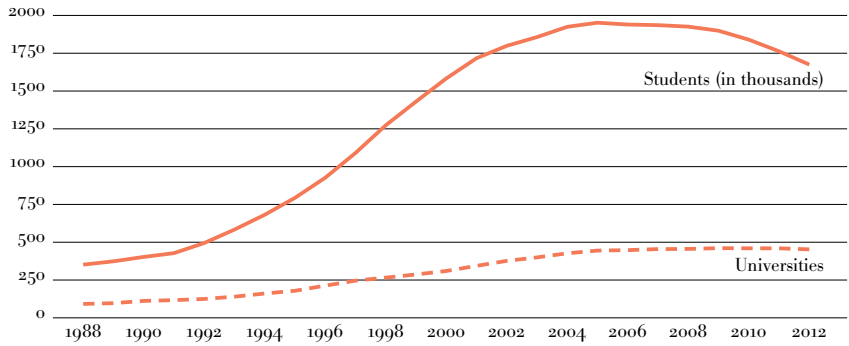

FIGURE 1 Number of Universities and Students in Poland, 1988–2012 (based on data from the Central Statistical Office, http://stat.gov.pl)

offer is supplemented by other non-public universities in Lublin: Vincent Pol University (2,700 students), University College of Enterprise and Administration (1,800), University of Social Sciences (500) and University of Business and Administration (200). In the Lublin province but not in Lublin there are three vocational universities: in Biała Podlaska (3,500 students), Chełm (2,400) and Zamość (1,000). Other non-public universities in the Lublin province are in Zamość (University of Management and Administration with 1,900 students and College of Humanities and Economics with 400students), in Chełm (University of International Relations and Social Communication with 600 students), in Puławy (University of Puławy with 200 students) and in Ryki (Lublin University with 300 students).

Lublin academic centre is characterized by rich offer of the postgraduate and PhD studies. In the academic year 2011/2012 at postgraduate studies 7,000 people studied here, while PhD studies were attended by 2,800 (Urząd Statystyczny w Lublinie 2013, 107). Within 10 years the number of PhD candidates in Poland increased four times (from 10,500 in 2002 to 42,000 in 2012), and the number of students participating in postgraduate studies by 30% (from 131,000 in 2002 to 173,000 in 2012).

Level of Education and Unemployment

The level of education in a population affects its professional activity, employment and unemployment. Relative measures in this respect are: activity rate (the number of professionally active in the number of population at the age of 15 years and above), employment rate

TABLE 1 Students (as of 30 September) and Graduates (as at the end of an Academic Year) of Universities in Lublin, in the Lublin Province and in Poland, in the years 2002 and 2012

Specification		Lublin		Lublin prov.		Poland	
		2002	2012	2002	2012	2002	2012
Students	Total	81.7	79.9	91.6	90.1	1800.5	1676.9
	Women	48.5	49.9	54.1	55.5	1025.6	985.0
	% women	59.3	62.4	59.1	61.5	57.0	58.7
	% stationary	53.5	68.6	51.1	67.8	45.8	57.9
	% non-stationary	46.5	31.4	48.9	32.2	54.2	42.1
Graduates	Total	15.6	24.6	18.2	27.8	342.1	485.2
	Women	–	17.0	–	18.9	–	317.0
	% women	–	69.1	–	68.2	–	65.3
	% stationary	42.9	61.7	39.3	60.4	38.3	50.8
	% non-stationary	57.1	38.3	60.7	39.6	61.7	49.2

NOTES Based on data from the Central Statistical Office in Poland (http://stat.gov.pl).

(the number of employed in the total number of population at the age of 15 years and above) and unemployment rate (the number of unemployed in the number of professionally active).

These three rates are more favourable for the population with university education than for the population with lower education (table 3). Among the population with university education there is the highest percentage of active and working people and the lowest percentage of the unemployed. These regularities are preserved over time in spite of changes in the number of unemployed and unemployment rate, which currently is 13.2% in Poland, 14.0% in the Lublin province and 10.0% in Lublin. 10 years earlier the unemployment rate was higher and it was 17.5% in Poland, 14.9% in the Lublin Province and 13.1% in Lublin. Unemployment rate was reduced by 4.2 percentage point (p.p.) in Poland, 0.9 p.p. in the Lublin province and by 3.1 p.p. in Lublin. Also in the absolute terms there occurred decrease in number of unemployed people. Namely, the number of unemployed decreased by approximately 1,000,000 in Poland, 39,700 in the Lublin province and by 2,800 in Lublin (table 4).

In Lublin within 10 years the number of unemployed with university education increased from 2,600 in 2003 to 4,900 – approximately twice. This growth was also great in the whole Lublin province where

TABLE 2 Universities in Lublin and in the Lublin Province According to the number of Students in 2013

Public in Lublin	
Uniwersytet Marii Curie Skłodowskiej	23.6
Politechnika Lubelska	10.8
Uniwersytet Przyrodniczy w Lublinie	10.1
Uniwersytet Medyczny w Lublinie	7.3
Public not in Lublin	
Państwowa Wyższa Szkoła Zawodowa w Białej Podlaskiej	3.5
Państwowa Wyższa Szkoła Zawodowa w Chełmie	2.4
Państwowa Wyższa Szkoła Zawodowa w Zamościu	1.0
Non-public in Lublin	
Katolicki Uniwersytet Lubelski	15.2
Wyższa Szkoła Ekonomii i Innowacji w Lublinie	7.7
Wyższa Szkoła Społeczno-Przyrodnicza w Lublinie	2.7
Wyższa Szkoła Przedsiębiorczości i Administracji w Lublinie	1.8
Wyższa Szkoła Nauk Społecznych w Lublinie	0.5
Wyższa Szkoła Biznesu i Administracji w Lublinie	0.2
Not-public not in Lublin	
Wyższa Szkoła Administracji i Zarządzania w Zamościu	1.9
Wyższa Szkoła Stosunków Międzynarodowych i Komunikacji Społecznej w Chełmie	0.6
Wyższa Szkoła Humanistyczno-Ekonomiczna w w Zamościu	0.4
Lubelska Szkoła Wyższa w Rykach	0.3
Puławska Szkoła Wyższa	0.2

NOTES Based on data from the Central Statistical Office in Poland (http://stat.gov.pl).

the number of unemployed with university education increased from 10,400 in 2003 to 19,500 in 2013 – approximately by 80%. The high (almost twofold) growth in the number of unemployed with university education was recorded in the whole country from 123,300 in 2003 to 242,900 in 2013 (table 4).

In Lublin, the Lublin province and in Poland there is a very high level of unemployment among people aged 25–34 (table 5). People at this age state the highest percentage of unemployed (about 1/3). In addition, this percentage increased by approximately 2 percentage points over the past 10 years in the country, the Lublin province and in Lublin. At the same time the amount of unemployed below

TABLE 3 Economic Activity Rates of the Population in the Lublin Province and in Poland (in the 2nd Quarter of 2013)

Level of education	Activity rate		Empl. ratio		Unempl. rate	
	(1)	(2)	(1)	(2)	(1)	(2)
Tertiary	80.1	79.7	75.1	75.5	5.9	5.3
Post-secondary and secondary vocational	68.8	66.5	61.7	60.1	10.4	9.6
General secondary education	49.7	49.8	42.0	42.6	15.6	14.4
Basic vocational	64.8	61.4	57.5	53.6	11.2	12.7
Primary or lower	22.3	18.8	19.3	14.9	13.5	20.9
Total	56.8	55.9	51.0	50.0	10.2	10.4

NOTES Based on data from the Central Statistical Office in Poland (http://stat.gov.pl)

25 years of age lowered, which may be related to the temporary postponement of unemployment in the time of university studies.

It seems that the decrease of the number of unemployed and unemployment rate was partially connected with a great emigration, especially after accession of Poland to the European Union. According to the population census from 2011, 83% among approximately 2 million Polish emigrants were at the working age. From the Lublin province emigrated 112,000 people. Level of education was determined only for 345,000 emigrants aged 13+ years, 2/3 had at least secondary school, 23% university education, more than 40% – secondary, small part among them had secondary vocational level of education. Nearly 1/4 of Polish emigrants had basic vocational level of education. 73% of the Polish emigrants were employed abroad, most often with basic vocational education (81% of this group), secondary vocational (79%) and university education (72%). Most rarely people worked without a particular profession (1/3 of people with not completed primary school and without education, 60% of primary education and 65% of general secondary education).

The Domain of University Education and Unemployment

The size of unemployment differs also at the domain of university education. Table 6 compares structures of emigrants and the population with university education, students and graduates according to the domain of education in Poland. Owing to the fact that there is no

TABLE 4 Unemployed Registered According to the Level of Education in Lublin and in the Lublin Province in the Years 2003 and 2013 (as of 30 September) and in Poland (as of 30 June)

Level of education	Lublin				Lublin province				Poland			
	2003		2013		2003		2013		2003		2013	
	*n**	%	*n**	%	*n**	%	*n**	%	*n**	%	*n**	%
Tertiary	2.6	13.1	4.0	23.1	10.4	6.2	19.5	15.4	123.3	3.9	242.9	11.5
Secondary vocational	5.4	26.7	4.1	23.8	42.6	25.5	31.6	24.9	674.2	21.5	466.8	22.1
General secondary education	1.7	8.6	2.1	12.1	12.9	7.8	15.8	12.4	204.0	6.5	233.6	11.1
Basic vocational	5.1	25.2	3.0	17.4	55.3	33.2	30.9	24.3	1110.7	35.4	587.6	27.9
Primary or lower	5.3	26.5	4.1	23.7	45.5	27.3	29.2	23.0	1022.4	32.6	578.2	27.4
Total	20.1	100.0	17.3	100.0	166.6	100.0	126.9	100.0	3134.6	100.0	2109.1	100.0

NOTES *In thousands. Based on data from the Central Statistical Office in Poland (http://stat.gov.pl)

TABLE 5 Unemployed Registered by age in Lublin, in the Lublin Province and in Poland in the Years 2003 and 2013 (as of 30 September)

Age	Lublin				Lublin province				Poland			
	2003		2013		2003		2013		2003		2013	
	*n**	%	*n**	%	*n**	%	*n**	%	*n**	%	*n**	%
Below 25	4.0	19.8	2.1	11.9	49.9	29.9	27.2	21.4	823.6	26.8	385.2	18.3
25–34	6.4	31.9	5.8	33.2	51.6	31.0	42.2	33.2	849.5	27.6	627.3	29.7
35–44	4.3	21.6	3.7	21.5	33.0	19.8	24.0	18.9	668.3	21.7	425.7	20.2
45–54	4.8	23.8	3.1	18.2	28.5	17.1	19.8	15.6	642.5	20.9	389.6	18.5
55+	0.6	3.0	2.6	15.2	3.6	2.2	13.8	10.9	89.4	2.9	281.4	13.3
Total	20.1	100.0	17.3	100.0	166.6	100.0	126.9	100.0	3073.3	100.0	2109.1	100.0

NOTES *In thousands. Based on data from the Central Statistical Office in Poland (http://stat.gov.pl)

data on a structure of unemployed with university education according to the domain of education, only data of the levels of education were analysed.

The largest percentage of the unemployed are people educated in domains of engineering, industry and construction (36.2%), then with general education (27.4%), and in social sciences, economics and law (almost 15.4% of total unemployed). The last group is also the most frequently represented (more than 1/3) among emigrants and total population with university education. Additionally, the majority of students educate themselves still in these domains and universities release to the job market the majority of graduates in these domains.

In 2012, at universities in Lublin, the majority of students were educated in the economic and administrative group (16.6% of all students), then in humanities (13%), medical (11.9%), pedagogical (9.3%) and social sciences (9.1%). Students of the above mentioned groups were 60% of all of students in Lublin (Urząd Statystyczny w Lublinie 2013, 72). At the same time according to the data of the City Labour Office in Lublin, the majority of the unemployed university graduates registered in labour offices in Lublin province (as for 31.05.2013) graduated from:

- administration 374
- pedagogy 366
- law 157
- physiotherapy 140

A similar situation occurs nationwide and every province is dominated by four of the aforementioned domains, as well as economics and management. On the other hand, domains, in which no one was reported unemployed in the province of Lublin are: pharmacy, finance and banking, computer science and econometrics, medicine, stomatology (Fundacja Energia dla Europy 2013, 93).

The question is, why universities educate in these domains, after which graduates cannot find a job. One of the reasons may be a fashion to study in certain domains, and the ease to organize the studies in domains that do not require highly specialized laboratories, devices and assistance. When analysing an average unit cost of education of one student in 2012 (figure 2), we can see that education of economists (PLN 9,700) and educators (PLN 10,300) is the cheapest,

TABLE 6 Unemployed, Emigrants, Population in Total, Students and Graduates According to the Domain of Education in Poland

The domain of education	(1)		(2)		(3)	(4)
	*n**	%	%†	%‡	%	%
Education of teachers and pedagogy	51	2.8	11.0	16.3	10.4	12.0
Humanities, education on languages and art	28	1.5	13.4	8.9	8.9	10.3
Social sciences, economics and law	278	15.4	38.7	36.2	36.0	33.4
Sciences, mathematics and computer science	55	3.0	10.0	9.0	8.6	9.4
Technique, industry, construction	655	36.2	11.6	15.2	17.1	17.6
Agriculture and veterinary medicine	66	3.6	2.2	3.2	1.7	2.3
Health and social care	36	2.0	6.4	6.9	8.1	8.6
Services	146	8.1	6.6	4.4	9.3	6.4
General programs	496	27.4	–	–	–	–
Total	1811	100.0	100.0	100.0	100.0	100.0

NOTES Column headings are as follows: (1) Unemployed aged 15 + years, 2nd quarter of 2013, (2) population with higher education, census 2011, (3) students 2012, (4) graduates 2012. *In thousands, † emigrants, ‡ total. Based on data from the Central Statistical Office in Poland (http://stat.gov.pl)

while artists (PLN 35,300) and students of medical universities (PLN 32,800) are the most expensive. The education of doctors is more expensive, it is cheaper for nurses, and the cheapest for cosmetologists and public health professionals. Average cost of education of one student was PLN 13,800 in 2012 in Poland, in public schools PLN 15,600, in non-public ones – PLN 8,200.

Conclusion

The conducted analysis proves a significant value of education, in particular on the level of university education. Population with university education, despite growth in the number of unemployed people among them, still has a better status on the labour market, manifesting itself by a greater professional activity, higher employment rate and lower unemployment rate.

However, there is still an excessive supply of the graduates of some

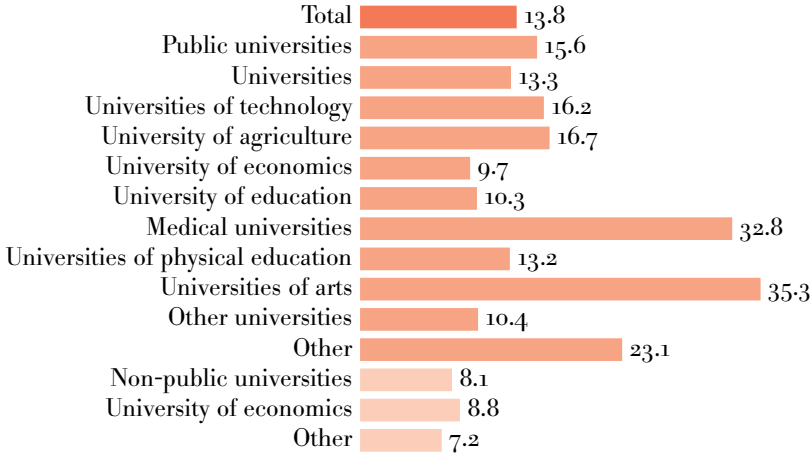

FIGURE 2 Unit Costs of University Education in Poland in 2012 (based on data from the Central Statistical Office, http://stat.gov.pl)

specializations. We are not able to foresee what it will be like in the future. After all, the professional work lasts at least 30 years and after raising the retirement age even more than 40. In addition the contemporary progress takes place in an appalling pace and, at the same time, it outdates the acquired before knowledge in all domains. Therefore teaching during university studies should be conducted in such a manner, so as to equip students with the knowledge most important for the particular discipline, referred to the future professional work, accordingly verified, and also the one which brings the appropriate skills and shapes the mind – the so called intellectual potential to create real employment opportunities in related professions, and if necessary, even requalification, however, not resulting in the sense of degradation. 'The human right to work is not the right to meaningless gainful operations, but to work, which an actual goal, being morally faultless, becoming a reasonable personal goal' ('Przemówienie Rektora' 2013, 47). What is unacceptable it is the condition, when under the dualistic society, some have work and decent salary, and some must be satisfied only with a seasonal or occasional employment, or be the victims of chronic unemployment.

Taking account of the contemporary realities, universities, though they should be open for new trends, do not have to uncritically accept them and change into professional courses combined with a career office. That is because achieving proficiency in anything requires a

lot of effort and time. There are no bad professions, they can be only unsuitable for a particular person and labour market. Here, it is possible to propose several postulates: instead of education at several domains – interdisciplinary nature of teaching; cooperation between faculties and even between universities; internships not only during studies, but also immediately after; multi-level career; the return to the relationship of a student and a master, partner, never a client, which has only rights and claimant attitude; considering realities of the contemporary times and the future (demographic forecasts and technical progress); a graduate should be an enlightened and righteous man.

'For me, it is difficult to believe – emphasized John Paul II in a speech at the 68th session of the International Labour Organization on 15 June 1982 - that the contemporary humanity, capable of such renowned scientific achievements, was not able – by means of a creative effort inspired by the solidarity which connects all people – to find justified and effective solutions to such a significantly human problem, which is the problem of employment' (Radwan, Dyczewski, and Stanowski 1993, 298).

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Tourism and Cultural Attractions in Lublin Selected by Students

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Introduction

A leisure time is a time spend away from physiological needs, household, professional or school duties. It can be used in any number of ways, depending on tastes, preferences, character or personality. The most important of its functions is to provide mental and physical relaxation, entertainment, health improvement, develop interests and skills. Free-temporary behaviors are a source of positive experiences. They evoke pleasant emotions. They allow closer contact with family and friends and help to establish deeper relationships (Mucha-Szajek and Zaremba 2005, 346; Siviński 2004, 7).

They have a positive influence on the socio-economic and spatial location reception – very often the cities. Analysis of needs and preferences of residents and travelers on tourism can lead to a coherent plan for the development of the village. One of the main conditions for the proper functioning of the free-temporary economy in the city is a thorough knowledge of its environment and monitor changes taking place in it (Panasiuk 2005, 164–165).

The purpose of the article was to determine student's preferences regarding visited tourist and cultural facilities and cultural events in Lublin. It also examined the reasons for not using the above-mentioned activities. It was decided to research this group due to the fact that Lublin is the largest academic center in eastern Poland – close to 100,000 students.[1]

The City as a Tourist Product

Tourist resort according to Pawlikowska-Piechotka (2010, 18) is a 'settlement unit, which due to tourist attractions, tourist infrastructure (base) and the availability of communication is a target or staging point for tourists.'

[1] See www.student.lublin.eu/Nauka_i_Szkolnictwo-14-77.html?page=9

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 119–129.
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The decision to develop the tourism function in a particular location is often undertaken in hope that it will bring economic activation of the region. Most of local governments in Poland sees tourism and recreation, as the basic direction of region development (p. 18).

In the modern world spending free time for recreation or tourism has become the norm (Niezgoda and Zmyślony 2003, 69). Properly filled leisure time gives positive effects not only to the individual person. The development of tourism and recreation brings a number of benefits for both the reception site, which is often a city and its inhabitants (Pawlicz 2008, 21).

Urban Tourism

Urban tourism is one of the oldest forms of tourism. It was cultivated in the Middle Ages. Its flourish took place in the early 80's. It is based on cultural values, mass events, entertainment, congresses and conferences. Its characteristic features include:

- high average tourist expenditure,
- short period of stay,
- lower level of seasonality,
- small role of natural attractions,
- a high proportion of business visitors.

Traffic and environmental pollution are not as important as in areas of high natural value (Pawlicz 2008, 7–8).

Tourism and recreational infrastructure of the city is its biggest attraction (table 1). Primary attractions greatly influence the choice of the city as a tourist destination (Matczak and Płoński 2008, 32). Secondary attractions determine the success of the village as tourist centers. They are also the most important factor for economy and they generate large employment of workers. Additional attractions serve both tourists and residents. They make urban spaces more attractive (Matczak 2008, 54).

Research Methodology

Diagnostic survey was used to carry out the research. The method was used to determine tourist and cultural attractions selected by students studying at Lublin. Surveying technique has been applied.

Author's questionnaire consisted of specifications containing 5 questions (gender, age, year of study, university, place of origin) and

TABLE 1 Classification of Tourist Attractions in Cities

Attractions	Place of entertainment	Surroundings leisure time
Primary	*Cultural attractions:* theatres, theaters, opera houses, philharmonic; cinemas, libraries; concert halls; museums, art galleries; exhibitions. *Recreational and sport attractions:* open and indoor sporting events; tourist routes; swimming pools, outdoor swimming. *Entertainment attractions:* casinos, night clubs; theme parks; planetariums.	*Physical attractions:* church buildings; locks and/or their ruins, palaces; townhouses, villas celebrities; ancient monuments and sculptures; interesting buildings; historic streets; parks and green areas; industrial plants, mines; conference rooms, exhibition halls. *Socio-cultural attractions:* language; folklore; local customs and clothing; security; hospitality
Secondary	Hotels; food and drink; stores, shopping centers, shopping districts; markets, bazaars, fairs.	
Additional (conditional)	Internal transport, parking, availability; information about attractions (signs, maps, guides, leaflets).	

5 question questionnaire. List of tourist facilities and regular events in Lublin has been developed on the basis of information contained in the tourist brochure (Województwo Lubelskie 2013, 15, 29–30, 38–40, 186–189). The study was conducted in the period from 12 April to 13 June 2013. Research questionnaire was distributed at universities in Lublin and posted on social networks.[2] The results were analyzed. Adopted independent variables are:

- *gender:* women – W, man – M,
- *university:* The John Paul II Catholic University of Lublin – KUL, Lublin University of Technology – PL, Medical University of Lublin – UM, Maria Curie Skłodowska University - UMCS, University of Life Sciences in Lublin – UP,
- *year of study:* I–V,
- *place of residence:* city – C, village – vi.

Characteristics of the Sample

The study involved 300 respondents – 74 men (24.7%) and 226 women (75.3%) in age from 18 to 28 years (average age 21.8 years).

[2] See http://moje-ankiety.pl/respond-42169.html

TABLE 2 The University and Year of Study Respondents (%)

Gender	*N*	University					Year of study				
		KUL	PL	UM	UMCS	UP	I	II	III	IV	V
W	75.3	62.7	66.0	78.3	88.8	7.7	74.4	81.0	68.1	81.4	75.6
M	24.7	37.3	34.0	21.7	11.2	29.3	25.6	19.0	31.9	18.6	24.4
Total	100	19.7	17.7	7.7	35.7	19.3	27.3	14.0	24.0	19.7	15.0

TABLE 3 Place of Residence of the Respondents (%)

Residence	*N*	Gender		University				
		W	M	KUL	PL	UM	UMCS	UP
Village	42.7	46.0	32.4	50.9	41.5	43.5	38.3	43.1
City	57.3	54.0	67.6	49.1	58.5	56.5	61.7	56.9
<20,000*	12.0	12.8	9.5	6.8	18.9	4.4	12.2	13.8
20–100,000	21.7	20.4	25.7	18.6	24.5	21.7	23.4	19.0
100–200,000	3.7	3.5	4.1	-	5.7	4.4	4.7	3.5
200–500,000	16.0	13.3	24.3	20.3	7.6	13.0	18.7	15.5
>500,000	4.0	4.0	4.1	3.4	1.9	13.0	2.8	5.2

NOTES *Inhabitants.

The largest group consisted of 22-year-olds – 65 people (21.7%), 20-year-olds – 60 (20.0%) and 23-year-olds – 57 (19.0%).

The research was conducted among university students in five public universities in Lublin. Most of the respondents were students from UMCS – 107 people (35.7%), and least UM students – 23 (7.7%) (table 2). The largest percentage of students were first-year – 82 (24.0%) and 3rd grade students – 72 (24.0%) and the lowest 2nd year – 42 (14.0%) and 5th year – 45 (15.0%) (table 2).

Responders were significantly dominated by urban residents – 172 people (57.3%), and among them residents of cities with a population of 20 – 100,000 residents – 65 responders (21.7%) (table 3). Most people that came from rural areas was studying at the KUL and UM, and most people from town was studying at UMCS and UP.

Results

Most of respondents visited monuments in Lublin. Students rarely visited the Court of the Crown (1.33) and Trinitarian Tower (1.34). Average for all objects (1.76) shows that only a few people haven't visited the most important monuments in Lublin not even once. Old Town Square (2.76), Lithuanian Square (2.18) and the Cathedral of

Lublin (1.94) enjoyed the greatest popularity among the respondents. The Old Town is frequently visited by women (2.78), students from UMCS and UP (2.84), students from the 3rd year (2.89) and people coming from the village (2.78). In the case of Lithuania's Square the score was the same.

Ratio of visiting monuments of Lublin was at the level of 48.5%. This means that respondents visited on average every second objects stated listed in table 4. This ratio was the highest in the case of students from the 3rd year (54.5%), students from UP (54.2%) and UMCS (51.8%), people from the city (50.84) and men (49.6%) (table 4).

Three selected objects in Lublin were visited by the largest number of people – 21.3%. 6.0% of the respondents were in all of the monuments taken into account. Most of these people were among men (12.2%), people in the 3rd year (8.3%) and people from the city (7.6%). 4.3% of students didn't visit any monument in Lublin yet. Most of these people were on in the first (7.3%) and fifth year (6.7%).

Museums in Lublin were visited by a small number of students (table 5). The respondents most frequently answered 1 – not visited. Lublin Museum (1.69), State Museum at Majdanek (1.66) and the Lublin Open Air Village Museum (1.56) enjoyed the greatest popularity. These objects are the largest and most famous in Lublin.

Students from UMCS (1.86) and UP (1.78), students from 3rd (1.83) and 5th year (1.82) mainly visited Lublin Museum. The State Museum at Majdanek was most popular among students from UP (1.79) and 3rd year students (1.74).

Ratio of visiting museums in Lublin was 20.4%. Respondents visited every fifth museum listed in table 5. Students from UP (28.5%), students in the 3rd year (24.9%) and people from the city (22.4%) achieved the highest ratio of visits. Students from KUL (13.5%) and 2nd year students (13.7%) were the least interested in the museum offer (table 5).

26.3% of the respondents didn't visit any museum in Lublin. Most of these people were among the 1st year students (35.4%). All museums in Lublin was visited by 1% of the respondents. 1–3 museums in Lublin visited by an average of between 10% and 15% of people.

Students hardly participated in wide range of events organized in Lublin (Tab 6). Average response in most cases is equal to approximately 1.0. Respondents can be frequently found on the Student Culture Days (2.35), Night of Culture (1.74) and the Jagiellonian Fair

TABLE 4 Monuments of Lublin, Visited by the Respondents

Monument	*N*	Gender		Year of study					Place of res.	
		W	M	I	II	III	IV	V	C	Vi
Trinitarian Tower	1.34	1.33	1.39	1.28	1.24	1.46	1.36	1.36	1.37	1.30
Chapel of the Holy Trinity	1.59	1.59	1.57	1.56	1.52	1.58	1.61	1.67	1.63	1.52
Old Town Square	2.76	2.78	2.70	2.68	2.67	2.89	2.80	2.76	2.75	2.78
Cathedral in Lublin	1.94	1.89	2.09	1.94	1.83	1.96	1.98	1.96	1.97	1.91
Lublin Underground	1.27	1.26	1.31	1.27	1.24	1.29	1.29	1..24	1.32	1.20
Crown Court	1.33	1.31	1.41	1.32	1.40	1.33	1.32	1.29	1.35	1.30
Lithuanian Square with the Palace of the Czartoryski and Lubomirski	2.18	2.16	2.23	2.04	1.83	2.43	2.25	2.24	2.16	2.20
Team municipal cemeteries Street Linden	1.94	1.94	1.96	1.77	1.62	2.07	2.08	2.18	1.96	1.92
The monastery of Dominican	1.45	1.45	1.47	1.32	1.38	1.54	1.66	1.36	1.47	1.44
Together	1.76	1.74	1.79	1.69	1.64	1.84	1.82	1.78	1.78	1.73
Rov (%)**	48.52	48.18	49.55	45.53	41.80	54.48	49.72	49.14	50.84	45.50

NOTES 1 – not visited, 2 – visited at least once, 3 – visited more than once. *Average number of visited objects/max number of objects.

TABLE 5 Museums in Lublin, Visited by the Respondents During the Study

Monument	*N*	Gender		Year of study					Place of res.	
		W	M	I	II	III	IV	V	C	Vi
Lublin Museum	1.69	1.71	1.62	1.62	1.45	1.83	1.68	1.82	1.72	1.65
Lublin Open Air Village Museum	1.56	1.58	1.51	1.57	1.40	1.67	1.54	1.53	1.62	1.48
State Museum at Majdanek	1.66	1.69	1.58	1.65	1.64	1.74	1.69	1.56	1.70	1.62
Museum of the City of Lublin in Gate Krakowska	1.24	1.24	1.24	1.22	1.10	1.31	1.20	1.36	1.26	1.22
Museum of Martyrdom 'Dunder the Clock'	1.16	1.15	1.20	1.18	1.00	1.21	1.17	1.18	1.20	1.10
Literary Branch. Joseph Czechowicz	1.13	1.12	1.18	1.11	1.05	1.22	1.12	1.13	1.13	1.13
Jeszywas Chachmej	1.12	1.11	1.15	1.11	1.05	1.17	1.08	1.16	1.12	1.12
Chamber Drukarska	1.12	1.11	1.15	1.13	1.05	1.21	1.08	1.04	1.15	1.07

Center 'Grodzka Gate'	1.34	1.35	1.30	1.27	1.26	1.42	1.36	1.38	1.36	1.30
Vincent Manor Fields	1.13	1.12	1.15	1.12	1.02	1.15	1.19	1.09	1.13	1.12
Cathedral of Lublin (treasury, crypt)	1.30	1.30	1.32	1.28	1.21	1.36	1.27	1.38	1.34	1.25
Museum of the History of Pharmacy	1.07	1.07	1.09	1.06	1.02	1.11	1.08	1.07	1.11	1.02
Museum of History of KUL	1.14	1.12	1.18	1.15	1.05	1.14	1.07	1.29	1.15	1.13
Museum UMCS	1.12	1.11	1.14	1.11	1.07	1.21	1.03	1.13	1.12	1.11
Cellar Fortuna	1.06	1.05	1.08	1.06	1.02	1.11	1.02	1.04	1.08	1.02
Together	1.26	1.25	1.26	1.24	1.16	1.32	1.24	1.28	1.28	1.22
Rov (%)*	20.40	20.32	20.63	19.35	13.65	24.91	20.00	21.93	22.40	17.71

NOTES 1 – not visited, 2 – visited at least once, 3 – visited more than once. *Average number of visited objects/max number of objects.

TABLE 6 Selected Recurring Events Organized in Lublin, Attended by Respondents

Monument	*N*	Gender		Year of study					Place of res.	
		W	M	I	II	III	IV	V	C	VI
Student Culture Days	2.35	2.37	2.30	2.24	2.36	2.43	2.37	2.40	2.28	2.45
International Festival of Carols East Slavic	1.04	1.02	1.12	1.04	1.00	1.08	1.00	1.09	1.04	1.05
Student Film Confrontations	1.19	1.17	1.24	1.13	1.17	1.29	1.14	1.22	1.21	1.16
Lublin Jazz Festival	1.11	1.11	1.12	1.07	1.12	1.14	1.10	1.13	1.14	1.07
Festival of Traditional and Avant-Garde Music 'Codes'	1.05	1.04	1.08	1.01	1.05	1.10	1.05	1.07	1.06	1.04
Night of Culture	1.74	1.65	1.99	1.62	1.62	1.97	1.64	1.80	1.81	1.63
Central Europe Theatre Festival 'The Neighbors'	1.10	1.08	1.19	1.09	1.02	1.15	1.10	1.13	1.12	1.09
Festival of Art in Public Space 'Open City'	1.07	1.04	1.16	1.05	1.00	1.15	1.08	1.04	1.10	1.04
International Meeting of Folklore	1.07	1.06	1.11	1.04	1.00	1.14	1.05	1.11	1.07	1.07
Festival of Art and Music 'Other Voices'	1.19	1.16	1.28	1.11	1.12	1.33	1.10	1.29	1.23	1.14
Carnival Fine-Champions	1.33	1.28	1.46	1.24	1.33	1.43	1.27	1.38	1.38	1.25
Jagiellonian Fair	1.43	1.37	1.64	1.38	1.33	1.54	1.47	1.40	1.45	1.41

Continued on the next page

TABLE 6 *Continued from the previous page*

Monument	*N*	Gender		Year of study					Place of res.	
		W	M	I	II	III	IV	V	C	VI
European Festival of Taste	1.30	1.27	1.42	1.26	1.21	1.49	1.29	1.20	1.33	1.27
Int. Theatre Festival 'Theatre Confrontations'	1.09	1.07	1.16	1.05	1.05	1.15	1.05	1.16	1.10	1.07
International Festival 'The Oldest Songs of Europe'	1.04	1.03	1.07	1.02	1.02	1.06	1.03	1.07	1.03	1.05
International Dance Theatres Festival	1.07	1.06	1.09	1.04	1.00	1.13	1.07	1.09	1.07	1.06
International Festival of Jazz Without	1.04	1.04	1.07	1.01	1.02	1.10	1.00	1.09	1.05	1.04
Nicholas Folk	1.14	1.12	1.19	1.09	1.12	1.19	1.12	1.20	1.13	1.15
Together	1.24	1.21	1.31	1.19	1.19	1.32	1.21	1.27	1.25	1.22
Rov (%)*	17.07	15.67	21.34	14.06	13.28	23.03	15.43	18.71	18.08	15.71

NOTES 1 – not participate, 2 – participate at least once, 3 – participate more than once. *Average number of events in which participated the group of respondents/max number of events.

TABLE 7 Cultural Places in Lublin, Visited by the Respondents During the Study

Monument	*N*	Gender		Year of study					Place of res.	
		W	M	I	II	III	IV	V	C	VI
Philharmonics	1.23	1.19	1.34	1.20	1.26	1.19	1.24	1.29	1.26	1.19
Theatres	1.45	1.43	1.51	1.43	1.45	1.43	1.49	1.47	1.46	1.44
Cinemas	2.42	2.42	2.42	2.40	2.26	2.58	2.53	2.20	2.42	2.41
Art galleries	1.91	1.88	2.01	1.99	1.71	2.01	1.88	1.84	1.91	1.91
Cross underground	1.20	1.18	1.28	1.12	1.12	1.35	1.19	1.22	1.25	1.14
Urban trails	1.89	1.90	1.88	1.85	1.36	2.15	1.95	1.98	1.90	1.89
Together	1.68	1.67	1.74	1.66	1.53	1.79	1.71	1.67	1.70	1.66
Rov (%)*	47.39	46.61	49.77	44.72	41.67	53.01	48.87	46.67	48.74	45.57

NOTES 1 – not visited, 2 – rarely visited, 3 – visited often, 4 – visited regularly. *Average number of visited cultural places/max number of cultural places.

(1.43). These three events are the most popular and especially promoted in Lublin.

Student Culture Days most attracted students from the PL (2.51), people coming from the village (2.45), 3rd year students (2.43) and women (2.37). Students from UM are least interested in them (2.13). Men (1.99), students from UP (1.97), students from 3rd year (1.97) and people from the city (1.81) most went to the Night of Culture. Students from UM are least interested in them (1.52).

Ratio of participation in recurring events in Lublin was 17.1%. Respondents visited every sixth events listed in table 6. Students from UP, students from the 3rd year, men and people from the city achieved the highest ratio of participation (table 6).

One or two selected events in Lublin were participated by the largest number of people (respectively 21,0% and 19,0%). Most of this people were among people from the village (50.0%), people in the I year (45.2%) and women (42,5%). 15.0% of respondents didn't participate in any previously mentioned events yet. Most of this respondents were among students in the 2nd year (19.0%) and people from the city (19.8%). O,3% of the respondents were on all of the events taken into account.

Cultural places in Lublin are visited by a small number of students (table 7). Average use of all forms stood at 1.68. Cinemas (2,42), art galleries (1,91) and urban trails (1.89) enjoyed the greatest popularity. Respondents from the 3rd year (2,58), students from UP (2,55) and people from the city (2,42) mainly went to the cinemas. Students from V year (2,20) were the least interested in the cinemas offer. Art galleries were most popular among students from UP (2,14), men (2,01) and students from the 3rd year. The origin of the respondents didn't affect the average of responses (1.91).

Ratio of visiting cultural places in Lublin was 47,4%. Respondents visited every second cultural places listed in table 7. Unfortunately, the majority of respondents visited these places rarely. Students from UP (54,0%), students from the 3rd year (53,0%), men (49,8%) and respondents from the city (48,7%) achieved the highest ratio of visits (table 7).

12.0% of respondents visit of cultural places in Lublin. Most of this respondents were among men (every fifth) and students from V year (every fourth). Most frequently cited reasons for not using the seats of culture was the lack of motivating people (average 40.5%) and in-

sufficient advertising (average 34.5%). Excluded were students from PL (for them reasons was the lack of motivating people and to expensive tickets), students from UM (lack of motivating people and lack of interest), students from the 3rd year (insufficient advertising and the lack of promotion for students), students fifth year (for expensive tickets and the lack of promotion for students).

No website was almost irrelevant to respondents. As other reasons respondents exchanged a lack of time (9 people), difficult access from home (3), lack of self-motivation (2). One person didn't know that so many events are organized in Lublin.

Conclusions

Each person has a very big impact on how use your free time. Students are little interested in tourist and cultural attractions in Lublin. The most famous monuments and places of culture were the most frequently visited. Recurring events (except for the Student Culture Days Lublin) and Lublin museums proved to be the least popular among respondents. To encourage students to such forms of entertainment should ensure sufficient and getting through advertising objects and events to this group. Environment student should be properly theme. For example, academics in some classes could organize tours of the Lublin. Scientific circles and student associations could work together with the Centre for the Promotion of the Lublin Province or Lublin Regional Tourist Organization.

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Part Three

Economic Development of Lublin Metropolitan Area

Industrial Lublin: The Reindustrialization Strategy for the City

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Introduction

The significance of industry for the civilization progress has been globally highlighted by economists. In the global economic development, however, different phases of production have been observed and defined as industrial revolutions as they have always been induced by fast-paced technological development. The current – fifth in turn – industrial revolution began in 2005 and is expected to last until 2040 (Marsh 2012, 214). Compared to the previous four, the current revolution may be defined as 'industrial democracy' since its effects will not concentrate on several key groups of countries. Instead, they will diffuse equally into the majority of the world's countries (p. 215).

The global reindustrialization processes have been observed not only in the countries which were targeted by offshoring (that is mostly Asian countries) but more so in the countries losing the industry (e.g. the USA). After almost twenty years of transferring production to lower-cost locations the tendency has reversed. It has been due to market conditions such as growing labor costs in e.g. China (Khanna 2012). The trend has been accompanied by active strategy of many countries, aiming at encouraging new industrial investment, as well as by the development of global industrial clusters working with educational and research institutions. This development is a powerful incentive for production to remain or revive in the developed countries. Presently the key factors which enhance the development in the industrial sector are mostly talent-driven innovations, competitive material and labor costs, and favorable tax, trade, financial and legal systems (Deloitte 2013, 6–7).

In Poland, after the periods of strong post-transformational deindustrialization and then of investment development in the service sector (particularly in BPO/SSC) there has been a slow rise in aware-

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 133–144.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

ness among the decision-makers and the academia about more attention to be drawn to the manufacturing sector as it is fundamental for the country's economic development. It does not mean that during the last twenty five years there has not been any progress in manufacturing in terms of its size, productivity or technological development. The processes, however, happened chaotically, without any strictly defined and consequently implemented industrial policy.

Lublin also experienced the processes which appeared in other post-socialist countries, regions and cities. In the nineties of the previous century Lublin observed several of the traditional industrial sectors, such as textile or food processing, decline. At the end of the decade the biggest car manufacturing company in the city, Daewoo Motor Polska Sp. z o.o., went bankrupt, along with Odlewnia Lublin. However, the traditional sectors were replaced by new ones, and several companies in the industries relatively advanced in technology (e.g. biotechnology) were successfully restructured and changed ownership. Yet it was in the mid-first decade of the 21st century that the condition of the manufacturing industry became stable, and for several years now the industrial development has been quicker in Lublin.

In 2013, when the new strategy for the city's development until the year 2020 was adopted, the industrial development was granted high priority (Urząd Miasta Lublin 2013a). The document is fundamental for creating a detailed strategy for the city's reindustrialization and for the development of the priority sectors by 2025. The purpose of this study is to demonstrate the fundamental conditions and dilemmas of the manufacturing industry development as well as to propose solutions and recommendations, which will serve to specify the provisions of the sectoral strategy for industrial development in Lublin.

Industry in Lublin: Basic Information

Lublin is the most significant industrial center in Eastern Poland.[1] The revenue generated by industry in the city in 2012 reached PLN 6.6 billion.[2] Lublin is distinguished by accumulation of industrial

[1] The revenue index of industrial enterprises located in a given city was analyzed. The condition of Lublin has been demonstrated compared to other voivodeships and regional centers in Eastern Poland (the Lubelskie, Podlaskie, Świętokrzyskie and Podkarpackie voivodeships) and to the Radom center.

[2] Based on data published by the Central Statistical Office (http://stat.gov.pl). The revenue of industrial enterprises comprises sections B, C, and E. It excludes sec-

activity, particularly in the sectors of medium-high and high technologies. The leading industrial sectors in Lublin include food industry, automotive and machine-building industries, metal industry, pharmaceutical industry, and printing and textiles industries.

The result of a relatively high significance of industry in Lublin's economy, compared to the other analyzed cities, was that the GDP per capita in the Lubelski subregion in 2011 was the highest in Eastern Poland (PLN 34,425.00) which constitutes almost 87% of the national average GDP (Gross Domestic Product, Regional Accounts in 2011, 2013, p. 104). The city of Lublin itself is estimated by PWC, a consulting company, to have the GDP per capita at 111% which is significantly higher than Białystok or Rzeszów (where it is at 102% and 103–104% respectively) (PWC 2011, 5; 2012, 6). The condition of Lublin in terms of its industrial potential, seemingly favorable compared to other regions of Eastern Poland, is however significantly worse when compared to that of Poznań or Wrocław. Interestingly, the second industrial center in Eastern Poland is the district of Mielec (see figure 1). The city's Euro-Park Mielec Special Economic Zone, established in 1995, and its successful strategy of acquiring external investors, contributed to reaching as much as PLN 4.9 billion in the revenue in the industrial processing enterprises located in Mielec in 2012. Thus, what is uncommon in Poland, Mielec has surpassed the capital of the Podkarpackie voivodeship, Rzeszów, which only demonstrates Rzeszów's economic weakness.[3]

A slight industrial potential is observed also in Kielce and particularly in Białystok, with both cities generating the revenue of around PLN 2.8 billion. Stalowa Wola, on the other hand, of which the fundamental function is industrial, generates higher revenue from production enterprises than any one of the mentioned capitals of their voivodeships. While studying Lublin and its environment it is worth to highlight very low industrial potential of other towns and cities of the Lublin region (excluding Puławy), and particularly of Biała Podlaska.

In the recent years, along with commencing a professional system of external investor acquisition and support for the local enterprises

tion D. In the three analyzed sections in all studied cities over 97% of revenue is generated by enterprises in section C – industrial processing.

[3] For more information on the potential for development in the capitals of Eastern Poland's voivodeships see Sagan (2013).

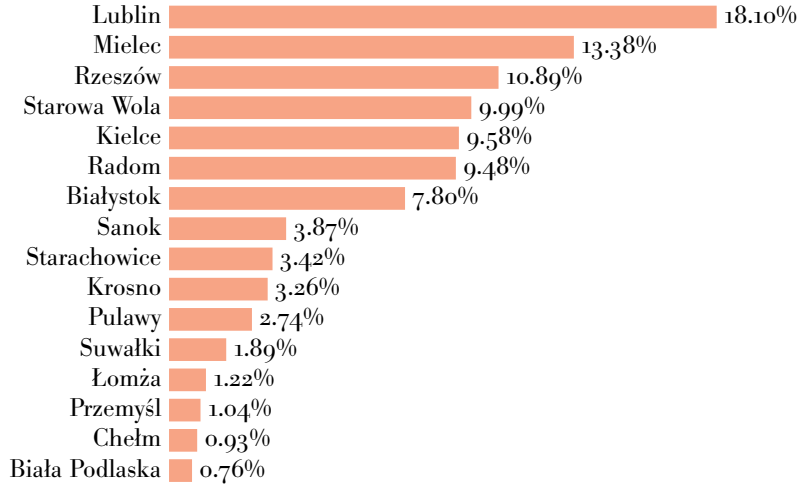

FIGURE 1 The Revenue of Industrial Enterprises in Selected Cities of Eastern Poland and the Radomski Subregion (based on data published by the Central Statistical Office, see footnote 2; the percentage points demonstrate the position of a city compared to the entire group of the cities analyzed)

in the Municipality of Lublin, the employment in industry has been growing. According to the data published by the Municipal Employment Office in the years 2011–2013 over 1000 new employment opportunities were created in enterprises of the industrial processing sector (section C), which constituted over 10% of the overall number of jobs created in the city in the studied period.[4] In the Lublin Subzone of the Euro-Park Mielec Special Economic Zone around 400 jobs were created in industry (mostly in ABM Greiffenberger, Dobroplast and Aliplast, all of which are foreign investors with 100% foreign capital). Other significant investors in the production industry are URSUS and WARBO SA, which by the end of 2013 created almost 170 jobs (data for the period 2011–2013).[5] The significant majority of these jobs was created in the automotive, machine-building and electro-machining sectors. Modernizing the structure and the offer of the Lublin industry has resulted in the successive increase of salaries

4 Own calculations based on reports published by the Municipal Employment Office in Lublin (see www.mup.lublin.pl). Data for 2013 includes the first half of the year.

5 Data collected from the Department of Strategy and Investor Services of the Municipality of Lublin.

in production (from PLN 3,870 in 2010 to PLN 4,121 in 2012). Historically, in the period 2005–2011 the sold production of industry in Lublin (in companies employing 9 and more people) increased by 147%.[6]

Strategic Areas for Industrial Development in Lublin: The City's Intelligent Multi-Specialization

In the 'Lublin Development Strategy 2013–2020' one of the primary areas for development, Entrepreneurship, includes the key sectors for future development of Lublin (Urząd Miasta Lublin 2013a, 53–7). In accordance with the intention of Deloitte which drew up the methodology and proposed the key sectors, the city authorities should focus on those exact areas in their efforts to acquire investments (external, including foreign), as well as to encourage local investments. The selection process of the basic and secondary sectors for Lublin comprised five stages (Urząd Miasta Lublin 2013b, 4–8):

1. Compilation of a list of present businesses/businesses developed in Lublin.
2. Compilation of a list of present businesses/businesses developed by reference cities (the reference cities include cities of characteristic features similar to Lublin: Olsztyn, Białystok, Cluj-Napoca and Ostrava, as well as the cities which are leaders in economic development: Poznań and Cork).
3. Compilation of a short list of businesses for Lublin.
4. Validation of the short list of businesses and recommendation of 8 businesses for Lublin.
5. Prioritization of businesses and distinguishing the basic and secondary businesses (also based on the 'ease' of the city to attract investment in a given sector and on the barrier to relocation – 'withdrawal' – of investors in a given sector from Lublin).

The analysis resulted in expanding the group of the mentioned sectors crucial for Lublin to include more sectors, listed below according to the Deloitte ranking of the industries (Urząd Miasta Lublin 2013b, 8–9):

[6] Own calculations based on data published by the Central Statistical Office (http://stat.gov.pl).

1. Basic industries:
    - food industry,
    - BPO/SSC,
    - Information technology and telecommunications (ICT).
2. Secondary industries:
    - logistics and transport,
    - renewable energy,
    - automotive industry,
    - health care and pharmacy,
    - biotechnology.

Lublin's industrial specialization, proposed by Deloitte and accepted in the 'Lublin Development Strategy 2013–2020' (Urząd Miasta Lublin 2013a) therefore comprises the following sectors:

1. food industry (food processing),
2. renewable energy industry (producing solutions and technologies applicable in the renewables sector),
3. machine-building and automotive industries (with their cooperating facilities and the metal industry),
4. pharmaceutical industry (manufacturing medications and pharmaceuticals),
5. biotechnology industry.

Dilemmas of Industry Development in Lublin

The contemporary tendencies observed in global economy affect the reindustrialization processes in Lublin and the Lublin Metropolitan area by specifying the strategic, tactical and operational dilemmas which need to be faced by the city's elites and its decision-makers. The challenges for cities, which derive from reconstructing their industrial potential and other development processes, are not finished problems with ready-made success recipes. Their operationalization requires not only a skilful definition of the problematic areas and finding good practices globally, but also a skilful adaptation of the verified solutions to the reality of the Polish cites, to the country's context and the stage of development a given city is in.

Among numerous dilemmas of industry development in Lublin the major problem is competing for external investors from within the

production sector. On one hand it is possible to compete for labor-intensive manufacturing (with the usual lower labor and capital productivity) or for capital-intensive production. The issues of human resources in the city, and disguised unemployment in agriculture in the Lublin region and in the present Podkarpackie voivodeship, are arguments in favor of the production which absorbs the surplus of labor force from the countryside.

The question is, however, whether the traditional convergence drawing people to work and live in the Lublin Metropolitan area is not too risky in times of rapid changes in the development models and convergence patterns. On the other hand, a tempting alternative, postulatively at least, is the development of technologically advanced industries due to the convergence of endogenous development potentials of universities and research centers of Lublin, the local innovative business partners and the external investments into the manufacturing industry. This development pattern would contribute to significantly quicker convergence of Lublin with other Polish metropolitan areas in terms of the revenue level, although the level of employment would definitely grow slower (the growth in the number of high salary jobs would however be quicker). Yet another key question is how to support the industry sector development in time of digitization.

Another group of dilemmas is strictly related to selecting the intelligent multi-specialization of Lublin. Adopting 8 sectors to be selectively supported is a logical consequence of the analysis of the city assets, although it may seem that Lublin after the year 2020 should be able to validate/evaluate its economic strategy and perhaps to focus on four or five key industries. Another challenge is to determine the role of the aviation industry in Lublin. It is not included in the list of the prioritized sectors, although in a very short distance from the city borders one of the most significant aviation companies in the country, AgustaWestland, runs its business. The presence of the aviation ecosystem in the Lublin region and the Lublin Metropolitan area makes it recommendable to commence activities to support the institutionalization of cooperation among the industry's stakeholders: the authorities of the city, the region, the universities, of the partner business and the leading company. Consequently it is feasible to construct a competitive aviation cluster – the 'Lublin's Aviation Heights' or 'Lublin Aviation Platform.'

Finally, the question arises on foreign capital Lublin should compete for in the manufacturing sector: whether it should be sector-oriented and bring numerous multiplying results (e.g. competing for major investors who can however quickly relocate their plants) or it should be smaller, scattered capital which will provide the city with balanced economy and more stability (by affecting the economic development of Lublin over a longer period, not instantly). It may be that the mixed model is the choice Lublin should make: dependant on the sectors and cluster forms.

In the automotive sector, for example, it is fundamental to attract a significant automobile manufacturer which would constitute a solid ground to build innovative cooperation network on. In the biotechnology sector, on the other hand, it is more attractive to invite further innovative small and medium enterprises and to support local business development. Consequently it will affect the power of the entire biotechnological ecosystem and clusters which operate within.

Recommendations: How to Reinforce Industry in Lublin?

The pool of supportive activities for the Lublin industry should include attracting external investors, developing the areas of economic involvement, stimulating and active management of clusters, and constructing solid ground for the innovative development in the future.

External Investment

The analysis of the contemporary forms of capital transfer and the FDI structure demonstrates that greenfield investments are being replaced by the forms of entering foreign markets which are based on non-equity relations. It results in the necessity to prepare and implement new strategies of acquiring investors by non-equity mode, converged with subsequent support and settlement of this type of activity in Lublin.

This direction allows the business to familiarize with the new environment and decreases the risk of expansion. Consequently, a contract manufacturer satisfied with the location may be encouraged to acquire a local partner, or to invest in another location (brownfield), or, ultimately, to build another plant from the ground up. It is a time-consuming process which requires consequent and long-term support form the city authorities.

Areas for Business Activation

Lublin already has proper development areas which are diversified for the city's needs of multi-specialization in economy and industry. These are e.g. Euro-Park Mielec Special Economic Zone and the Bursaki (greenfield areas), the former Daewoo Motor Polska area (mostly brownfield), along with numerous areas for mixed-use retail and office space. The nearest future should see gradual supplementing the Special Economy Zone areas and creating new space for business activation nearby the interchange points and express roads within the Metropolitan area of Lublin. Completing the rehabilitation process of post-industrial areas ought to be the fundamental element of the reindustrialization strategy of Lublin, which is also included in the assumptions to the National Municipal Policy. A fine example of already initiated activities is the former Daewoo Motor Polska area, where in 2013 almost 4000 people were employed in various sectors, which was more than the Daewoo monoculture employed just before it went bankrupt.

Clusters and Cooperation of Business with Universities

Successful clusters, in various configurations, are essential for the Lublin industrial development in the selected sectors. These are: (a) clusters initiated by a winner enterprise, (b) clusters of business and universities, (c) clusters joining entities representing business, science, and the local government, and (d) clusters of decentralized business. AgustaWestland, mentioned earlier as enjoying the status of a winner enterprise, could initiate a cluster, and thus could stimulate the development and partnerships among the industrial start-ups. The biotechnology sector, on the other hand, should attempt at the Triple Helix relations.

Innovative Progress

Today it is not enough to design a system of knowledge transfer and commercialization from science to business for innovative development. The actions are necessary which will distinguish Lublin in the environment competing for production investments, and will increase the pace of generating the value added in the Lublin industry. These actions include the convergence of the production sector with growing outsourcing sector in Lublin. The result will be avoiding the risk of the processes being withdrawn from the medium-sized business in

the city and adopted by the entities within the BPO in other locations. Additionally, stimulating the rise of sectors interconnecting the basic and secondary industries in Lublin is fundamental, and one of the joining elements should be the increasingly powerful IT sector which generates innovation.

Supportive Tools

For Lublin, the only metropolitan area in Eastern Poland, the extent of support the city is able to gain in order to reinforce its socio-economic potential is fundamental. The ability to generate employment in industry is a crucial factor to decide on the future importance of Lublin within the network of Polish cities. It is also related to the possibility of the city's influence on its environment (the region and the south-eastern part of the country). Very low level of economic development (measured by GDP per capita) in this region of Poland (and the actual lack of competition from other municipalities) is an obstacle to metropolization of Lublin, yet also is, with the Lublin economy reinforced, a stimulus for people to migrate to this major center of Eastern Poland for employment.

The national strategy documents (including 'National Strategy of Regional Development 2010–2020' (Ministerstwo Infrastruktury i Rozwoju 2010) and 'National Spatial Development Concept 2030' (Ministerstwo Infrastruktury i Rozwoju 2011)) have built the grounds for the regionally-based development policy. Their operationalization, related to the support for municipal centers including the metropolitan areas, was proposed in the 'National Municipal Policy Assumptions 2020' (Ministerstwo Rozwoju Regionalnego 2012). It has been proposed that improvement in competitiveness and capability of municipal areas to provide for development, growth and employment is a key objective. What it means is that the basis was designed for reinforcement of the knowledge- and innovation-based economy in cities ('National Municipal Policy Assumptions 2020' 2012, 12), which is significantly related to supporting the technologically advanced industry sector. The assumptions adopted in the 'Lublin Development Strategy 2013–2020' (Urząd Miasta Lublin 2013a) on the economic multi-specialization of the city and the sectors significant for industry, correspond to the assumptions of the municipal policy and guarantee the capital coming to the existent innovative production enterprises from Lublin as well as to compa-

nies being set up. In order to execute these ambitious development plans the city (its government and its internal stakeholders) needs to become a beneficiary of the generous assistance projects mostly funded by the EU (from the European Union budget for the years 2014–2020 and even more from the central government allocations), and also of the projects executed within public-private partnerships.

The political support is as well highly significant, the support which should be granted by the city and region's authorities to the Lublin exporters and companies expanding internationally by deploying more advanced strategies of foreign market entry (particularly in the difficult markets). Moreover, designing instruments for stimulating local industry by municipal companies (with the mechanism of placing orders to the Lublin production and partnership base) is crucial.

The industrial development in Lublin demands taking long-term actions based on sectors, regions, innovations and network relations. As a result it is possible to construct a powerful, diversified industrial center in Lublin by 2030. The center which will be capable of competing with major Polish centers, will be based on priority sectors, strong business ecosystems with key clusters and innovative competitive facilities, as well as on new sectors established where traditional sectors converged.

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The Factors behind the Development of Individual Economic Activity in Lublin and the Lubelskie Voivodeship

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The fact of undertaking an individual economic activity is currently perceived as a manifestation of entrepreneurship and economic initiative of people, as well as a stimulus for the economy and the labour market, used also to combat unemployment (Drozdowski and Matczak 2004, 8). This phenomenon, and its related social, economic and cultural processes, have been the subject of study by the representatives of various scientific fields. This interest has produced a number of diverse publications with distinctive focus, subject matter and methodology. Compared to other undertakings carried out in Poland, primary research conducted in the Lubelskie Voivodeship is fairly small, with the majority involving the analysis of official and statistical data gathered by institutions. However, social and economic indicators cannot explain a number of problems relevant to the development of entrepreneurship. Therefore, this study is to explore the aspects related to awareness, i.e. to investigate how entrepreneurs view the development opportunities for individual economic activity in view of the local economic conditions and the labour market.

The Empirical Background

This analysis is based on the findings of two survey projects conducted by the author between 2002 and 2003 in the Lubelskie Voivodeship (hereinafter P1) and in 2011 in Lublin (P2).[1] The projects

[1] The projects were carried out as part of the research and scientific operations of the Institute of Sociology, the Faculty of Philosophy and Sociology, Maria Curie-Skłodowska University in Lublin. The study employed questionnaire interviews and household drop-off surveys; in P1 the questionnaire comprised 77 questions and 96 questions in P2. The role of the interviewers was fulfilled by Institute students, to whom I wish to extend my gratitude. A special 'thank-you' is also due to all the entrepreneurs who agreed to participate in the study.

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 145–157.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

focussed on natural persons who conducted individual economic activities (outside agriculture), and their research samples comprised: 739 respondents in P1, and 652 in P2. In both cases random samples were prepared by the Statistical Office in Lublin on the basis of the REGON Registry (entities with 0–9 or 10–49 employees). Due to problems in sampling and addressing the shortages, the samples did not comply with the representativeness criteria. However, the projects reused selected elements of research approaches and indexes and the vast amount of empirical data thus obtained facilitated a comparative analysis. The numerous similarities observed in the findings can be regarded as an argument in favour of the cognitive value of the study.

It is important to note that the project findings presented below are the outcome of the adopted (cultural) research approach, as well as their respective objectives and methodologies (Jezior 2009, 5). The study focussed on the labour situation of people conducting individual business activities (outside agriculture), which creates a slightly different profile of the study population than in the case of corporate focus. The relevant literature emphasises the multitude of approaches to define and categorise this population, the lack of a statutory definition of self-employment, and the discrepancies between the doctrine of law and other sciences (Kraśnicka 2002; Dominiak 2005; Duraj 2007). Indeed, the applicable regulations use mainly formal and quantitative criteria to describe economic entities. Even though a growing number of publications investigate the issue of self-employment, defined as work on one's own account, there is no common agreement in terms of approach. This study describes the surveyed population as *entrepreneurs*,[2] a term used to refer to people engaged in the act of running business activities.

The majority of respondents were urban residents: P1 – 86.8%; P2 – 93.1% (including from Lublin: 39.2% and 86.9% respectively). Their gender structure proved balanced, with a slight predominance of men in P1 (56.2%) and of women in P2 (51.4%). The proportions of people below the age of 34 were as follows: P1 – 38.0%; P2 – 27.0%; between 35 and 44: 27.6% and 29.7% respectively; the rest was aged

[2] The population comprised self-employed persons, family-business operators, employers and professionals. The scope of this study does not allow elaboration on complex terminology issues.

45 or more. The respondents were characterised by exceptionally high education levels, with higher education represented by: 29.4% for P1 and 50.9% for P2; secondary and post-secondary: 57.0% and 40.6% respectively; and basic vocational: 13.6% for P1 and 8.6% for P2. Due to the nature of the samples, the assessment of the population profiles was difficult, but the findings of the studies conducted in other regions of Poland showed similar characteristics. The most frequently quoted include the predominance of men among the respondents, the fact of their being middle-aged and their relatively high education (Jaźwińska 1999, 6; Matusiak 2006). What needs to be noted is that the study generally covered micro-enterprises. Sole traders comprised: 38.3% for P1 and 54.3% for P2; companies with up to nine employees: 52.9% and 41.9% respectively (including up to five employees: 46.4% and 35.5% respectively).

The Business Background

In 2012, the REGON Registry for the Lubelskie Voivodeship recorded 166.0 thousand entities of the national economy (including 126.5 thousand entities managed by natural persons as part of their economic activities), denoting an increase of ca. 20% over a decade (Urząd Statystyczny w Lublinie 2013, 365n).[3] Nevertheless, the expansion of economic activities is irregular. Entities managed by natural persons are centered around townships, and 25.3% (of all) operate in Lublin. The number of entities per 10 thousand residents of the city is 879, while in the Voivodeship as a whole it's no more than 584 (Urząd Statystyczny w Lublinie 2013, 373). This is much less than the national average (757), which shows a substantial gap in relation to the Zachodniopomorskie (948) or Mazowieckie (910) Voivodeships (Główny Urząd Statystyczny 2013, 45).

Other authors usually provide two prevailing reasons for establishing and managing individual economic activities. One is professional entrepreneurship, based on high professional qualifications, and the other is the situation on the labour market and unemployment. These patterns are reflected in the Lubelskie study findings. The vast majority of entrepreneurs had a proven professional track record (81.0% for P1 and 90.5% for P2) usually based on wage work.

[3] Due to its data being up to date and the fact that the research (for P2) was completed in 2012, it is that year that served as the base year.

Many of them were recruited from the management (27.5% in P1 and 24.8% in P2) or specialist staff (19.2% and 23.9% respectively). The proportion of respondents who had been unemployed before establishing their own companies was 26.0% for P1 and 20.1% for P2. Similar findings emerged in respect of the reasons for self-employment, which to a large extent correlated with the results of projects carried out in other parts of Poland (Drozdowski and Matczak 2004; Matusiak 2006). In P1 the respondents quoted an improvement in their financial standing (50.9%), the pursuit of their ideas and interests (37.6%), unemployment (34.3%), a market opportunity or niche (18.1%) and persuasion by their relatives (13.4%). In P2, in turn, possible motivations included the need to be independent at work (41.4%), the pursuit of one's interests (35.4%), the improvement of one's financial standing (39.5%) and market needs and opportunities (26.8%). Only further down the list were employment-related issues, both negative, such as having no other decent job opportunities (22.1%) or unemployment (21.8%), and constructive, such as being well-qualified for managing one's own business (18.7%). In this context, poor frequency was observed for aspects such as innovation, new product, service or technological ideas (7.5% for P1 and 9.6% for P2), employer requirements (2.5% for P2) and entrepreneurship-oriented programmes (0.5% for P2).[4]

Even though the questions used in both projects addressed slightly different sets of issues, and the passage of time and the socio-economic developments in the country had clearly left their mark on the findings, their assessment showed a number of factors at play, which made the investigated groups vary internally. This applied in particular to their levels of education, profession, professional qualifications and place of business (town type and size). In P2 the factors such as self-fulfilment, market orientation, and the ability to take advantage of professional and economic opportunities, were more prominent than any defence mechanisms or focus on income-earning. This can be considered as a sign of the changing ways of thinking and operating among entrepreneurs. Nevertheless, such a result (P2) also emerged from the answers provided by young respondents, whose education and professional formation had taken place under market economy conditions, in the Voivodeship capital.

[4] In P2 the survey questionnaire was changed, so certain data is not available for P1.

TABLE 1 Financing Sources for Launching Economic Activity: Entrepreneurs (%)

Answer type	2002–2003		2011
	Primary importance ($N = 712$)	Overall structure ($N = 722$)	Overall structure ($N = 643$)
Own savings (and funds)	45.8	61.4	70.5
Loan from relatives (or friends)	22.1	35.7	23.2 (5.6)
Bank loan	25.7	33.4	19.1
Other	5.0	4.4	4.5*
Support from other institutions (other than banks)	1.4	2.4	10.9**

NOTES The data in columns 3 and 4 do not add up to 100%, because more than one answer could be provided. * Mainly EU funds. ** In over 90% of cases this was funding from the Employment Office.

Entrepreneurs were also asked about their qualifications for the management of their own business operations. The answers included in particular individual and micro-social factors, such as the professional expertise developed during education and previous work (34.8% for P1 and 35.7% for P2), intuition (30.2% and 30.4% respectively), self-education (30.3% and 26.6% respectively), and support from family and friends (31.2% and 30.2% respectively). It is worth noting that relatives and friends not only push people into action, but also provide nearly all the necessary advisory, financial, and everyday assistance at work. Both in this and other questions regarding the process of establishing and managing a company, institutional support was reported only infrequently.

This pattern is reflected not only in the financing sources (table 1), but also in the description of start-ups, where as many as 89.2% of respondents (P2) declared that they had set up their companies on their own, from scratch.

The majority of respondents did not use any forms of business consultancy (P1 – 69.5%; P2 – 77.2%),[5] claiming to be doing well without it, based on their independence and knowledge or skills. Other reasons included insufficient funds, the shortage of appropriate institutions and poor service usability (e.g. 'No opportunities for receiving

[5] Similar findings were obtained in other studies conducted in Lubelskie (Rożnowski et al. 2006).

any practical knowledge, as theory in itself is useless;' 'I'm doing well on my own, consultants have similar knowledge to mine, so paying for the exchange of views is pointless'). Respondents mentioned such assistance providers as legal and accounting/bookkeeping offices. The analysis of the available time and activities connected with managing companies showed that there was no room for initiating any cooperation with institutions working to support entrepreneurship, or to seek information on social projects.

Answers related to training, advisory and financing programmes for economic activities indicate difficulties in obtaining knowledge, including on how to successfully use such services (e.g. the issue of formalities).

The process of shaping the identity of an entrepreneur as a professional is characterised by heterogeneity within the group, which is attributable to the differences in professional profiles and value systems connected with the domain of work. Although many respondents did think of themselves as entrepreneurs (P2 – 65.4%), they provided formal rationales for their answers, with those negative justified by the small scale of operations or a freelance nature of one's profession, and the positive by the fact of managing economic activities. The perception of their work status and business success (P1, P2) was based mainly on individual resources such as professional qualifications and capabilities, independence and assiduity. These last criteria, rather than entrepreneurship or its synonyms, were in fact predominant in respondents' subjective views on the role of the entrepreneur.

The majority of respondents identified themselves with their professions or jobs performed before they established their companies, which was further reinforced when the profession or set of skills was the basis for their current economic activity. According to the survey declarations, this was true for around 60% of the companies. This situation is consistent with their expectations towards work and visions of professional success. In both cases, they emphasised the importance of the appropriate income, but also self-fulfilment, professional attainment and satisfaction. At this stage of formation of entrepreneurship role models, economic activity is more of a form of professional inclusion and means of achieving the above-mentioned goals, than a way to make one's 'dreams' of having a company come true.

Business Management Conditions

The situation of the economy and the labour market in the Lubelskie Voivodeship creates a specific context for the development of the SME sector, individual entrepreneurship and self-employment, due to the low level of urbanisation and industrialisation, and the high agricultural employment rate, typical of Eastern Poland. The views expressed by entrepreneurs show that they are aware of the challenging conditions posed by their socio-economic environment (table 2). However, critical views were expressed especially in relation to systemic solutions, national socio-economic policy and the rules governing its implementation, as well as the way offices and institutions operate. This conclusion is further corroborated by its similarity to the findings obtained in studies conducted with the participation of employers from the Lubelskie Voivodeship. This is in addition to the fact that the analysis of data (P1) revealed a correlation between the increase in the size of the entrepreneurs' place of residence, and the lessening of critical attitudes towards legal regulations, with the most favourable views expressed by the residents of Lublin (Spearman's $R = 0.12$; $p < 0.01$) The structure of answers in P2 confirms this trend. The awareness of the gap in the economic development between the Voivodeship and Lublin, and other regions of Poland, is clearly evident.

The respondent data collected in quantitative (table 3) and qualitative surveys[6] show that the conditions for economic operations are perceived through the prism of barriers. The most prevalent issues mentioned by the respondents included legal, economic and fiscal obstacles, bureaucracy and supervision, problems in relations with government offices, and the lack of institutional support. Furthermore, respondents do not trust many institutions and offices, while also being convinced of the prevalence of cronyism and nepotism in business relations and on the job market as a whole. Examples of violations against the ethical and legal rules encountered by entrepreneurs relatively often included unfair competition (49.8%), failure to comply with contract provisions (32.0%), fraud and deception (31.3%).[7] The positive impact of entrepreneurship-oriented

[6] Interviews conducted in 2011 with 47 entrepreneurs.

[7] The question was introduced in P2; with five possible levels of frequency; the data is an aggregate for 'very often' and 'quite often.'

TABLE 2 The Assessment of Business Management Conditions: A Comparative Account (%)

Question		Employers*	Entrepreneurs	
		2001	2002–2003	2011
Are legal regulations in Poland conducive to entrepreneurship?	Definitely not	27.8	25.9	2.1
	Rather not	40.9	40.8	28.0
	Hard to say	22.2	26.5	35.4
	Rather yes	8.6	6.1	24.7
	Definitely yes	0.5	0.7	9.8
		Employers 2011		
		Poland	Lub. Voiv.	Lublin
What are the conditions for managing one's own business?	Very poor	5.8	11.6	13.7
	Poor	16.6	32.7	28.6
	Average	56.9	50.1	50.6
	Good	19.9	5.1	6.5
	Very good	0.8	0.5	0.6

NOTES *Studies among employers from the Lubelskie Voivodeship ($N = 410$).

policies, the support system and institutional measures on the development of companies was acknowledged only sporadically. The social climate pertaining to potential threats implies ambivalent predictions, more pessimistic in relation to the socio-economic environment than to one's own company. Assessing prospects related to Poland's accession to the European Union, P1 expressed less optimism as regards improvement in the situation of small entities (16.5%), compared to deterioration in this respect (27.5%). Regarding the direction of economic developments in the country, the majority of respondents in P2 considered it unfavourable (34.5%) or difficult to assess (35.4%) rather than favourable (30.1%). Maladies in the labour market and the economy were expected to be addressed by the government (approx. two-thirds of respondents in both projects), institutions and local authorities (one-third of respondents).

An Assessment of the Corporate Situation and Prospects for Development

The reception of conditions for the management of individual economic activity boosts one's self-esteem in terms of his or her qualifications and work, and even modest manifestations of successful performance under harsh market conditions are sources of satisfaction.

TABLE 3 Barriers to the Development of One's Own Company: Entrepreneurs (%)

Answer type	2002–2003 $N = 728$	2011 $N = 644$
High costs of business operations	*	66.1
Excessive taxes	53.4	46.3
Market competition	*	43.5
Generally bad economic situation in the country	34.6	36.5
Wrong economic policy of the government	17.7	25.3
Lack of own funds	11.8	17.1
No output markets (P1); no demand, economic downturn (P2)	10.6	14.1
Excessive interest on (and poor access to) loans	31.9	13.5
Mental barriers (such as the fear of failure)	4.8	9.9
Difficulties in obtaining EU funds	*	7.8
Lack of appropriate legal regulations on economic activities	*	6.8
Lack of appropriate, skilled personnel	1.8	4.8
Poverty within the public	56.3	
Poorly designed tax system	14.2	
Defective credit system	6.3	

NOTES The data do not add up to 100%, because more than one answer type could be selected. Up to 3 out of 17 for P1 and up to 4 out of 15 for P2 (table 3 shows only selected answer types). Other types, such as the lack of the appropriate technical equipment, no access to latest technologies, poor product or service quality, poor work organisation or poor productivity, accounted for less than 2.5%.
*This type was not included in the question.

The majority of respondents declared that they enjoyed working in their companies (79.4% for P1 and 78.8% for P2) and were satisfied with their financial performance (58.6% for P1 and 50.9% for P2). The economic standing of the company received relatively favourable opinions, with average rankings at 51.3% for P1 and 53.2% for P2, and good at 28.6% and 37.0% respectively. Therefore, good corporate standing was consistently associated with the use of internal resources. P1 mentioned efficient work organisation (51.3%), product and service quality (43.9%), substantial revenue (35.7%), work productivity (27.5%) and reasonable employment level (20.2%). For P2, the answers were: professional reliability (51.7%), product and service quality (47.4%), good work (49.1%), professional experience (42.4%), reputation and brand (30.5%). In both projects, the invest-

ment factor was important for 12% of respondents, while new technologies for about 7%. Positive contributions on the part of external factors were acknowledged very rarely (involvement and assistance from local authorities: 2.6% for P1 and 1.5% for P2; state subsidies: 1.2% and 4.1% respectively; institutional support: less than 1%).

The observed principles of perceiving growth factors for economic operations are reflected in problems related to corporate management. P1 mentioned in particular the functioning of institutions and interactions with government offices (48.1%), accounting and financial settlement (39.1%), sales and marketing (13.9%), supply and suppliers (11.0%); while P2: market competition (51.6%), finding outlets, recipients and clients (37.1%), legal regulations (26.5%), malpractices on the part of other persons or companies (26.2%), interactions with government offices (22.5%), and accounting (13.4%). Similar proportions were observed for answers such as 'there are no problems' (16.9% for P1 and 12.9% for P2).

In addition, in P2 an open-ended question was asked about the most important benefits and drawbacks to working in one's own company. Leading advantages included independence, 'being your own boss,' the ability to go one's own way and have control over one's working time and earnings. Disadvantages included mainly sole responsibility, being overworked, and having no free time, but also the reasons mentioned earlier, such as volatile legal regulations, bureaucracy, high costs of business maintenance, heavy burden related to social-insurance contributions and taxes, and fiscal policy. Nevertheless, given a free choice, the majority of respondents (P2) would like to continue or expand their operations (57.3%), or possibly change their profile (13.7%). Only 10% preferred wage work. Corporate growth prospects are also favourable (P2). The current situation was seen either as likely to continue (37.1%) or improve (with either slow – 30.6% – or rapid – 16.7% – corporate development). Relatively few subjects envisaged a deterioration in their situation, or even the closure of operations (12.0%).

Conclusions

The study presents selected findings from two research projects carried out on a group of entrepreneurs managing individual economic activities. The projects had a local character and their lack of representative value limits extrapolation opportunities. However, their

shared conceptual framework, indicator replication, similarity of answer types and correlations in sets of variables, as well as convergence with research findings from other regions in Poland, allow a few conclusions to be drawn.

First of all, the situation on the labour market and the condition of the economy in the Lubelskie Voivodeship, and Lublin itself, make it difficult to manage individual economic activities, which influences respondent assessment. As a result, the perception of many barriers and threats to corporate development and professional activity reflects the picture based on social and economic data. It is important to note, however, that emphasising problems is not typical of entrepreneurs, since the predominance of critical opinions, and in many respects even more pejorative views, was also observed in other groups of Voivodeship residents.[8]

Secondly, cooperation with the institutional environment and the use of entrepreneurship support system are rather limited. In fact, other authors have proven that this is characteristic of entrepreneurship in Poland. This issue is, however, a complex one, since the analyses of the support system and innovation and entrepreneurship centres in Poland have shown that this is in part due to the system itself (Matusiak 2006).

Thirdly, the analysed groups show internal heterogeneity, especially in respect of their professional characteristics, which diversifies their work situation. Certain substantial problems connected with economic operations are therefore specific to a given industry and result from the nature of professional activities. Entrepreneurs, asked about the sources of potential for corporate growth (on a micro-scale), mentioned mainly individual factors, such as professional qualifications, independence, hard work, management skills, the ability to compete on the market and deal with complex and volatile legal regulations. As regards general recommendations for the improvement of the reference conditions, suggestions made by the en-

[8] This conclusion refers to the findings of several other projects conducted by the author as part of her work at the Institute of Sociology, the Faculty of Philosophy and Sociology, Maria Curie-Skłodowska University, and under a grant from the Vice-Chancellor of UMCS for Scientific Research and International Cooperation. In 1998–2011 the research covered students, employers, wage workers, and entrepreneurs (6.4 thousand respondents in total).

trepreneurs are noteworthy.[9] The most popular included changes to the fiscal system (simplification, lower costs, tax relief), the legal framework (regulations, fixed rules, streamlined procedures, start-up assistance, simplified accounting rules) and the social security procedures (lower premiums, non-compulsory system, reduced employer costs, 'elimination of the Social Insurance Institution, ZUS'), improved Labour Law, 'friendly' state policy, reduced bureaucracy and formalities, access to inexpensive legal advice, improved interactions with the Tax Office, subsidised training for small businesses, easier access to investment funds and cost-effective credit facilities.

To sum up, Lublin, as the administrative capital of the region and the largest academic centre in this part of Poland, has undoubtedly produced role models for entrepreneurship. This is confirmed both in the high economic activity of its residents, the relatively efficient entrepreneurship support system and the number of social projects. The findings of this study also substantiate this claim. What seems to be the problem is the poor 'radiation' of these role models across other areas of the Lubelskie Voivodeship. The development of individual economic activity is, of course, subject to political, legal and economic conditions, as well as to the prosperity of the society and the market situation, which determine the course of transformations. Nevertheless, companies are set up by people. Therefore, one way to redefine this situation can be through 'educational and youth resources' mobilised at Lublin's universities, especially in view of the intensified cooperation between academics and businesses. At the national level, graduates from Lublin's universities have dominated in the categories which operate according to unfavourable rules (21.3%, the national average being 12.8%) or undertake work as farmhands in their family agricultural holdings ('Badanie aktywności' 2008, 326). However, they should be prepared to serve as the custodians of new professional strategies, or even actions anticipating the establishment of an entrepreneurship support system and social programmes in their local, and particularly rural, communities. As a result, self-employment and individual economic activity would not only become alternative forms of vocational activation among young

[9] Based on answers (open-ended question) provided in pilot studies (2010; 51 interviews). These are consistent with the qualitative (P1, P2) and quantitative interview findings.

people and a solution to the unemployment and emigration problems, but also a way to tap into the human resources developed with great social effort. Apart from the natural environment, this is still the main asset of Central and Eastern Poland.

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Barriers to the Development of Innovative Entrepreneurship: Synergy between Science and Business in Lublin

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Introduction

Developing the city and its business based on the pillar of innovation requires adequate social, institutional and financial infrastructure. Both the author's practical experience and research conducted by the Faculty of Economics of Maria Curie-Skłodowska University and other centres suggest that in the case of Lublin, there are significant barriers in this regard. Their elimination would allow synergistical development of not only the economic potential of the city, but also to better target the use of intellectual potential.

The purpose of this paper is to present critically issues faced by innovators along with review of research results and concepts proposed and implemented in the world, stimulating the development of academic entrepreneurship and innovation support system. The article is part of the discussion in the area of operations C3.1, C3.2. and D2.1. 'The Strategy of Lublin City 2013–2020.'

In the first part of the article a review of selected literature in the field of academic entrepreneurship and cooperation between science and practice was made. The next shows the current problems of the cooperation perceived in Lublin, while the third proposes actions to minimize these problems or mitigate their effects.

World Experience in the Development of Cooperation between Science and Business: A Research Overview

The very concept of academic entrepreneurship today differs from those of initially identified by B. R. Clark (1998, 5), and aims at defining the universities as modern organisations, created purely for the corporation purposes and managed like corporations. Understanding that universities can function like commercial companies may seem impossible, because such kind of mercantilism seems to in-

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 159–170.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

terfere with 'the spirit of the university.' However, if universities are to survive in a dynamic global environment, increasing competition from non-university education sector, including the use of modern information technology and the increasing massive scale of education, they have to face the challenge, change or collapse (Binkauskas 2012, 234).

The reference is made here to the three major external factors forcing this trend. Firstly, smaller university funding from public resources and the need to compete with other sources of financing. Secondly, the increasingly stronger links between universities and business practice. Universities cannot solely be the institutions that provide to other sectors of economy adequately educated (at least theoretically) human resources. Universities and research centres are the natural part of the economic environment of enterprises, which, by creating and delivering innovations, tighten these bounds. Thirdly, stronger and stronger cooperation between universities with local and regional environments becomes an expression of universities usability and contributes to the process of socio-economic development of local community. G. Binkauskas (2012) indicates at the same time, relying on the research of other authors, five major changes that define the evolution of the university towards an institution built on entrepreneurship:

- strengthening the growing importance of management processes,
- development of non-university centres and integration of research capacity into the interdisciplinary service centres,
- diversification of funding sources and purposes of their use,
- stimulation of research,
- integration of an entrepreneurial culture.

R. Rinne and J. Koivula (2005, 91) further indicate five types, in which university organizations can evolve:

- *Innovative University*, in a positive sense, not meaning explicitly institution focused on profit,
- *Service University*, for which customers are a priority,
- *McUniversity* as an institution focused on mass education based on the criteria of economic efficiency and profitability,

- *Entrepreneurship University*, the definition of which is not clearly formulated, but includes such attitudes, structures and rules governing its operation.

The attempt of defining the very concept of academic entrepreneurship was made by M. M. Mars and C. Rios-Aguilar (2010, 447), reviewing the development of the concept and related issues basing on 73 articles in 5 scientific journals devoted to higher education in the world (*Journal of Higher Education*, *The Review of Higher Education*, *Research in Higher Education*, *Higher Education* and *Journal of Higher Education and Management*) and 4 books, published between 1999–2008. The researchers drew attention to the fact that the concept of academic entrepreneurship and creating business relationships of the academic community with the environment regionally differentiates in the world. The authors from the USA, Canada and Australia have focused primarily on the area of institutional changes, including organization of bodies responsible for the transfer of knowledge, processes of academic knowledge commercialization and cooperation of universities and industry. Mars and Rios-Aguilar (2010) said that Western systems of higher education, under the influence of neo-liberalism of the 80-ies on the national level have evolved to best correspond to the effects of globalization in the economy, while in the less developed economies, systems begin these changes and, therefore, do not keep pace with the socio-economic changes in these countries. If the path of changes observed in western systems will be repeated, the growing importance of market orientation of researchers activity will lead to paying more attention to appropriate safeguarding intellectual property and creating start-up businesses around own discoveries (p. 454). Innovations associated with them, which provide a market spread, are the basis of a narrow understanding of the effects associated with them in the form of financial benefits and organizational solutions. Meanwhile, Mars and Rios-Aguilar indicate the validity of their broader perception as intangible assets that create for students possibility of knowledge acquisition in terms of practical and market research application, increase of public confidence towards the university, which are based on their implemented discoveries or the stability of organizational and institutional solutions created by them, independent of the general economic situation.

The importance of the sustainability of institutional arrangements to support the development of economies through the application of scientific discoveries and creating spin-offs is also indicated by Tchalakov, Mitev, and petrov (2010, 189–217), analysing their significance for the transforming economies of Eastern Europe. They emphasize that the problems of the diffusion of scientific solutions to the economy in this group of economies (research involved here Bulgaria and Romania) are associated with past centrally controlled system and primarily by a lack of large market players interested in implementing solutions on a large scale and providing funding for their further development and creating in this way an effective market demand for innovative solutions. Their enormous importance for the process of knowledge commercialization in Western Europe and the United States is emphasized by other authors (Henrekson and Rosenberg 2001, 1). Meanwhile, the very creation of spin-off companies, as far it leads to knowledge transfer, works usually in the case of considerable asymmetry of business skills, occurring between scientists and companies – to the detriment of the former. In the development of appropriate policy supporting the commercialization of knowledge, the existence of intermediaries, linking the world of science and business, as well as mechanisms for funding of research projects – venture capital, business angels, research grants, technology parks, incubators, etc. is crucial.

Possibilities for the development of academic entrepreneurship are dependent on the simultaneous occurrence of four elements: ideas, their effective protection, risk appetite and funding (Słodowa-Hełpa 2011, 147). If one adds the above mentioned appropriate institutional frames, it is the creation of spin-off companies that may seem the solution dedicated for this kind of projects. However, going back to the arguments connected to certain market experience in universities functioning, progressing evolution of globalisation it occurs that this should not be the solution espoused by all means. The key element of spin-offs success is a way of selecting the project, together with motivating people, partnership, establishment of cash reserves and management. These features can be attributed to each successful enterprise, which indicates that market experience has much bigger importance for the success in the field of knowledge commercialisation than scientific knowledge, which, of course, cannot be overlooked in its whole construction based on innovation. In this context, the lack of developed entrepreneurial culture at Polish universities

compared to universities in Western Europe and the United States may result in fact that conditions for the development of academic entrepreneurship in general can be difficult. It seems that also for city such as Lublin, where lack of ideas should not be a problem in itself, with the relatively high importance of academic centres for urban system, in conditions when the barriers to raise capital on a global scale disappear, soft aspects of academic enterprise development, lack of entrepreneurship culture and not fully used effects of competence synergies of academic and business centres determinative the relatively lower efficiency of the process.

Barriers in Cooperation between Enterprises and Research Centres: The Development of Academic Entrepreneurship in Lublin

The significance of innovation processes in organizations and companies competing in the market has become an inspiration to undertake research to identify barriers to the financing of innovative activities, including the aspects of the perception of the very innovation, perception of financial instruments and institutions offering them, the very innovators and the risk of the innovation process and mental limits in their making.

Research[1] conducted in the Department of Banking at the Maria Curie-Skłodowska University under the project have been divided into two phases. In the first stage, which took place in 2011 on a sample of 395 companies located in the region of Lublin, information about involvement in the creation and implementation of innovation in enterprises, knowledge about the experiences of companies in this area and their assessment of the availability and use of instruments for financing innovation were obtained. In the second phase, completed in November 2012, in-depth individual interviews with representatives of selected entities (30 companies) and business institutions were conducted. The sample was selected deliberately, and special attention was paid to those entities that indicated in the first stage of research on the problems with the implementation of innovations, failures in this regard and difficulties in obtaining financing for innovation.

Besides very aspects of innovative processes funding, the subject to

[1] The research project of the Ministry of Science and Higher Education NN 113 303038.

TABLE 1 Declaration of Cooperation between Business and Business Environment Institutions on the Stages of Idea Forming, Concept Forming and Financing of Innovative Solutions

Institutions	(1)	(2)	(3)
Training and advisory bodies	20,2%	18,4%	1,5%
Advisory and consulting Companies	12,9%	10,7%	7,4%
Employers' organizations	12,0%	4,9%	3,1%
Universities	12,0%	4,9%	1,5%
Central administration units (including PARP)	10,4%	9,8%	17,2%
Research and development institutions, including the laboratories	10,4%	5,2%	1,2%
Local government units	8,9%	11,0%	12,9%
Regional Development Agencies	8,9%	10,1%	13,8%
Banks	2,5%	7,7%	78,2%
Investment funds	1,2%	1,2%	12,0%

NOTES Column headings are as follows: (1) idea phase, (2) formation of concept phase, (3) funding phase.

the research were also relations between creators and beneficiaries of innovations and the evaluation of environmental conditions for these relations. The whole process of pro-innovation activities was divided into four interrelated phases (initiating innovation phase, the development and in-depth pre-implementation analyses phase, funding phase and implementation phase), whereas the factors mentioned further were examined in the first three stages.

Cooperation between business practice and the Lublin scientific centres is not easy, and certainly not widespread. Only 11.3% of purposely selected companies that defined themselves as innovative businesses indicated that, by definition, this is an innovative company that works with research centres and universities. In addition, only 12% of 326 companies declaring a potential possibility of cooperation with business institutions indicated that they would be interested in using the support of the university at the stage of generating innovative ideas. Adequate percentage of people interested in working with research and development bodies reached 10.4%.

Nearly twice lower guidance in this respect for universities and R&D institutions in relation to training, advisory and consulting firms indicate their low attractiveness as potential partners in creating innovation. This may indicate the fact that innovations are primar-

ily fixed in the process of company itself and help from outside at the stage of searching for inspiration in general is not particularly needed. Nevertheless the interest of companies is directed rather at the institutions having contacts with the practice and in their opinion, familiar with better technology or industry specifics than scientists and researchers. Often it is a wrong impression, but on the other hand, scientists and universities often do not formulate properly clear or even any message containing offer, which can be used in business practice. Moreover, scientists were not motivated until now to be able to undertake such activity. Entrepreneurs have pointed to the difficulties in formalizing cooperation, low utilitarianism of academic researchers of Lublin and region as well as difficulties in mutual communication.

Such results should not be surprising if one takes into account the structure of enterprises in the region, especially the shortage of large companies acting as potential recipients of innovation, who also can afford their co-financing. On the one hand, a large number of small and fragmented companies will surely be interested in the development of innovative solutions, but acting alone, they cannot and are not willing to spend on them amounts that would enable research funding. On the other hand, too high costs of creating and maintaining research and development facilities close the way to innovation for small entities that do not interact with research centres and universities.

Innovative actions are costly and opinions of the surveyed companies indicating barriers in taking them seem to confirm this. Limited sources of funding and associated risk, that the innovation will occur unprofitable were indicated by almost half of the surveyed companies. Cooperation with universities and research centres will not solve the shortage of capital, but among other indicated barriers there are those which, by establishing cooperation may cease to be a problem in 15–20% of cases. The very companies admit that they cannot diagnose whether they have the possibility of introducing innovation (21.5% of respondents) or they are not convinced f as to the validity of their introduction (14.9% of entities). Meanwhile, the establishment of cooperation between the university and the group of enterprises (sectorial associations, clusters, producer groups, etc.) on the one hand gives a chance to confront theory (often underrated recent scientific discoveries or unique, experimental solutions) and

TABLE 2 Barriers in Implementation of Innovative Activities in the Opinion of the Surveyed Companies from Lublin and Region

Barriers in implementation of innovations	% of respondents
Inefficient capital	48.6%
Adverse legal and tax regulations	43.0%
Too high risk of low return	29.6%
Resistance of emploees	26.1%
Not diagnosed possibilities of implementing	21.5%
Lack of institutional support in implementing	18.7%
Weak knowledge on implementing innovation	18.5%
Not convinced to implement innovation	14.9%
Operating area do not require innovations	13.4%
Lack of clear and measurable benefits of being 'innovative'	11.4%
Unnecessary 'luxury,' without which you might as well deal	6.6%
We experience no barriers	3.0%
Other	0.5%

practice that the stability of such connections will also result in long-term innovation programming on (creating demand) and performing joint projects. In this way the science gets a practical laboratory for experiments, which are drawn by its potential beneficiaries (tailor-made) while supporting public funding (research grants application). Given the number of potential regional bodies, the conditions for the development of science, called 'the blue ocean' are created.

Additionally, thinking about innovation in companies, we have in mind mostly technological innovations, while small and medium-sized service companies do not always need this type of costly innovation. As far as product innovation may appear more frequently as a reaction to the perceived signals from customers, suppliers or competitors, and if they are not suppressed by a formal path of information flow or postponed, inasmuch focusing on the repetition of operational processes in the SME sector, that prevails in Lublin and the region, one often forgets the fact that possibility of performing existing tasks in different, innovative way also is to be considered an innovation. The needs of process innovations are more easily to be identified by observers from outside the organization than by its members. The bodies trying to avoid risk are often more likely to implement innovations. According to research results of H. Greave (Greve 2003, 685) it is more likely that innovation will be introduced

TABLE 3 Barriers in the Cooperation between Business and Science in Lublin and How to Eradicate Them

Diagnosed barrier	Possible strategic actions
Lack of specific needs in terms of innovation in MSP enterprises, focus on operating businesses. Offer of the University regarded as non-market, lack of practical preparation of academic staff, impractical students education.	Offer of centres of knowledge transfer created by universities *should be more proactive*, because at the moment it is mostly based on passive presentation of knowledge and possibilities as well as waiting for contact. The universities should *mainly focus on active searching for potential recipients of innovation and offering help in diagnosing the needs in this area.* The actions of the innovation brokers implemented by the universities may be a kind of support. Projects implemented together with enterprises lead to greater involvement of employees in real business processes and practical education of students adapted to the observed needs of the economy.

Continued on the next page

in companies experiencing financial difficulties than in those that have a healthy financial situation. This does not mean that organizations that succeed are less innovative. On the contrary, significantly higher activity in research and development can be noticed, healthy operating foundations allow to finance this type of expenditure, however, significantly lower proportion of such companies then implement innovations into market products then.

Practical Recommendations for the Lublin Strategy Development in the Context of Synergy of Entrepreneurship and Academic Character

Table 3 shows the most important, according to the author, barriers limiting the development of cooperation between science and business in Lublin. Their limitation, by creating permanent institutional system solutions may be a factor stimulating the development of the City and facilitating implementation of the Strategy, particularly in the area of entrepreneurship and academic character, unleashing synergistic effects through stronger connection between these two spheres.

It seems that for many of the above identified problems lying on both sides of the area of the interaction between science and business in Lublin common solutions can be suggested. They can be limited to few strategic actions, requiring greater activity and commitment,

TABLE 3 *Continued from the previous page*

Diagnosed barrier	Possible strategic actions
Often unspecified strategy of commercialisation the results of research at universities and procedures for cooperation with their innovators. High risk aversion among scientists commercialising discoveries. High scientific competencies, lack of business experience. Different expectations of innovators and the financing part (especially equity funds)	Functioning of centres for the transfer of knowledge seems not to result from authentic need and will of the commercialization of knowledge, but it has all the characteristics following the trend. These entities should not only have offer to external customers, but also *support internal customers (innovators) according to transparent procedures*. Inefficiency and the apparent actions of these individuals may in fact discourage innovators to carry out activities in the field of commercialization, if they do not have a professional business support. Scientists-innovators in general are great specialists in their own field of knowledge, but do not have the business competence. Creating or forcing spin-off development with the innovator as the accountable manager is, in such cases, ostensible and risky. In this regard, *substantive expertise in the field of innovation (scientific) and operational (business) competences should be clearly divided*, forming teams of scientists-innovators involved in the process of commercialisation and *managerial support* using internal (business departments) or external resources of university (business departments). The presence of managers might be *an interface* between scientists-innovators ('I know how it works, but I don't know what to do with it in matters of business') and money donors ('I have money, but what benefits can I have out of the innovation'). The creation of *university fund*, equipped with the rights to inventions (contributions in kinds) with the scientific support of scientists-innovators (service and commercial) responsible only for the active commercialization of discoveries. *Keeping inventions in the portfolio of the entity* it is possible to form value-creating strategy across the university (the benefits of licensing ideas instead of selling them), financing further innovation and generating additional funds for the inventor and the entire university, *freeing the latter more and more of the public funding*. Worth considering in terms of demographic decline.

Continued on the next page

also financial, of both parties, as well as of authorities and local institutions interested in the participation:

- *greater activity of knowledge transfer centres* at universities, both in terms of external customers (offer of support in iden-

TABLE 3 *Continued from the previous page*

Diagnosed barrier	Possible strategic actions
A small number of large companies as recipients of innovation and co-financing development projects. Weak capital equipment of companies of the MSP sector. Lack of local systemic solutions for financing innovation and commercialization of knowledge with consequences for the local community beyond the scope of LPNT.	If the strategy of reindustrialisation of Lublin urban agglomeration will be implemented, the problem will gradually disappear along with appearing new large entities creating the need for innovation. Otherwise, the active role of innovation brokers representing universities should also *support processes between companies or other cantered around some innovative solutions*, which together can co-finance them and absorb, which might allow avoiding the problem of weak capital equipment of MSP sector. An alternative solution would be to *calling local capital fund (closed or open)*, which forming transparent institutional framework would draw local capital resources and external finance (including the issuance of debt instruments). As a priority, such entity would provide financial and technical support (managerial, business) to the projects as *local shared services centre for Lublin research units* (SSC/BPO). Common capital equipment supplied by the founders (universities, public institutions and business) and *building up a portfolio of projects contributed by participants* (not just universities) would allow for savings in the operation (instead of funding in each university one common entity commercialising knowledge) and *dispersion of risk (combination of medical, technical, environmental projects and others) and proportional for shares division of benefits.*

tifying the needs for innovation) as well as internal (creating an entrepreneurial culture at universities),

- *commercialization of knowledge based on the separation of scientific and managerial competence*, if spin-offs/spin-outs are created at universities *entity (portfolio found) managing inventions value* in the long term, through their licensing rather than selling
- *supporting of business linking processes* around the idea of innovation, involving them together to co-finance its development,
- *considering the possibility of establishing a local capital fund*, which would constitute a shared service centre (Shared Services Centre, SSC) in terms of commercialization of knowledge for research units in Lublin; the idea of a common fund,

however, requires a resignation by each of the founders from particular benefits and from individual developing their own projects, but their conversion into equity securities (certificates), the value of which is dependent on the effects of management *all introduced and implemented* discoveries in the long term, this solution reduces the cost of operation of the institutions created at each university separately (above) replacing it, and diversifies the risk of individual projects of each.[2]

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[2] Taking the experience of Lublin universities with creating of individual R&D centres instead of one shared research camp into the consideration, it seems that we will have to wait long for possibility of such solution.

Creative Capital as Stimulus for Development of Competitiveness and Innovativeness of Lublin

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Introduction

Famous Polish sociologist Jerzy Szacki in his popular work 'History of Sociological Thought' (numbered to canon of sociological literature) has taken note of timelessness and universality of some theories for which there are no time or space limits. 'That social theories are still valid despite of changes in conditions in they were formulated is caused by the fact that they are read and interpreted afresh' (Ziętek 2010, 9). Undoubtedly, they include theories describing different forms of capital: economic, cultural, human and social one.

For a few years there has been an increase in popularity of theory of social and network capital which are strongly related to intricacies of contemporary development where 'concentration of capital and capital flow became goals for themselves' (Majer 2010, 5). The world that has been so far, so to speak, a socially neutral space is becoming a platform of flow for different kinds of capital which are deep-rooted in a network of numerous connections between both individuals and collective subjects. Their presence is particularly well observed inter alia around and in cities 'which, due to their architecture, planning, features of communities and functions performed' are 'examples for synthesis of multicolored components that constitute identity of their inhabitants' (Majer 2009, 8).

In such constructed and dynamic world cities needs to be redefined ('re-thought,' as F. Mayor would call it), that is to say: 'They need to be made to become a place for creation of loyal and civic attitude, community, civilization' (Mayor 2001, 86). The process is a response to current municipal metapolicy, where cities (considered in isolation from states or regions) become crucial nodes in network

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 171–181. Bangkok, Celje, and Lublin: ToKnowPress, 2015.

of flow. This is supported by revolution in IT and communication as, thanks to them, exchange processes are limited to the very minimum and space-time limitations simply vanish. Serious challenge the contemporary cities are facing is to build polis – the city of the 21st century (according to F. mayor). In practice, it means that 'cities need to attempt to balance between diversity and unification. They must create public and common collective areas in which each individual would be able to find a place where he could anchor, physically and symbolically' (Mayor 2001, 103–107).

Theoretical and Pragmatic Aspects of Creative Capital

In contemporary world creativity is particularly important due to many cumulating economic and social processes which are based on flows, networks, nodes and constant changes like in a kaleidoscope. 'Creativity started to be appreciated, special systems came into being to support and make better use of it – because it is which is the source of new technologies, new branches of industry, new prosperity and all other positive things in economy' (Florida 2010, 41). Moreover, 'human creativity is basic economic capital' (p. 9).

The current transformation possible thanks to such factors like intelligence, talent, knowledge and creativity is of greater importance than previous social and economic changes for they were based on material resources and means (industrial revolution). 'Human creativity is nearly unlimited form of capital' (Florida 2010, 10). It is multidimensional, takes various forms and occurs in any in any place and time. In contemporary economy, creativity is a process going on constantly and everywhere (p. 12). Its supplement is transformation in the area of culture where talent, tolerance and technology are taken advantage of to a larger and larger extent. R. Florida notes accurately that 'cultural-artistic creativity supports and cooperates with technological-economic creativity' (p. 12).

Space created in such way is center of creativity and is inhabited just by creative people which the American sociologist called 'creative class.' It includes two subgroups: super-creative core and creative professionals. Among the first one he numbers: IT-, architecture-, engineery, social sciences-, natural sciences-, life science-, art-, design-, entertainment- and media- related occupations. The second group includes management occupations, business and financial operations occupations, legal occupations, healthcare practitioners and

technical occupation and high-end sales and sales management. R. Florida (2010) emphasizes that today's professionals see themselves as members of broadly defined creative force. That is why they tend to seek for stimulating and creative environment- for places which would offer not only chances and all possible comforts but which would also be open to diversity and would enable them to express themselves and to confirm their identity (Florida 2010, 33–4). In the course of time, creativity supporting and stimulating system has been developed. It is composed of such instruments as: venture capital, research funding, creation of factors that would support rise of creative cultural-artistic communities, start-up companies, innovations in high-tech-industry. 'Such environment guarantees basic ecosystem or habitat where creativity can settle down and prosper in many dimensions' (p. 71).

To analyze creative capital, R. Florida and his team of analysts have devised a special set of parameters which includes: *high technology index* (percentage participation of products of technological sector in one region against the same value for entire country), *innovativeness index* (number of patented innovations per capita), *Bohemian index* (number of people creative in terms of arts), *human capital index* (percentage of bachelor's [or higher degree] holder in a region). Example for Florida's another criteria is *creativity index* that measures capability of a region or city to achieve creative economy-related goals. It contains four following parameters: percentage of creative class in entirety of labour force, innovativeness (number of patents per person), presence of companies in high-tech branch and diversity (measured by number of homosexuals). 'This multifactorial index is an instrument that enables us to evaluate capability of a given region to function in creativity-based economy in more accurate way than simple percentage of creative class in labour force does' (Florida 2010, 251).

Creative economy is based on, what R. Florida calls, 'social structure of creativity,' videlicet new systems suitable for technological creativity and entrepreneurship, effective models for production of foods and provision of services, as well as social environment that is based on cultural and geographical factors and open to all symptoms of creativity.

Another parameter proposed by R. Florida is creativity index based on three factors: talent, technology and tolerance (so-called 3Ts cre-

ativity index). Talent is expressed in percentage of people working in so-called creative (and science-related) jobs who hold at least bachelor's degree. Technology index finds expression in percentage of people working in high-tech industry, number of patents per 1000 inhabitants, percentage of Internet (or mobile phones with Internet access) users. Tolerance index consists of: percentage of people inhabited in a region but not born there, transient students, mixed marriages, percentage of differing racial groups inhabited in a region against proportion of all such persons registered in a whole country, percentage of so-called bohemians in comparison to people at large.

Another interesting measure instruments are so-called Creative Economy Composite index and European Creative Index. The first one takes into consideration following factors: innovativeness (percentage of Internet users in population, number of patents per 1000 inhabitants, number of people hired in high-tech industry), entrepreneurship (number of firms started in comparison to number of firms closed down in the same period of time, including investment capital), openness (percentage of immigrants in a region and number of students coming from different regions). In the second case, the factor talent is expressed in: percentage size of working population engaged in the creative industries, percentage of population age 25–64 with bachelor's degree or above, percentage of hired scientists in working population. The technology measures include: number of patents granted per capita, R&D expenditures, number of patents in the area of so called innovative technologies per capita. Tolerance measures include, in turn: number of international tourist arrivals as percentage of total population, number of students studying out of their region and the number of foreign students studying on the domestic market.

Polish researchers on the subject have created in recent years many papers on relations and interdependencies of creative capital and economic processes, particularly in the terms of influence of the capital on economic development of cities and regions. However, 'analyses are conducted separately for each segment or for respective components' (Podgrodzka 2013, 418). The author refers here to dependency between creative capital and innovative or knowledge-based economy. 'Whereas it is still difficult to find a study that would take into considerations all the factors together' (p. 418).

Competitiveness and Innovativeness of Lublin: Currently and Perspectives

Significant acceleration in social-economic changes in the last years is an effect of intensifying technological development (especially related to information flow), in which crucial are: learning processes, creation and development of knowledge-based economy, most important features of which are information and innovation. The contemporary economy is stimulated by innovations and it starts to replace present models, where it is investments that used to be the main development-stimulating factor. Therefore, knowledge and innovation are becoming separate and fundamental production factors. Special attention must be paid to correlation between these terms because knowledge is commonly defined in terms of information computed in order to make use of it. 'Then, knowledge is information put in organizational, economic and social context. It is, in fact, making use of information in practice' (Nowakowska 2011, 32–33). An inseparable component of creation of knowledge resources is many-sided and long-term process of learning. The ability to transform knowledge into concrete actions will be a significant asset of innovativeness.

Innovativeness and innovative processes are subject of focus of many scientific disciplines, hence the output on this complex and many-sided phenomenon is quite rich. J. A. Schumpeter defines innovation as launching of a new or new species of already know product, application of new production methods, opening of a new market, acquisition of new resources, new bases of raw material or implementation of new industry organization manner. 'Innovation is underlied by technical, social and organizational changes, and its primary feature is discontinuation' (Nowakowska 2011, 35).

For P. Drucker, innovation is 'a entrepreneurs' special tool, which enable them to start new economic activity or provide new services as consequence of changes' (in other words: a change that creates a new dimension of performance) (Drucker 1992, 39–40). The author emphasizes not only technical, but also economic and social dimension of innovative processes. Success of a new product (or service, or process) on market, as well as social factors (values, culture, norms, social relations) imply success of innovation. J. Guinet et al. (2009) are of the opinion that innovation is a multifaceted process characterised by following features:

- is based on interactions, relations and integration;
- it arises as a result of learning, accumulation of expert knowledge and so-called creative destruction;
- is has strong social and cultural background;
- it is 'located' (meaning that they are concentrated in an area rich in resources crucial for rise of innovation).

The author stresses that innovations can be cost-intensive and risky, especially from small subjects' point of view.

Along with the evolution of innovation model, from linear (technological push) to interactive (feedback, integrated, network-based) one, a new definition of innovation has been developed in specialist literature. 'Innovation is derivative of interaction, arising thanks to co-operation of many actors; it is a result of collective and synergic actions […]. Understanding of innovative processes as one-way, linear and sequential has been abandoned and researchers turned towards integrated and network-oriented approach' (Nowakowska 2011, 39–40).

Innovative potential of administrative units (in Poland: voivodships, districts (Pol. powiat), communes (Pol. gmina) and towns) depend on their ability to create innovation, i.e. to seek for and obtain research results, inventions, new ideas and solutions, and next to make use of them in practice. 'Innovativeness is ability to apply in practice creative actions, new ideas and inventions, a result of which are innovations' (Nowakowska 2011, 40). Particular emphasis needs to be layed on pro-innovative resources, like human, material, informative, economic ones. Internal system of a region (city) also influences rise and development of innovative processes. Added value is created by all actions, resources, capacity of subjects engaged in creation of innovative solution and in their transfer for their subsequent implementation, as well.

Competitiveness and innovativeness of Polish economy places Poland at the bottom of the table, classifying all EU states, far behind Nordic countries, Germany, the UK, France or Slovenia. Poland is followed only by Bulgaria, Romania, Lithuania and Latvia. We are rated among so-called 'Moderate innovators.' In turn, in research conducted for dozen years by A. Nowakowska's team, Lublin Voivodship is classified as so-called 'backwardness' deepening region (Paździor 2013, 9).

Human resources of the city of Lublin comprise almost 230,000 inhabitants in working age (for 350,000 inhabitants total). It is important education center, with over 90,000 students in public- and non-public universities and colleges. Among these, over 30,000 are students of social, juridical and humanistic faculties, over 20,000 – medical and artistic ones, over 16,000 – economic ones and almost 15,000 – technical, including IT-related ones. In the population of students in Lublin 1400 persons are foreigners (Urząd Miasta Lublina 2012, 4–6).

In the area of Lublin active are over 41,600 economic entities, over 700 of which are public entities, over 4,100 are trading companies, and almost 200 are cooperatives. Most units (over 8,800) are registered in the field of trade and services (= repair) and in building industry (over 3,000). Transport, storing and industrial sectors include 2,200–2,800 units. Over 1,600 units operate in finance and insurance business. Transport, storing and industrial sectors include 2,200–2,800 units. Over 1,600 units operate in finance and insurance business (Urząd Miasta Lublina 2012, 15). In and around Lublin located are of 21 so-called Business Environment Institutions.[1] These are: academic business incubators, loan and guarantee funds, innovation and technology transfer centers, business angels and the like. Their goal is to foster and support local entrepreneurship by providing advisory services, promoting pro-active approach and trainings.

Particularly significant for development of innovativeness and competitiveness of Lublin should be subzone of Special Economic Zone Europark Mielec, grounded several years ago, where 15 economic entities are currently active. They focus on such fields as: building industry, biotechnology, logistics, production of machines, car parts, medical equipment etc. Companies located in the zone have so far completed projects for over 500 million zlotys and hire almost 1,200 employees.[2] Unfortunately, as conducted analyses show, fewer and fewer companies invest in innovativeness, for the Lublin Voivodship the percentage is 15% – almost three times lower than in recent years.

The city boasts 11 clusters[3] specialized in e.g. food industry, high-

[1] See http://www.pi.gov.pl/parp/data/pdf_071112/index.html
[2] See http://www.lublin.eu/Specjalna_Strefa_Ekonomiczna-1-298-3-347.html
[3] See http://www.lublin.eu/Lista_klastrow-1-1837.html

tech, IT, eco-energy. Good example is Lublin IT Upland project, managed jointly by the Municipality of Lublin and Eastern Cluster ICT. The projects aims to create right atmosphere for development of IT sector in Lublin and to promote intellectual capital of Lublin.[4] Another kind of units, many of which are located in Lublin, are Innovation and Business Centers (Pol. OIP). Research conducted between 2010 and 2013 have shown that universities in Lublin, both public and non-public, do offer study subjects and courses that are correlated with the needs of innovative companies. This applies especially to public educational institutions (Ziętek 2013, 23–33). However, as it stands in one of assessment on growth and stagnation in the Lublin region, 'it is too weak relations between scientific and business communities which are said to be main obstacle for development of innovativeness of businesspeople in Lublin [...] Research results indicate that offer of R&D sector in Lublin is not adapted to current needs of companies [...] So we have proper infrastructure, technological parks, development centers at our disposal but we cannot use them effectively for the good of local economy and population of our region' (Betlej, Błaszczak, and Sępoch 2013, 17).

According to strategic documents of Lublin, the most perspective fields for its development are IT, biotechnology, automotive industry, machine building, power and food industry. As crucial considered are also high-tech industry, shared services centers (SSC) and medicine and health care-related services.

Talent, Technology, Tolerance (3Ts model) as Stimulus for Development of Lublin

In R. Florida's opinion, 'creative economy' is transforming not only holistic economic model, it re-defines present understanding of creativity of cities and regions. Contemporary knowledge, technology and creativity are replacing natural resources, plants and concentrated labour force. 'in contemporary economy, regions take advantage from speed of gathering talents, resources and capacities required for transformation of innovation into new business ideas and market products' (Białek and Oleksiak 2009, 295) In this manner they participate in system of capital and units gathering cooperating or competing actors 'in compliance with regulations in

[4] See http://www.lwit.lublin.eu/?id=lwit

force in a given space and in accordance with approved assumptions and goals considered important' (Majer 2010, 53). Nowadays, particularly significant for creation of capital and fields are network-based structures, the nodes of which are dynamic, diversified and inconstant. Such structures composed of nodes and relations linking them 'provide the maximal number of elastic, horizontal interconnections between respective nodes' (Jałowiecki and Szczepański 2006, 25). Cities as nodes of a network must be goal-oriented, global and adaptive. City characterized by these features is close to become 21st century-specific subject, a technopolis (cluster of modern technologies centers, scientific parks, universities, financial institutions and companies). In functional approach, technological pole is grouping of research institutions and companies that contribute to economic growth and 'cover entity of process: from laboratory studies through production to commercialization' (p. 235). R. Florida's triad model: Tolerance, Talent, Technology is present-day indicator of creative and innovative centers that determine development trends.

When applying this model to performance and development of Lublin, special attention must be paid to both actions of municipality as a whole and respective initiatives. On the one hand Lublin is considered large academic center with qualified and specialized staff, on the other hand there are numerous examples for achievements of scientists from Lublin: polymer parts, artificial fuel, plasma sterilization or artificial bone. Despite this, universities of Lublin are ranked low in rankings of innovativeness, where e.g. number or patents, licenses, copyright or innovative background are measured. The newspaper *Rzeczpospolita* ranked universities of Lublin in terms of innovativeness as follows: Lublin University of Technology – 15 position, Maria Curie Skłodowska University (UMCS) – 19, The John Paul II Catholic University of Lublin – 42. When it comes to research potential (accreditations, entitlement to grant postdoctoral degrees, staff), the order is following: Catholic University of Lublin 22 position, UMCS – 31 and University of Life Sciences 40. In the category internalization (number of foreign students and lecturers, courses in foreign languages) best ranked is Medical University (11 position), followed by Catholic University of Lublin (33) and Lublin University of Technology (44).

Analyses of number of patent request (3,200 in Poland total) and patents granted show that the Lublin Voivodship is ranked 8 (of 16)

with the number of 55 patents, most of which were granted to Lublin University of technology (30). In the framework of R&D cooperation were 692 contracts concluded, 501 research projects completed, 312 certificates granted, 34 technological audits performed and specialist equipment was made available 24 times in the Lublin region.

An example for initiatives that would link talent and tolerance may be 'The Creatives 2013' exhibition on creative class in Lublin (businesspeople and artists acting in the field of art, craftsmanship and technology. Their introduction to wide audience promoted the belief that people engaged in creative industry, their knowledge and ideas will be essential link in development of competitiveness and innovativeness.

Summary and Conclusions

R. Florida (2010, 72) points out very accurately that 'creativity is not a sudden explosion of innovation in high-tech industry. We are entering new era of omnipresent creativity that spreads over all areas of economy and society. In fact, we are in the very center of creative transformation process, at the dawn of creative economy.' He formulates, thus, several rules, a sui generis Decalogue, e.g. to respect, foster and reward creativity, to invest in creative ecosystems, to accept diversity and take care of creative individuals. In addition, he suggests to respect people being ready to take risk in their actions, to invest in quality of area, to remove obstacles to development of creativity etc. Thanks to these, cities will be able to participate in the 'dawn' of innovative society, at the doorstep of which we are standing.

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Manpower Resources for the Development of Outsourcing of Accounting Services in the Lublin Region

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Introduction

One of Lublin's economic development pillars that is highly emphasized in the region's strategic documentation is the sector of special services based upon knowledge and modern technologies that include accounting, and other services that support business. Despite the fact that Lublin is not referred to as a top location for centres offering such services in Poland, its position is growing stronger.

The Lublin region has a lot of advantages that give it a chance for a steady development in respect of the business support service sector that include business friendly climate, the possibility to carry on activity at competitive costs throughout the region but, above all, highly qualified staff. As an important academic centre, Lublin provides qualified staff for a range of sectors of economy thus attracting investors who are interested in recruiting employees with relatively low payment expectations in comparison with other regions in Poland to work in the service centres. The aim of this article is to analyze the staff potential for modern business services in Lublin and areas around Lublin with particular attention to accounting and financial services. The Lublin region intellectual potential with respect to accounting and related services is constituted both by high school graduates and specialists with practical experience confirmed by their qualifications, which is the analysis contained herein.

Sector of Outsourcing Services across the Lublin Region and Its Importance to the Region Development

The interest in outsourcing has been continuing for many years. Some of the factors that are cited as reasons for the above growth in-

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 183–199. Bangkok, Celje, and Lublin: ToKnowPress, 2015.

clude globalization, tendency to flatten the management structures, increase in the complexity and professionalizing of management, advancing privatization and diversity of economic systems, which in Poland is additionally strengthened by the influence of management systems that promote activity efficiency, increasing pressure of competition on cost reduction as well as frequent revisions of legislation which necessitates being up to date with the revisions (Matejun 2006, 328–329).

Outsourcing consists in contracting out certain processes which do not directly create a value but which are a source of costs to be carried out outside a company. The contracting out of such processes to third parties contributes to the rationalizing of costs and aims at concentrating on the basic activity, that is the provision of services (Filipiak and Panasiuk 2008).

In response to the growing demand for special services based on modern knowledge, there has been a steady development of service centres has been observed including SSC (shared services centers) – operating in favour of a big multi-branch corporation or a capital group and the BPO (business process outsourcing) centres – independent units providing services to companies as external customers (DIS 2008, 4). The service centres are constituted by organizational units (independent companies or part of a bigger capital group) whose area of specialization allows them to provide high-quality services to internal or external customers at reasonable prices (p. 3).

The Poland's position on the BPO/SSC service market has been growing stronger since mid 1990s. According to the latest 'Onshore, Nearshore, Offshore: Unsure?' report (Polish Information and Foreign Investment Agency 2013), Poland is first in Central Eastern Europe, second in Europe and sixth in the world with regard to the number of workplaces in service centres (Matejun 2006, 4). Centres with foreign capital are predominant. According to ABSL – a leading sectoral organization representing a sector of modern business services in Poland, there are more than 400 foreign capital service centres in Poland that are owned by nearly 300 investors, employing 110.000 people (Association of Business Service Leaders in Poland 2013, 11).

The major business service locations in Poland include seven centres: Cracow, Warsaw, Wrocław, Tricity, Łódź, The Katowice Metropolitan Area, and Poznań, holding over 80% of all service centres with

foreign capital (88% of the total employment in the sector) (Association of Business Service Leaders in Poland 2013, 10–11). What is worth emphasizing is the fact that the position of small cities such as Lublin, Toruń, Rzeszów, Szczecin and Bydgoszcz has been growing stronger on the map of the locations of the BPO/SSC service centres in Poland.

Lublin along with Kielce, Toruń and Olsztyn were recognized, according to the report issued by Colliers International counselling company, as the rising stars of the BPO/SSC sector in Poland' in 2013[1] that is the locations with the highest potential with respect to the future development of the BPO/SSC sector on the Polish market. There are currently more than ten big service centres operating in the Lublin region (including the city of Lublin). The biggest of these include Genpact Poland Ltd., eLeader Ltd., Orange Customer Service, PKO Bank Polski Retail Customer Service Centre, Orange Poland's Accounting Operations Centre (COK), Proama, Asseco Business Solutions SA, Comp uGroup Medical Polska Ltd., Britenet Ltd. Lublin Branch Office.

The BPO/SSC centre sector constitutes one of the high-priority areas in Lublin economic development. Four pillars were identified as part of Lublin Strategy for 2020 which form the basis of the Lublin development i.e. openness, friendliness, initiative and academic qualities. The sector of special services based on knowledge and state-of-the-art technologies (such as outsourcing of services for business) was indicated as part of the third of the above and recognized as one of the pillars of Lublin economic development (Urząd Miasta Lublin 2013).

The importance of the BPO/SSC sector to the Lublin development is also touched upon in other studies and documents drawn up on the basis of such studies. The Deloitte report which identifies the basic sectors supporting the development of Lublin points to the BPO/SSC sector as one of the three (along with food industry, IT and telecommunications) of the basic sectors (Deloitte 2013).

The Lublin universities with their research facilities are considered to be the city's main advantage that creates an opportunity for the development of the outsourcing services. The key factors that may contribute to investors choosing the location for their businesses are

[1] See http://www.colliers.com/pl-pl/poland/insights/news/q1-2013/23-01-13-bpo

the availability of qualified staff, business-friendly climate, competitive costs and improving communication system within the region.

The operation of three special economic zones within the Lublin region (the Tarnobrzeg zone, the Starachowice zone and the Mielec zone) also plays a very important part, offering tax reliefs for investors who will locate their businesses there. The technical facilities including telecommunication lines are also improving. The Lublin Airport has been operating for over a year now. There has also been a dynamic development of office spaces, which constitutes an important factor that is often taken into account when choosing locations for service centres. The report by Colliers International states that the rental fees in small cities considered as locations with the highest potential for the development of the BPO/SSC sector in Poland (including Lublin) can be as much as 50% higher compared to the main markets of office areas. A number of such office spaces are under construction or are still being planned.

All of the above-mentioned are going to be key factors in the subsequent development of the region's outsourcing service sector.

The Role of the Lublin Schools and Universities in the education of the Employees of the financial and Accounting Service Centres

The centres located in Poland provide a wide range of services including finances and accounting, audit, IT, tax counselling, consulting, research and development and customer service. The most recent ABSL study shows that most of over 100 service centres that underwent the research (nearly 60%) were carrying on their finance and accounting services most often by combining them with other business processes (the prevailing part was constituted by the units which provide services as part of at least two business processes) (Association of Business Service Leaders in Poland 2013, 19). The above is confirmed by the study conducted by the auditing and counselling company Grant Thornton (2012, 9).

The finance and accounting services including keeping the books, settlement of invoices, completing tax declarations, drawing up financial reports, closing the settlement periods, calculating the payments, and to an increasingly great extent, providing services to financial institutions, are regarded as the Polish specialty (Grant Thornton 2011, 4).

The favourable conditions for conducting activity by the outsourcing service centres in the Lublin region coupled with the attempts of the local authorities to make the BPO/SSC sector one of the basic sectors driving the region's economy cause that it is worth thinking about the region's potential in respect of the financial and accounting services. One of the essential constituents of the said potential is human resources.

The Lublin region intellectual potential within the area of accounting services as well as services deriving from accounting is constituted both by graduates from the secondary and tertiary education institutions as well as specialists with practical expertise and confirmed qualifications. The current flood of graduates from economic and administration majors and the qualified unemployed individuals with experience in the fields are the main groups of potential employees of the financial and accounting service centres. Confining to only one of the above social groups in the analysis does not reflect the whole intellectual potential within the area of interest shown by the BPO/SSC sector investors. In order to complement the analysis, we need to look into the expectations of the employers of the centres towards the employees who are the object of various studies.

One of such analysis was carried out at the end of May and the beginning of June by Manpower Group, a company dealing with conducting labour market analyses. Various individuals were invited to take part in the analyses including those responsible for personnel policy and the management of companies operating within the BPO/SSC sector. A total of 28 businesses took part in the analyses, accounting for 10% of all the companies from the BPO/SSC sector that operate in Poland. The research shows that a statistical employee of the BPO/SSC centres is an educated thirty-year-old with a very good command of at least one foreign language, often having qualifications and professional experience which are valuable for the employer. The basic requirement set for the employees of centres of modern business services is a good command of foreign languages. The command of English is required irrespective of the position to be held. The requirements also include the command of another foreign language, especially one of the niche languages like Czech, Hungarian, Dutch, Bulgarian, Ukrainian and Belarusian (ManpowerGroup 2012, 24).

The above shows that people with a good command of foreign

TABLE 1 Students and Graduates of the Universities in the Lublin Province, academic year 2012/2013

Universities	18
Students*	90140
BA/BSC (vocational)	53681
MA/MSC	13143
Supplementary MA/MSC Studies	21586
After the last year without exams	1730
Graduates**	27770
BA/BSC (vocational)	15118
MA/MSC	2778
Supplementary MA/MSC Studies	9874

NOTES *As of 30 November. **As of the previous academic year. Adapted from Urząd Statystyczny w Lublinie (2013b, 12).

languages (including those who can speak English fluently) are the most in-demand group of candidates for work in the service centres. This means that the employers are basically interested not only in the individuals with subject-matter competence, but above all those who can speak foreign languages fluently, e.g. graduates from such majors as linguistics and humanities.

Institutions of higher education play a very important part in social and economic life of the city and the region. The Lublin region currently has 18 institutions of higher education and 10 extramural organizational units. Table 1 shows the number of students and graduates from 18 Lublin universities in the academic year 2012/2013.

In the academic year 2012/2013 there were more than 90.1 thousand students at universities across the Lublin region, which was 4.9% less than in the previous year. The main academic centre in the Lublin province is the city of Lublin with 9 universities that offered education to 88% of the total number of students in the academic year 2012/2013. Table 2 shows the number of students and graduates by university site.

Due to the BPO/SSC service centre employee profile that emerges from the above mentioned research it seems that the intellectual potential that is the primary point of interest of employers in finance and accounting centres is constituted by students and graduates of the following majors: economy, administration, finances and accounting, management, IT, mathematics and studies of foreign languages.

TABLE 2 Students and Graduates by University Site in the Academic Year 2012/2013

University site	Students		Graduates*	
	Number	%	Number	%
Lublin	79700	88,4%	24506	88,2%
Zamość	3289	3,6%	1018	3,7%
Chełm	2929	3,2%	931	3,4%
Puławy	239	0,3%	158	0,6%
Ryki	288	0,3%	195	0,7%
Łuków	191	0,2%	97	0,3%
Biała Podlaska	3504	3,9%	865	3,1%
Total	90140	100,0%	27770	100,0%

NOTES *As of the previous year. Adapted from Urząd Statystyczny w Lublinie (2013b, 13).

TABLE 3 Students and Graduates from Selected Majors in the Academic Year 2012/2013 (the Most Demanded by Employers in Service Centres)

Major	Students	Graduates
Administration	5345	2974
IT	2266	499
Economy	2823	1072
Finance and Accounting	2020	764
Mathematics	1132	232
Management	3033	916
English	1397	784
German	391	139
French	421	103
Russian	323	131
Ukrainian	72	30
Belarusian	35	19
Bulgarian	40	20
Dutch	107	27
Iberian languages	199	23
Chinese	68	0
Applied linguistics	323	84

NOTES Adapted from Urząd Statystyczny w Lublinie (2013a).

The number of students and graduates from the above majors are contained in table 3.

TABLE 4 Students and Graduates of Secondary and Post-Secondary Schools in the Lublin Region in the School Year 2012/2013 at Selected Majors

Type of school	Major	Students	Graduates*
Secondary schools	Business and administration	2592	883
	IT	4750	999
Post-secondary schools	Business and administration	6871	1279
	IT	1109	193

NOTES *As of the school year 2011/2012. Adapted from Urząd Statystyczny w Lublinie (2013a, 8–9).

The specialists who have knowledge required for working in the BPO/SSC service centres are also educated at post-diploma studies. In the academic year 2012/2013 the post-diploma studies across the Lublin region were implemented in 17 higher schools and one research and development institute (IUNG) (Urząd Statystyczny w Lublinie 2013b, 16). Due to the freedom given to universities/institutions to create and name post-diploma majors, keeping statistics in this respect is impeded. Consequently, there is insufficient data on that subject in the available sources. However, it should be mentioned that this form of education is particularly valuable to the employees of service centres as it allows students to gain basic knowledge in the profile of a company's activity relatively quickly (the duration of post-diploma studies is normally shorter than the MA course).

The picture of the intellectual potential of students and graduates from the Lublin institutions of higher education for special service centres is complemented by the students and graduates of secondary school graduates who study economy and other majors related thereto. At the beginning of the school year 2012/2013 there were 83.5 people studying at 489 secondary schools across the Lublin region. 131 of the secondary schools were vocational secondary schools, 171 – general secondary schools, 22 – specialized secondary schools, and 165 were technical secondary schools. The majority of secondary school students in the school year 2012/2013 were general secondary school students (49.4%) and technical secondary schools (35.4%). There were also 169 post-secondary schools in the school year 2012/2013 (Urząd Statystyczny w Lublinie 2013a, 6–7).

Table 4 lists the information on the number of students and graduates of the secondary and post-secondary schools in the Lublin re-

gion studying the majors that were considered as preferred by the employers of service centers. The data is incomplete, but it is the most recent data available regarding the Lublin region.

The presented data shows that the Lublin region has a considerable intellectual capital with respect to the students and graduates of economy and other majors (including foreign language and literature studies) which are crucial as in respect of the expectations of employers in the BPO/SSC service centres with the financial profile.

Certified Accountants and Other Professional F&A Staff in the Lublin Region

A group that may be an important human resource for companies dealing with the outsourcing of accounting services are people who took part in a variety of non-formal education forms, including those organized by SKWP, ACCA, CIMA, and other institutions that in recent years have often organized training courses in accounting and finances using EU funds (mainly the Human Capital Operational Programme).

Particular attention should be paid to the Lublin branch of the Accountants Association in Poland that has been actively implementing its training activities. Since 2011, SKWP has implemented the accountant job certification. The education path comprises 14 modules divided into four education levels. The four levels of certification put into practice include:

- I – accountant, job code 331301,
- II – individual accountant, job code 241103,
- III – chief accountant, job code 121101,
- IV – certified accountant, new job.

The Regulations for the Qualification and Professional Practice Requirements for the purposes of certification of the accountant job sets out the minimum preliminary requirements for taking up a specified level of training.

The association organizes courses in individual levels of certification. The courses are very popular (in 2011–2012 over 16 thousand people completed the level I–IV courses on the national level, including 741 who completed their courses in the Lublin division of SKWP). On average, 7% of all certificates issued annually by the SKWP are issued by the Lublin division.

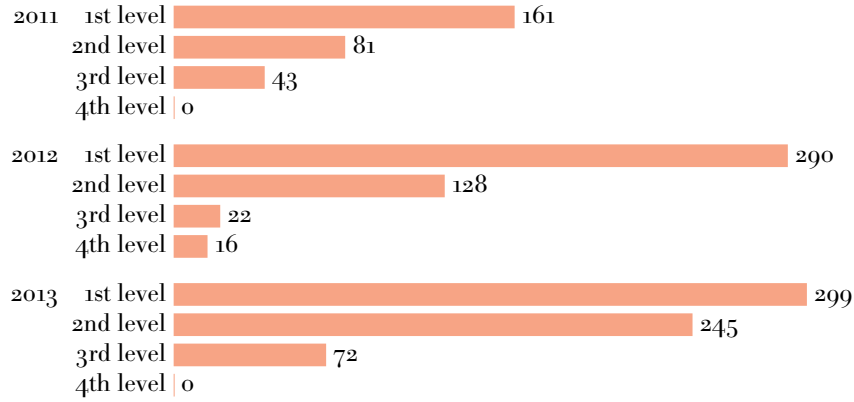

FIGURE 1 Number of SKWP Certification Course Participants in the Lublin Region in 2011–2013

Figure 1 shows the number of course participants on the individual levels of certification organized by the Lublin division of SKWP in 2011–2013.

Over a period of three years, the courses were organized for a total of 1357 individuals. Level I and level II courses were the most popular (750 graduates and 454 graduates, respectively). 137 individuals completed Level III course over a period of three years. Level IV course gathered the fewest participants mainly because of its level of difficulty and an extensive portion of material to be mastered. The association does not conduct a systematic analysis of the percentage of individuals who completed level I or level II courses and who are continuing their education at the next certification levels. It should also be indicated that between 2007 and 2010 the Lublin division issued 1418 certificates, but due to significant changes in the regulations for SKWP certification, the numeral data cannot be summed up. However, the available figures prove that there are a lot of people in the Lublin region who were prepared, to a lesser or greater extent, by SKWP to work as accountants.

The data obtained from the Association shows that course participants are both individuals with economic background, students at economics-related majors, employed who do not have formal economic background but who work as accountants as well as people who have not had any contact with finances and accounting, either during their professional career or on their formal education path, and treat the course as an opportunity to acquire some extra skills

or to requalify. The course assessment questionnaires show that students stress their high subject-matter level and practical advantages of the acquired skills.

The potential employees of outsourcing centres can also be found among the individuals who are entitled to provide accounting services in line with their qualifications certificate or the accountant certificate. The said qualifications are issued by the Minister of Finance, who issued qualifications certificates until August 2002. Currently, the accounting certificates are issued on the application of a natural person, but it should be noted that in accordance with the second tranche of job deregulation planned to be implemented, the certificates will disappear and the accounting books shall be kept by persons without any special skills in this respect. For the moment, the certificate may be obtained either by taking the national examination or by documenting the appropriate educational background and practical experience. Individuals who have three-year practice in accounting and who hold the MA degree in accounting or are graduates of post-diploma studies in accounting (provided that the studies were governed by universities entitled to confer the degree of doctor of economic sciences) shall file an application and shall not be obliged to sit the exam. Others who are interested may, provided that they have two-year practice in accounting and hold at least one secondary diploma, acquire the certificate through passing the exam where a small percentage of such individuals are entitled to provide accounting services.

According to the data published on the Ministry of Finance website,[2] the list of persons entitled to provide accounting services showed 98,186 individuals including 63,400 holders of the accountant certificate and 34,786 holders of the qualifications certificates. The data contained in the said list unfortunately does not tell us how many persons included in the list live/perform their activity on the territory of the Lublin province and how many of them actively provide accounting services. Nevertheless, due to the fact that Lublin is a strong academic centre with a few universities systematically providing post-diploma studies in accounting, and in the last couple of

[2] See http://www.mf.gov.pl/ministerstwo-finansow/dzialalnosc/egzaminy-zawodowe/certyfikat-ksiegowy/informacje-na-temat-uslugowego-prowadzenia-ksiag-rachunkowych/uslugowe-prowadzenie-ksiag-rachunkowych

years UMCS has also been providing the MA studies with accounting as a major, we should expect that there are many accountant certificate holders living in the Lublin region.

The source of satisfying the staff needs in respect of managers and specialist personnel may be expert auditors, persons holding the international ACCA and CIMA certificates, or tax advisors. They are individuals who have broad knowledge of accounting, finances and taxes, show a high level of certified skills and have practice required by the certifying institutions.[3]

Unfortunately, neither the register of expert auditors kept by the National Council of Expert Auditors nor the register of tax advisors kept by the National Chamber of Tax Advisors do not provide us with sufficient data as to the number of people who perform the jobs in individual provinces or districts.

The data obtained from the Association of Chartered Certified Accountants (ACCA) for Pland shows that there are three ACCA holders working in the Lublin region (ACCA has 1251 members across Poland). Last year ACCA started talks with the authorities of the Lublin UMCS Faculty of Economics about the possibilities of opening an exam centre and obtaining accreditation that would allow students to pass their ACCA exams on the basis of the courses completed as part of their studies. The above facilities result in the growing chances to increase the number of ACCA certificate holders in the Lublin region, but it will take at least a few years (the transfer of the entire ACCA training path takes about 4 years).

Preliminary Assessment of the Lublin Labour Market for Accountants/Auditors

Due to a limited volume of the study, the preliminary analysis covered unemployment in the jobs related to accounting and the level of remuneration in the Lublin region.

[3] Information on the formal and subject-matter requirements set towards the persons who consider obtaining the above rights/certificates are generally available because they are specifically governed by the law (the Act of 07.05.2009 on expert auditors and their self-government, entities entitled to examine financial reports and on the public supervision and the Act of 05.07.1996 on tax counselling or statutes/resolutions issued by the certifying institutions available on the ACCA and CIMA websites shall apply accordingly). Therefore, the said information will not be discussed in the present study.

The analysis of unemployment in the 22 selected jobs related to accounting was carried out on the basis of the reports of the Ministry of Labour and Social Policy. The analysis covered the period of 2010–2012.

The jobs with the highest number of excess employees in Poland (the greatest advantage of the influx of the unemployed over the number of job offers) were: accounting specialist, finance specialist, accountant and accounting assistant.[4] The analysis of the data on the condition of unemployment with respect to jobs related to accounting for individual provinces indicates the following share of unemployed accountants in the Lublin region in the total number of unemployed accountants: 6% in 2010 and 5% in 2011 and 2012. Table 5 shows the number of the unemployed as per 22 accountant jobs towards the end of 2012 for the Lublin province and the whole country (the data for the previous years is similar).

The greatest number of the unemployed in the Lublin region from amongst the people prepared to perform jobs related to accounting were found in 'Technicians and Other Secondary Personnel' (job code starting with 3) and 'Office Workers' (job code starting with 4) – 548 people, that is over 67% of the registered unemployed accountants. People from the above two job groups may become potential employees of the BPO/SSC centres.

The unemployment in the Lublin region is typical as regards the level of educational background of people who remain unemployed. People with a higher education degree account for over 15% of the unemployed within the region whereas the percentage of individuals who hold higher education degree in respect of the whole country is a mere 12%. The age structure is also specific in that over 57% of the unemployed is constituted by individuals aged 34 years and under with around 50% in respect of the whole country (Główny Urząd Statystyczny 2012, 320).

The analysis of unemployment and jobs with the excess of staff based only on data derived from labour offices does not reflect the actual situation as a number of processes connected with looking for job and a potential employer take place with the exclusion of the labour office and through special internet portals (www.pracuj.pl, www.nuzle.pl, and www.praca.pl) or employment agencies. The anal-

[4] See http://www.mpips.gov/analizy-i-raporty/raporty-sprawozdania/rynek-pracy

TABLE 5 Number of Unemployed in 22 Jobs Related to Accounting towards the End of 2012 in the Lublin Province and in Poland

No.	Job code	Name of job	(1)	(2)	(3)
1	112006	Finance Director	2	66	3%
2	121101	Chief Accountant	8	277	3%
3	121102	Accounting Office Manager	0	3	0%
4	121103	Finance Department Manager	0	63	0%
5	134904	Auditing Company Manager	0	0	0%
6	241101	Expert Auditor	0	7	0%
7	241102	Controlling Specialist	3	50	6%
8	241103	Accounting Specialist	103	1919	5%
9	241104	Investment Accounting Specialist	0	17	0%
10	241105	Tax Accounting Specialist	4	48	8%
11	241106	Managerial Accounting Specialist	6	95	6%
12	241204	Tax Advisor	3	71	4%
13	241306	Finance Specialist	144	2535	6%
14	242204	Auditor	5	60	8%
15	331301	Accountant	293	7241	4%
16	335201	Tax Settlement Inspector	0	15	0%
17	335202	Tax Control Auditor	0	9	0%
18	335203	Tax Enforcement Clerk	1	21	5%
19	335290	Other tax clerks	0	24	0%
20	431101	Accounting Assistant	150	2504	6%
21	431102	Billing Clerk	54	930	6%
22	431103	Accounting Technician	40	439	9%
		Total	816	16394	5%

NOTES Column headings are as follows: (1) Lublin province, (2) Poland, (3) share of unemployed from the Lublin province. Based on data from Association of Business Service Leaders in Poland (2013) and Ministry of Labour and Social Policy (http://www.mpips.gov).

ysis of the job adverts placed on selected portals shows that the most job offers for an accountant/auditor came from Cracow, Warsaw, Wrocław (the analysis was carried out twice: in September 2013 and in January 2014). This predominantly results from the fact that these locations have the most outsourcing centres. The above also testifies to the theory about the difficulties with ensuring the proper supply of employment in the BPO/SSC sites thus far.

One of Lublin's advantages in respect of the potential investors is

the level of average remuneration, which has gone down by about 10%. In 2012, the average gross remuneration in Poland was 3744.38 PLN,[5] whereas the figure for the Lublin region was 3382.66 PLN (Główny Urząd Statystyczny 2012), At the same time, the differences related to payments received by specialists are significantly greater.

Conclusions

The analysis indicates that there is a considerable intellectual potential in the Lublin region as regards the possibilities to recruit employees of the service centres (including the finance and accounting profile). As an important academic centre, Lublin ensures a systematic influx of graduates of economics, humanities (languages) and science into the labour market. Courses of study also attach great importance to foreign languages. On the basis of the courses of studies with economic profile as well as profiles related thereto across the Lublin universities, it was found that the majority of them provide foreign language education both on the BA/BSC studies and MA/MSC studies. So, we may come to a conclusion that university authorities attach great importance to a good command of foreign languages among students.

The review of the available reports and press releases shows a clear picture of expectations of service centre employers towards job candidates. However, 'service centres also place a great emphasis on developing professional qualifications of their employees through various training courses related to the nature of provided services and the development of soft skills by financing post-diploma studies including language courses.'[6] The above means that there are a number of areas where the Lublin universities and investors as well as managers of the BPO/SSC companies can work together. One of the possible directions of cooperation is adapting the education offer to the needs and expectations of the BPO/SSC sector companies (creating post-diploma majors and MBA to meet educational expectations).

[5] As per the representative study conducted by the Central Office of Statistics on a group of entities that have more than 9 employees, the average monthly gross remuneration in the national economy for October 2012 amounted to 3895.72 PLN.

[6] A speech of Krystian Bestra, Managing Director of Infosys BPO Europe and Deputy President of the ABSL Managing Board (see http://www.egospodarka.pl/57621,Profil-pracownika-sektora-SSC-BPO,2,39,1.html).

The situation on the accounting labour market also seems to be favourable for prospective investors who want to open their BPO/SSC centres in the Lublin region. This basically involves a considerably lower average remuneration compared to the country's average, a relatively good educational background of unemployed and a large proportion of unemployed young people.

Furthermore, the recent study of the graduates' professional careers shows that, after all, Lublin is a good place to stay after studies: 70% of the questioned UMCS graduates declared that they live in the Lublin province (the study was carried out in 2011 and covered 40% of graduates. The study for 2012 will be available towards the end of January 2013) – data obtained from the UMCS spokesperson Magdalena Kozak-Siemińska.

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The Talented Youth on the Regional Labour Market

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Introduction

Regional labour market constitutes a meeting point of all issues pertaining to employment, unemployment and social policies. All of these form problematic areas of modern economies. Demand and supply for employment, unemployment rate and the structure of the unemployed provide vital information concerning the potential and difficulties of particular regions. When employment rate is concerned, the situation of Lublin region was significantly influenced by the political transformation. As a result of restructurisation and privatisation of the local industry, the previously stable labour market was transformed into the market of considerable unemployment affecting residents of cities and villages as well.

The City of Lublin vs. Lublin Voivodeship: Comparison of the Labour Market

Lublin Voivodeship's area amounts to 25114 km2, which constitutes 8% of the total area of the country. The voivodeship ranks third among all voivodeships in Poland as regards size.[1] Despite its considerable size, for years it has belonged to the least urbanised and populated regions in Poland. Since the beginning of 1990s, the population of the region has been on a steady decline. There were less than 2,152 thousand inhabitants in the voivodeship in 2010. Between 2005 and 2010 the population of the region decreased by 27 thousand (Urząd Marszałkowski Województwa Lubelskiego w Lublinie 2011, 17–9). The main factors behind the situation are the negative rate of natural increase and internal and external migration, for employment seeking purpose in particular. More than 63% of the region's area is composed of agricultural land. As a consequence, more than half of the region's population reside in rural areas.

[1] See http://www.stat.gov.pl/lublin/51_PLK_HTML.htm

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 201–209.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

The voivodeship is among those poorly industrialised. Generally, attempts at industrial investments in the region result in failures. The importance of agriculture in the region is a consequence of its determinant factors. Food industry and mining constitute significant branches of the region's economy. Lublin region is also renowned for its mineral waters (Nałęczów health resort). The region's economy is also represented by chemical, wood and furniture, metalworking and machine building industries (including aviation industry in Świdnik).[2]

One of the fundamental indexes defining the regional labour market is the unemployment rate, which in Lublin Voivodeship, is higher than the country's average (14,2% in Lublin Voivodeship and 13,4% in Poland in 2012).[3] The regional labour market is characterised by a significantly larger demand for work in relation to the supply, despite officially lower unemployment rate, which gives evidence to a high rate of hidden unemployment, especially in rural areas. The recent economic crisis has been generating unemployment. In Lublin Voivodeship, the basic reason behind the influx of new unemployed is job loss.

The fact that the dominant group of the unemployed is composed of the youth only emphasises the dire situation on the regional labour market. In 2011, people between 25 and 34 years of age formed 33,6% of all the unemployed. In addition, more than half of the registered unemployed (55,7) did not reach 34 years of age. Moreover, 3/4 of the number are in the so-called mobile age – the period of the highest professional activity (up to 44 years of age) (Wójcik 2013, 46–7).

The transition from education to employment was an exceptionally troublesome stage of the lives of the youth. This may be due to the fact that, when seeking their first employment, the youth, frequently, do not possess any professional experience. Finding first employment proves difficult in the period of high unemployment rate. Education and graduation do not guarantee proper training for the undertaken employment. In addition, generally, schools do not equip the youth with job-seeking skills. Difficulties in finding the first employment in Poland ensue from the fact of insufficient bond between education at vocational schools and business practice. Such education is

[2] See http://www.stat.gov.pl
[3] See http://www.stat.gov.pl

often limited to theoretical studies of the subject. Meanwhile, as indicated by the more developed European countries, the dual education system, where education at school is parallel with the education at a workplace (company or an organisation), seems the most effective when the improvement of the graduates' condition of the labour market is concerned (Kabaj 2005, 68–9).

Employment structure in Lublin Voivodeship is characterised by a relatively high number of people employed in agricultural sector and the fact that it does not generate demand for highly qualified labour. The difficult situation as regards the demand for labour is made even more severe by the fact that novel and innovative branches of industry presenting potential for employment are predominantly situated in urban areas. As a consequence, the voivodeship is characterised by lower potential as regards the supply of labour and lower generation of workplaces (Wadowski, Markowski, and Konefał 2013, 10). The region features the so-called employer labour market which denotes the fact that in case of an economic slowdown, an influx of job-seekers will result in the growth of unemployment rate (Czesla 2011, 5).

Lublin: The Academic City

In the environment of knowledge-based economy, the human factor largely decides upon competitiveness and growth opportunities in regions. As a consequence, the quality of human (R&D, innovation and organisational potential) and social capital are enumerated among significant determinants of regions' competitiveness (Dziemianowicz 2009, 17). Two groups of factors determining the situation of human capital in the region can be determined:

- Demographic indexes (natural increase, migration rate, population in productive age to the total population ratio).
- 'Educational' indexes.

Despite considerable demographic problems (which undeniably exert significant influence upon the situation of human capital in Lublin Voivodeship) and low level of entrepreneurship and innovation in companies, the improving social potential of the region regarding the so-called 'educational' indexes, as compared to the whole country, seem to give positive prognoses. In particular, the indexes encompass the schooling net rate in relation to post-secondary school

students (in 2010/2011 academic year, the rate amounted to 93,20%), the number of students, the number of university graduates or population with university diplomas in relation to the whole population of the region ratio (Kabaj 2005, 17).

The number of people with university diplomas and the percentage of people pursuing life-long learning are particularly high. The academic intellectual potential is on the rise. Between 2005 and 2010, the structure of population as regards education in Lublin Voivodeship became similar to that of the country. The presence of public and private higher education institutions operating in Lublin Voivodeship (19 in total and 15 branches and consultation points of institutions from outside the region) has largely contributed to the improvement in the population's education. 6,5 thousand faculty members are currently employed in the higher education institutions (the number amounts to 6% of the total number of faculty members in Poland). When the number of students is taken into account, the region ranks 7th in Poland.

The case is similar when the number of graduates is concerned. In 2010, 6% of the total number of graduates in Poland, graduated from the local universities. Lublin, the capital of the region, can boast approximately 80 thousand students making it the largest academic centre in Eastern Poland and one of the largest in the country. Besides education, universities in the region carry out research and implementation/development activities (R&D). Low innovation of local businesses could be overcome with the proper utilisation of the universities' potential. In order to remedy the situation, technology transfer, from the academia to the economy and social life is required.

According to the *Study of Human Capital in Poland* by the Polish Agency for Enterprise Development (2012), there were 1,5 million university graduates on the Polish labour market in 2011. Last year, the unemployment rate among university graduates equalled 21,2%. Among people graduating in last five years, the rate amounted to 12,5%. Mismatch regarding types of studies and employers' expectations is among the most important reasons behind the plight of the graduates on the labour market. In 2011, 19% of Poles aged 18–64 held a university diploma, whereas 9% (i.e. 413 thousand) of them graduated from post-graduate studies (*Study of Human Capital in Poland* 2012, 11–12).

Despite growing difficulties with finding employment by university graduates, higher education is still considered an important social value and widely embraced. However, upon graduation, young people must frequently revise their expectations regarding opportunities given by higher education. When lacking satisfactory employment opportunities, the graduates undertake employment which does not require such level of education (Werner 2011, 106–111).

Lublin Voivodeship is not a dynamic economic centre. However, in this part of the country, it is a valued academic centre. The region's authorities strive to promote Lublin as a city of knowledge. The authorities aim at attracting students originating not only from the neighbouring regions. In order to meet the objective, more and more frequently, tuition-fee courses are offered to foreigners. 2020 Lublin the City of Knowledge Strategy was designed for that purpose. The strategy is based on Lublin's assets such as academic potential, green character of the city (natural feature and the way of running businesses and citizen's lifestyles), the platform of meeting and cooperation between the East and West.

Progressing demographic changes lead to the decline in the overall number of students. The phenomenon affects universities in Lublin as well. There are full-time courses at public universities where recruitment does not exhaust the limit of applicants. In addition, a disturbing trend of influence of larger and more dynamically developing urban settlements (e.g. Warsaw's, Poznań and Cracow) which absorb the ambitious youth as early as at the time of them selecting the university and the type of undergraduate or graduate studies.

The decision of undertaking studies in the region does not guarantee young people a position in local businesses. Very frequently, in case of lack of satisfactory employment in the region, qualified and well-educated graduates migrate to large urban agglomerations or more industrially competitive parts of the country or abroad (Rydzewski 2011, 7–8).

Lublin region is in the possession of a considerable potential for development in the form of universities. Unfortunately, these universities frequently fail to attract the best of the region's secondary school graduates. According to studies carried out among the region's secondary school graduates in the framework of Lublin Voivodeship Marshal's Office project titled '2010–2013 Lublin Intellectual Capital' (LIC), 99,5% of respondents declared the desire to pursue higher

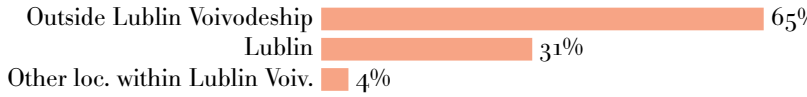

FIGURE 1 Destination of Studies as Declared by Lublin Region's Secondary School Graduates (adapted from Rydzewski 2011, 8)

TABLE 1 Destination of Respondents' Planned Employment after Graduation

Destination	Declarations
Place of origin	17%
Lublin	62%
Warsaw	26%
Other destinations in Poland	20%
EU countries (other than Poland)	14%

NOTES The sum of declarations does not amount to 100% – two declarations per respondent were allowed; $n = 636$.

education. However, despite the proximity of numerous universities in the region, respondents declared their interest in studying outside the voivodeship (more than 2/3 of respondents) (figure 1), most frequently in Warsaw (approx. 2/3 of declarations), Kraków (approx. 1/5) or in another large city in Poland.

When asked about the motivation behind the decision regarding studying outside the region, respondents indicated low esteem of Lublin universities (28% of declarations) and higher appeal of other regions (26%). The next reason behind the decision was the lack of professional opportunities in the region (23%) (Rydzewski 2011, 8).

Results of studies carried out among students of Lublin universities were different. Almost half of them (47,5%) declared they connected their future with the region while 40% intended to leave the region after graduation. The main direction of migration for respondents of the LIC project was Warsaw (every second respondent's choice). Remaining migration destinations were Wrocław, Kraków and Poznań (Rydzewski 2011, 8).

Similar results were obtained among students of economy between 2009 and 2011. The majority of respondents (62%) connected their professional future with Lublin. Other destinations for job-seeking purposes were rare (table 1). Every fifth respondent declared interest in finding employment in a different Polish city. As previously, Warsaw was indicated the most frequently (25% of declarations), Kraków

and Poznań were even rarer choices. These cities have been a job-seeking destination for graduates from Lublin region for years. They were expecting higher salaries and counting on opportunities connected with a larger number of businesses operating there.

Every seventh student of economy declared that after graduation he/she would seek employment in other EU countries. The majority of respondents indicated Great Britain as their destination (44% of the respondents). Other countries such as Germany, Spain, the Netherlands and Sweden were indicated more seldom.

How to Retain Talents in Lublin?

The presented results of studies carried out among the youth – students and secondary school graduates from Lublin Voivodeship, indicate that both the region and its capital – the city of Lublin, are not a satisfactory destination for the professional career and life in general.

As a consequence, retaining young, and talented people in particular, in the region is difficult. Frequently, secondary school period is the last moment they spend in their home regions due to the fact that they rarely return there after graduating from a university in a larger city.

A particularly disturbing fact is that young people are convinced – during their university studies or even prior to undertaking these, that there are no satisfactory employment opportunities in the particular profession in the region. In spite of the above, a large group of respondents continue to associate their future with Lublin and the region, even though they doubt in finding interesting employment.

Meanwhile, the talented youth, frequently well-educated ones, constitute too valuable capital. The importance of retention of such capital cannot be understated. Best efforts must be made in order to convince such people to associate their future with the region and provide them with growth opportunities at the same time.

Study results indicate that the fundamental factor determining young people to leave the region is the fear of unemployment and lack of professional growth opportunities. However, the financial factor is not the only one attracting the youth. Attractive types of studies, prestige of the university, cultural activities, opportunities for gaining experience or personal growth are also mentioned among factors motivating people to leave Lublin region. People representing gen-

erations Y and Z also pay particular attention to values and positive bond with the place they reside.

Lublin region may become a place young people will be willing to associate and identify with. However, this is largely dependent on the region's authorities, who ought to care for positive relations with citizens. Activities of the type ought to encompass promotion of the region's attractiveness and history, and as a consequence foster the development of the bond with the region and emphasise its prestige. Examples of these activities can be seen in organisation of various events, meetings of culture, art and history available to numerous recipients. Touristic values of Lublin region ought to also be utilised by organisation of open-air events which would enable whole families, adults, children and the youth, to participate. Chances for talent retention will be much higher if future generations of local patriots, proud of their city or region, are brought up.

Undeniably, interesting cultural activities or educational offer are insufficient for the development of the regions reputation. Investments, including those improving transportation infrastructure facilitating communication with other regions and countries (airports, motorways) are crucial. Such investments will attract prospective investors fostering the emergence of new workplaces.

Development of an improved transportation network (fast and cheap transport) would also motivate people to remain in the region while undertaking work in other cities e.g. in Warsaw. The capital city, located relatively close to the region, has been the primary destination for job-seeking graduates from Lublin Voivodeship.

Young people ought to be supported with reliable information regarding employment and growth opportunities, development of particular industry branches, competencies required on the labour market. It is vital that the selection of the type of university studies is not accidental, but based on the realities of the market. Supporting activities as regards the selection of suitable career paths ought to be developed in the framework of career counselling points network. These activities ought to support secondary school students onwards. Universities possess considerable powers in this respect. They ought to closely cooperate with employers and support institutions (business and technology incubators, financing institutions, employment agencies). Such network of cooperation, extending education with internship and vocational training, familiarizing young people with

the nature of work in individual branches of industry, may exert significant influence upon the pursuit of particular professions.

Young people ought to be encouraged to be active, be presented with opportunities and supported in their development of entrepreneurial attitudes while they still study at schools or universities. Employment indexes are unyielding – there will never be employment opportunities for all graduates. Therefore, young people ought to be encouraged to start their own businesses, by using grants or co-financing in particular, ought to be supported with soft measures (training, counselling as regards entrepreneurship), which would undeniably contribute to a greater retention of graduates in the region.

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Influence of Local Labor Market Condition on Investment Attractiveness of Lublin City

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Introduction

An assessment of investment attractiveness of the country or a particular region is not an easy task. Potential investors need to analyze and evaluate many different circumstances, so that the final decision on the location of their economic activities could be as rational as possible and give the opportunity to achieve success. The main factors of investment location in a region can be considered to be (Nowicki 2913, 15–18): transport accessibility, labor resources and its costs, market capacity, economic infrastructure, social infrastructure, level of economic development, the environment, the level of public safety and activity of the region's authorities towards investors. In this perspective, an investment attractiveness can be defined as *the ability to induce investment by offering the best combination of location advantages possible to achieve in the course of doing business* (p. 5). Bearing in mind that only the optimum combination of factors will cause the company to realize its objectives, it is worth noting the role of factors related to the local labor market. It is a group of factors, whose importance is highlighted by authors dealing with the issue of investment attractiveness.

The main goal of this study is an indication of the importance of the situation on the local labor market in the process of assessing the investment attractiveness by external investors. A realization of the objective requires a statistical data analysis which describes the condition of the labor market of the city of Lublin. In the analysis, the authors used a simple statistical method of data presentation, their interpretation and inference. This task presented some difficulties in obtaining data at the city level and, therefore, data on the labor market situation in the lubelskie voivodship was also used. This ap-

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 211–226. Bangkok, Celje, and Lublin: ToKnowPress, 2015.

proach, however, is justified from the point of view of implementation of the intended objective. It should be borne in mind that the city of Lublin draws workers from the surrounding province. The basic research period covers the years 2004–2012.

Importance of Factors Related to the Labor Market for the Assessment of Investment Attractiveness

Among the factors perceived as important in the evaluation of investment attractiveness, those related to the human factor are often the most significant. This is reflected both in theoretical attempts to explain the attractiveness of investment and location of investment, as well as in empirical research of decisions taken by investors. The importance of the human factor varies, depending on the type of business or investor strategy. However, the labor factor consistently ranks very high. It is often simply stated that the importance of each localization factor is highly personalized to a particular investor. However, based on past studies, certain regularities in the assessment by investors of factors associated with the workforce can be indicated. From the point of view of investors, the human factor can be assessed across a spectrum of criteria and investors can pay attention to its specific characteristics in a given region and for a specific industry. When assessing the importance of the human factor in terms of investment attractiveness, the following elements are frequently taken into account:

- Availability of the total labor supply in the investment area and in neighboring areas.
- Availability of labor with certain specialized skills and experience. This is reflected in the preference for investment in areas with a high share of employment in the sector of activity of the investor. It gives him a chance to gather the workforce not only possessing a specialized education background but also already verified by the labor market.
- Availability of workforce with personal qualities preferred by investor (e. g. creativity, responsibility, honesty, loyalty). This aspect is of particular importance when, for example, an enterprise is looking for employees in the development of which the company intends to invest a lot (Kalinowski 2005).
- Costs of labor. Labor costs have a direct impact on the cost

of doing business, and thus its profitability. They can be considered in narrow terms, as the costs incurred to pay for time worked, but also more broadly, taking into account the cost of creating and maintaining jobs. Labor costs can also be analyzed with regard to the efficiency and quality of work.

- The level and structure of unemployment. This influences the availability of labor in accordance with the requirements of the investor. At the same time, however, it affects the level of competition in the labor market and wage expectations of workers. Therefore unemployment rate and labor competition directly correlate to the overall cost of labor, often leading to reduced labor costs in the event of high unemployment and low labor competition.
- Opportunities of inflows into the labor market of adequately prepared personnel in future periods. In this case, the demographic projections and the ability of the local education system to deliver graduates with preferred education in the future are significant. Here there is also an ancillary correlation of location attractiveness, i.e. the ability to attract new, appropriately skilled workers to the region.
- Availability of high-skilled workers in related, cooperating industries. For example, the expectations of investors in high-tech industries toward high levels of qualifications of scientific institutions' employees in the geographical area.

It should also be taken into account that the characteristics of the human factor can be analyzed by the investor due to their indirect impact on conducting business. These features can in fact affect, for example, quality of life, level of public safety, the perception of the investor by the local community or the absorption of the local market. This effect, however, is difficult to assess because it would require analysis of a number of variables of an immeasurable character.[1]

In order to evaluate the investment attractiveness of Lublin from the point of view of various aspects related to the human factor, it is necessary to analyze changes in the situation on the supply side of the local labor market. A consideration of the size and nature of supply

[1] The analysis of this nature goes beyond the objectives of this study and the authors consciously resign to carry it out.

enables the characteristics of a human factor in its most important features.

It should be noted that the investment attractiveness of a country, region or a city is the result of the synergistic interaction of many factors. In relation to the human factor, they can be both substitutive (e. g. a localization towards supply markets can lower transportation costs and thereby compensate for the higher cost of labor), as well as complementary (e. g. good transportation infrastructure causes higher mobility of the workforce and its complement in case of its inadequate supply in the investment location).

The significant role of the factors related to the labor market is shown when we take into account their position among the reasons to invest in Poland indicated by investors. As an example results of other studies can serve as a basis on the most important motives for undertaking investments in Poland at the regional level. The most significant includes (Dorożyńska, Dorożyński, and Urbaniak 2011, 110):

1. The possibility of finding a workforce with appropriate skills.
2. Low wage costs.
3. Large internal market.
4. Small competition.
5. Good infrastructure.
6. The presence on the EU single market.

When investors were asked to indicate the most important motive for their investment decision labor costs and skills have also consistently ranked high. Labor costs received the most positive responses (22.5%). Qualification of employees was chosen by 11.9% of investors (KPMG 2006).

In the reports assessing investment attractiveness, the labor factors as referenced above were also attributed great importance. As an example, reports on the investment attractiveness of Polish regions and sub-regions by the Research Institute on Market Economy serve well. In the evaluation at the sub-regional level, the factors determined by the cost of labor but also the size and quality of labor resources were assigned an importance as high as 55% for investments in industry, 40% in services and 30% in advanced technologies. When evaluating the attractiveness of regions (voivodships) these factors were also

assigned the highest weight – 25% (Urząd Statystyczny w Lublinie 2013a, 12).

As emphasized earlier, the importance of this group of factors is diverse in terms of type of the planned activity. The strongest influence they exert is in making industrial/manufacturing investments. In this case, the availability of labor with specific qualifications is of primary significance. It is worth noting that the requirements for the qualifications are generally not high. The greatest demand is for workers with vocational and technical secondary education. In industries with a relatively large share of labor which is associated with production/manufacturing, the cost of labor takes on paramount importance. When investor activity is in the services industry, the requirements for the level of education and knowledge of foreign languages are growing. Because of the importance of the human factor in the provision of services, labor costs are also significant. In activities in a field of advanced technologies the availability of highly qualified staff is crucial. Investors count on high added value created by such workers and are willing to pay higher labor costs. It is a global phenomenon that the so-called knowledge workers command the highest wages and have the highest relative mobility.

Analysis of Changes in the Labor Market of the City of Lublin

Before we investigate the current situation of the labor market of Lublin city, attention must be paid to the forecasted unfavorable demographic trends formulated for the region. The forecast was developed by the Central Statistical Office and it indicates a continuation of the current negative demographic and migration trends. A decline in the region's population at the rate of 0.25% per annum was observed in years 2000–2009. The population is forecast to continue to decline in the coming years. A rate of decline is assumed at an average level of 0.7% per year till 2035 (Urząd Statystyczny w Lublinie 2013b, 29). This will result in a decline in the region's population of around 295,000 people compared to 2007 (Główny Urząd Statystyczny 2009, 191). A faster decline in population in urban areas (16.8%) than in rural areas (10.1%) is foreseen. Along with the decline in population there are also projected negative changes in the age structure of the population. The share of post-working age population, which in 2007 was 16.9%, in 2020 will rise and reach 22.6% and in 2035 27.9%. These levels are higher than expected rates for the whole

country. At the same time, a decrease of the share of the population aged 0–17 years is foreseen. In 2007, this group had a share of 20.5% of the population. In contrast, forecasts for 2020 assume a share of 18.6% and a further decline to 15.5% in 2035 (p. 240). The projected aging of the population of the lubelskie voivodship is also the result of unfavorable trends in migration. The data indicate that the region has the highest negative balance in Poland inter-voivodship migration flows. It is significant that these are mainly young people with a high level of education that migrate. In addition to the acceleration of adverse changes in the age structure, it also leads to weakening of local human capital. A survey among students of education institutions of Lublin, clearly indicate that the main motive of potential migration is the desire to improve their situation in the labor market.[2]

An assessment of investment attractiveness, which is made by every potential investor, is closely related to the current and projected condition of the local labor market. In each individual case the set of factors can differ but for the investor an important element of the assessment will be the availability and cost of acquiring human resources. Therefore, the local labor market should be able to offer the right amount of employees with features desired by potential employers while maintaining the principle of cost optimization. In assessing the availability of labor there are some specific analyses which are useful. These are: an analysis of demographic trends, analysis of the potential size of the resources (e. g. graduates and the level of unemployment supplemented by migration trends) but also qualitative analyses, including, among others, structure of graduates or the structure of unemployed by professional groups and the duration of unemployment.

The labor market of lubelskie voivodship, including the city of Lublin, has a higher than the national average activity rate of the population. In 2004, the activity rate of people of working age was 71.2% (69.6% in Poland), and by 2012 it increased to 73.8% (72.9% in Poland).[3] The data at the regional level does not give the full picture

[2] The four most common causes are: higher wages, employment opportunities, the ability to work in chosen profession and the opportunity to build a career (Wojewódzki Urząd Pracy w Lublinie 2009, 80).

[3] See http://stat.gov.pl/bdl/app/strona.html?p_name=indeks

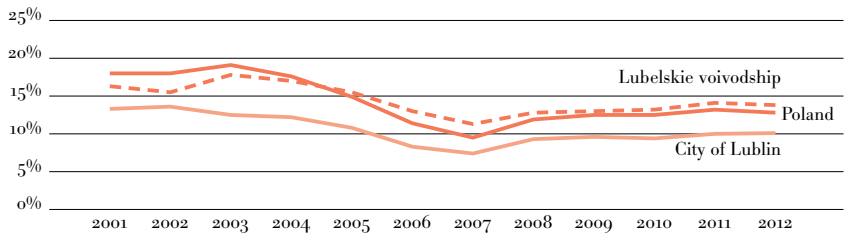

FIGURE 1 Registered Unemployment Rate in City of Lublin, Lubelskie Voivodship and Poland (based on data from Lublin City Office, www.mup.lublin.pl)

of the situation, which at the lower levels of the analysis is much more varied. The measure allowing for the assessment of the situation in terms of economic activity and the efficiency of the labor market can be a share of university graduates in the stock of unemployed. In 2012, the rate in Lublin remained at a level lower than the national average (5.2% vs. 5.9%) but also at a lower level than in the powiat of Łęczna (9.7%), Lublin (8, 8%), Lubartów (6.9%) or powiat of Świdnik (6.3%). Generally, a more favorable labor market situation in Lublin is confirmed by data on the unemployment rate for Poland. Figure 1 shows the trends in this field for Poland, lubelskie voivodship and Lublin city.

The data in figure 1 clearly shows that the situation on the labor market of Lublin city was much better than average in Poland and the lubelskie voivodship. The registered unemployment rate was falling continuously from 2003 to 2008 due to the generally favorable economic situation of the country, and it was also reflected on local labor markets.

The consequences of the downturn in the global economy in 2008 were felt in the national economy and at the same time on the regional labor markets. In Lublin city, the unemployment rate increased from 7.4% (2008) to 10.1% (June 2013) while the value of the index was still lower than the national average (by 3.1 percentage points) and the regional average (by 3.7 p. p.).

The increase in the labor resource due to unemployment translates into a quantitative increase in the availability of labor for investors, but it also negatively influenced migration trends occurring in Lublin and the entire voivodship. If the city of Lublin is a strong economic center of the region, it should attract people interested in settling down and at the same time taking a job here. In table

TABLE 1 Internal and International Migration of Population for Permanent Residence in the Years 2005–2012, Number of Persons

Year	Inflow				Outflow				Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
2005	3047	2192	809	46	3991	2684	1173	134	−944
2010	2482	1826	624	32	3795	2486	1238	71	−1313
2011	2631	1990	613	28	3755	2439	1229	87	−1124
2012	2564	1936	588	40	3521	2244	1223	54	−957

NOTES Column headings are as follows: (1) total, (2) from lubelskie voivodship, (3) from other voivodship, (4) from abroad, (5) total, (6) to lubelskie voivodship, (7) to other voivodship, (8) to abroad. Adapted from from Urząd Statystyczny w Lublinie (2013a).

1 the information on domestic and international migration for permanent residence in 2005–2012 in the city of Lublin were collected.

The data clearly shows that Lublin is a city with a declining population. A positive feature of this process was that the main direction of the population loss of the city were within the lubelskie voivodship. This seems to suggest an anti urbanization trend, i.e., previous inhabitants of Lublin migrating outside the administrative boundaries of the city. At the same time, these people often do not change their place of employment, deciding to commute to work. The share of the population deciding to leave Lublin as well as the voivodship exhibits a relatively stable percentage. This is consistent with the more general trend of net emigration from all over the lubelskie voivodship.[4] From the point of view of the labor force supply that is available to potential investors, migration processes are not perceived positively. But it should be kept in mind that quantitative changes in the labor market are only one of the aspects to be taken into account by potential investors. An analysis of the availability of labor also requires the assessment of the labor force in terms of the structure of qualifications.

In this aspect, two areas of analysis become of significant importance: the structure of the unemployed and the structure of graduates applying for a job. Table 2 summarizes the data on the distribution of

[4] According to data of the Central Statistical Office, in 2012 the lubelskie voivodship attracted 3,077 people, while the size of the outflow amounted to 8,095 people. Most people (4,587) moved to the mazowieckie voivodship. See http://stat.gov.pl/bdl/app/strona.html?p_name=indeks

TABLE 2 Unemployed Persons in city of Lublin by Educational Level in the Years 2004–2013 (%)

Level of education	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Tertiary	14.5	15.8	16.5	17.3	20.9	21.8	22.0	21.6	21.2	22.3
Post-secondary as well as vocational secondary	26.6	26.2	25.3	23.8	21.5	21.2	23.7	23.9	24.0	23.8
General secondary	9.1	9.4	11.0	11.6	13.3	14.7	11.8	12.3	12.3	12.6
Basic vocational	23.9	22.5	21.0	19.0	16.5	15.6	17.8	17.7	17.7	17.4
Lower secondary and below*	25.9	26.1	26.2	28.3	27.8	26.7	24.7	24.5	24.8	23.9

NOTES *For 2004 this group covers also persons with primary education. In the years 2004–2010 the numbers show a situation as of 31st of December, in the years 2011–2013 the numbers show a situation as of 30th of June.
Based on data from Lublin City Office (www.mup.lublin.pl).

TABLE 3 Unemployed Persons in the City of Lublin by Duration of Unemployment in the Years 2004–2012 (%)

Duration of unemployment	2004	2005	2006	2007	2008	2009	2010	2011	2012
3 months and less	20.2	20.0	20.1	21.2	29.2	24.9	28.6	24.8	24.2
3–6 months	11.4	13.2	12.3	11.9	15.8	16.5	15.4	14.4	15.7
6–12 months	15.6	16.0	15.6	14.7	14.6	21.1	18.0	17.9	17.4
More than 12 months	52.8	50.7	52.0	52.2	40.4	37.5	38.0	42.9	42.7
12–24 months	17.8	17.3	17.5	16.1	12.5	16.3	18.6	19.6	17.7
More than 24 months	35.0	33.5	34.6	36.1	27.8	21.3	19.3	23.3	25.0
Total (number of persons)	18965	18935	16708	12890	11592	14784	16080	16102	17124

NOTES Based on data from Central Statistical Office of Poland (http://www.stat.gov.pl).

a group of unemployed, depending on the level of education. As can be seen, the largest group of the unemployed is the group with the lowest level of education (lower secondary and below), then a group of people with post-secondary and vocational education. A relatively new phenomenon in the Lublin labor market is the fact that there is an increasing share of unemployment within the group with the highest level of education.

In 2004, 14.5% of the unemployed were persons with a diploma from an institution of higher-education, while in 2012 it increased to 22.3%. The relatively lowest share of unemployment was shown in the group of people with general secondary education. Such a structure of the unemployed creates favorable conditions for investors producing less technologically complex industrial products and simple services that are labor intensive. The high share of people with higher education may be beneficial for the activity of more complex services.

The analysis of unemployment can be complemented by its examination from the perspective of time needed to find a job. The data collected in table 3 shows that the most serious problem of the Lublin labor market is the high share of long-term unemployed. Although the share of this group has been declining since 2004 (52.8%), it is still the case that in 2012 those job seekers seeking employment for 12 months, or more had the largest share among the unemployed (42.7%). What is more, the most significant issue of the Lublin labor market is so called chronic (very long) unemployment. In 2012, the proportion of people without a job for over two years was 25%, which at the same time was an improvement because in 2004 the share of this group was 10 percentage points higher.

In the analysis of the labor market in terms of qualifications exhibited by the available workforce, a higher education has the highest significance as to its impact on investment attractiveness of the area. From this point of view, it can be concluded that Lublin has the potential to attract investors. Lublin is an academic city in which ten universities operate. In the academic year 2012/2013 more than 77,000 students were graduated from institutions of higher learning (Urząd Statystyczny w Lublinie 2013a, 109).

Every year the supply of highly qualified graduates in the local labor market increases. In the period 2004–2012 one could observe an upward trend in that field. In 2004, 17.4 thousand students gradu-

ated public and private universities, while in 2011 24.6 thousand.[5] In 2012, the number of graduates decreased by about a thousand. Such a large number of potential employees is an encouraging factor for investors, but equally, if not more important, is the structure of university graduates by field of study completed. In table 4 some important data on this phenomenon were collected for the city of Lublin.

According to the data presented, the conclusion can be drawn that throughout the entire period such fields as *business and administration* enjoyed a great popularity. The share of students graduating in these fields of studies in the total amount of graduates was the highest, although with a noticeable downward trend (from 29.4% in 2004 to 22.1% in 2012). With almost the same popularity in the period the *social* and *pedagogical* fields graduated the second largest percentage of students. It is worth noting that the strongest decline in popularity was exhibited in the fields of *humanities* and *law*, while the opposite trend was noticeable in *medical sciences*. In the latter case, the increase is largely due to a greater number of foreign students.[6] According to the data presented in table 5, in Lublin there are a group of studies that are not too often chosen by high school graduates. This category includes, among others, *arts*, *veterinary* or those related to *social care*. It is also worth noting that there was a relatively minor importance displayed in the structure of Lublin university graduates with respect to the *engineering-technical* as well as *informatics* fields. This can be perceived as a limitation to specific investment attractiveness of Lublin, especially for companies in manufacturing industries (e. g. automotive) or the information and telecommunications sector.

One of the basic factors of the attractiveness of the region from the point of view of the labor market is the cost of the local workforce. Companies in the quest to rationalize their operations pay a lot of attention to this aspect, but the approach is different depending on the industry in which the company operates. Starting with the most

[5] See http://www.stat.gov.pl/bdl/app/strona.html?p_name=indeks

[6] Only in 2012, the number of foreigners studying at the Medical University of Lublin was 1055, while in the academic year 2005/2006 the total number of foreign students in all universities of Lublin was only 812 (Urząd Statystyczny w Lublinie 2013a, 111).

TABLE 4 Graduates of Lublin Higher Education Institutions by Field of Studies (%)

Field of studies	2004	2005	2006	2007	2008	2009	2010	2011	2012
Business and administration	29.4	29.1	24.0	21.7	18.2	23.2	22.7	20.8	22.1
Social sciences	10.1	11.0	13.1	12.5	14.0	13.2	12.2	11.9	11.5
Pedagogical	13.1	13.2	11.5	14.2	11.8	12.4	11.0	11.5	11.2
Humanities	15.3	13.2	15.8	12.5	15.8	14.1	14.2	13.2	10.9
Medical	3.1	5.8	6.4	7.8	8.3	8.0	7.8	10.7	10.5
Engineering-technical	5.1	4.3	5.4	5.0	4.2	4.1	3.7	4.5	4.3
Law	7.4	5.8	5.8	5.2	5.1	4.4	3.8	3.5	3.8
Biology	0.7	0.6	0.6	3.4	3.5	3.0	3.6	2.8	3.2
Agriculture. forestry and fishery	4.3	4.2	3.9	4.3	4.4	3.7	4.5	4.1	3.2
Production and manufacturing	0.4	0.4	0.5	1.0	1.7	1.9	2.5	2.6	2.5
Public services	0.1	0.7	0.7	1.0	1.3	1.1	1.9	2.1	2.3
Informatics	1.1	2.4	2.1	2.4	2.0	2.0	1.4	2.3	2.2
Physics	2.1	2.2	2.1	2.1	2.0	2.1	2.5	1.8	2.0
Architecture and construction	1.4	1.4	1.3	1.7	2.0	1.7	2.0	2.1	1.9
Media and communications	0.5	0.4	0.9	1.0	1.1	1.8	1.4	1.5	1.9
Transportation	0.0	0.0	0.0	0.2	0.9	0.6	0.6	0.8	1.7
Mathematics and statistics	1.3	1.1	1.2	1.4	1.6	0.7	1.4	0.9	1.3
Environment	3.4	3.0	3.2	1.1	0.7	0.7	0.5	0.8	1.3
Social care	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
Veterinary	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.7
Arts	0.4	0.6	0.7	0.7	0.7	0.5	0.8	0.8	0.7
Total number of graduates	17400	18149	18486	17932	17928	20986	24492	24597	23646

NOTES Based on data from Central Statistical Office of Poland (http://www.stat.gov.pl).

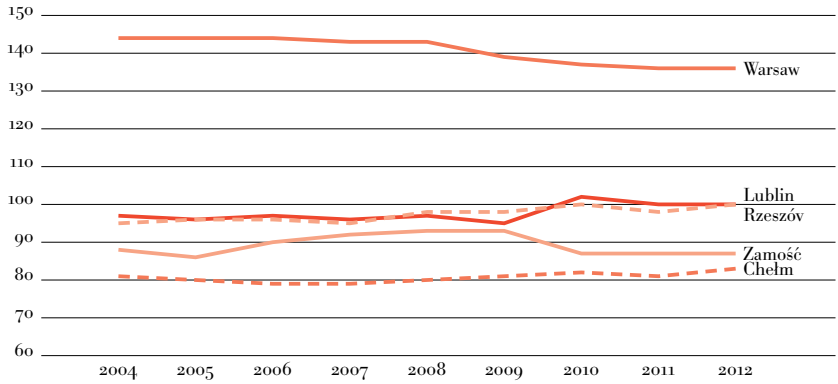

FIGURE 2 Relative Level of Wages in Selected Cities of Poland (average for the country = 100, based on data from Central Statistical Office of Poland, http://www.stat.gov.pl)

general comparison of wages it can be stated (see figure 3) that in Lublin the remuneration levels coincide with the national average level.

A comparison only of the average wage would indicate a significant advantage for Lublin in relation to the conducting of business in Warsaw. But one must remember that the investment attractiveness of Warsaw is determined by other factors that cannot be compensated only by cost advantage of Lublin. Higher salaries in Lublin compared to cities such as Chełm and Zamość should lead to the influx of skilled labor from these cities to Lublin. Salaries in Lublin exceed the levels achieved in Chełm by approximately 20% (2012) and Zamość about 14%.[7] At the same time, one can assume that the competitive advantages of the city of Lublin over those cities which are beyond mere labor cost aspects will also limit their investment attractiveness for new investment. The analysis of the level of wages in the entire region gives similar results. In all the districts of the Lublin region (but for the powiat of Łęczna) the average level of wages was lower than in the city of Lublin.[8]

[7] See http://www.stat.gov.pl/bdl/app/strona.html?p_name=indeks

[8] Powiat of Łęczna is an exception mainly because of the presence of a major employer in the district (Coal Mining Company – Bogdanka SA) which offers relatively high wages. In 2012, the average level of wages in the powiat of Łęczna was PLN 4,942.31, while in Lublin PLN 3,710.80 (Urząd Statystyczny w Lublinie 2013b, 154).

Conclusions

Among many factors that determine the choice of investment location, those factors associated with human resources have great significance. From the individual investor's point of view very specific requirements are often significant. These requirements are related to the labor resource but at a higher level of generality, the most significant role is played by the availability of the labor force with the expected qualifications and their associated costs.

The analysis carried out in this study allows some conclusions to be drawn which are directly connected to the labor market characteristics of the city of Lublin in the years 2004–2012. These features can be positively or negatively evaluated in making location decisions by potential investors. The most important features of the labor market in Lublin, which may affect the investment decisions of external entities were identified by the authors and are set out below.

1. City of Lublin is a large, regional labor market with high rates of labor force participation and has the potential to attract employees with the desired qualifications from the lubelskie voivodship and eastern Poland.
2. Availability of labor is relatively high. This is mainly due to:
    - relatively high level of unemployment (which throughout the period was lower than the national or regional average);
    - favorable structure of unemployment – a relatively high share of people with higher education, but also a high proportion of people without a job for more than a year;
    - a high number of graduates, especially those who supply the resource of highly qualified potential employees.
3. Cost of labor (wages) in Lublin are at a lower level than in the case of the largest economic centers of Poland (e. g. Warsaw), but also at a higher level than such cities as Zamość and Chełm. When factors other than labor dominate the investment attractiveness, for instance the comparison with Warsaw, Lublin has rather little chance in competing for investors, however, it can improve the investment attractiveness of Lublin compared to Chełm and Zamość, i.e., relative competitive advantage.

4. Although, as mentioned in the text, the role of factors related to the situation on the labor market is important for investors and often decisive, it should be noted that these factors will not necessarily lead to a rapid improvement of the investment attractiveness of Lublin. They are in fact a part of a synergistic interaction of a set of variables. Without an improvement in other factors it is difficult to expect clear benefits.
5. Limits of labor supply resulting from unfavorable demographic trends are difficult to change at the local level. In view of the present adverse demographic projections for the lubelskie voivodship and the city of Lublin, one of the ways to mitigate the effects of the decline in the labor force may be a reduction of the negative migration balance. This can be achieved by increasing the attractiveness of Lublin for the influx of people from other parts of the region and other regions. Any shortages of skilled workers can also be actively complemented by an increase in the influx of immigrants from neighboring countries (Ukraine, Belarus). This should be quite easy to implement as Lublin is the third academic center of choice for international students in Poland. A change in net migration by reducing the outflow of workers to other regions can only be a result of economic recovery in the city. It may therefore occur as a secondary effect of the overall improvement of investment attractiveness.
6. The existing structure of the qualifications of employees, the unemployed and a large part of graduates creates favorable conditions for investors, primarily in the industrial sector (not too complex technologies) and in simple services that are labor intensive. Lublin is also an attractive place for investment in services that require employees with high qualifications. One can conclude that strategic specializations adopted by the city are consistent with existing characteristics of human resources.

Taking into account the above analysis it should be noted however, that labor resources are important but they are only one of many elements of a comprehensive evaluation of investment attractiveness of the region. With this in mind, we should strive to improve the overall investment climate in the city, and these activities should be of

multi-dimensional character. Certainly, the labor market and its positive characteristics have the ability to encourage potential investors to locate their activities in Lublin but in tandem with other efforts to encourage investment, labor resources create a solid foundation.

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Selected Conditions of Cooperation Between Enterprises, Science and Local Government in the Field of Innovation

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Introduction

Economic growth is not only a measurement of the effects of the way economy functions but also a measurement of affluence of economy, and all the sectors existing in economy (enterprises, households, public administration) are its beneficiaries.

Competitive potential of the Polish economy based on low production costs (which results mainly from relatively cheap workforce) is gradually drying up (Czerniak 2013, 9). It is necessary for economic development to be hinged on other factors determining its pace such as technological advances or innovations. Yet, by Summary Innovation Index used by the European Union, the results of the innovation policy exercised in Poland are far from satisfactory. Poland is ranked the 23rd among the 27 member states (p. 9).

The Reasons for Low Level of Innovation

Given accessible current data, including analyses carried out for the needs of the Lublin Voivodeship Development Strategy, Lubelskie Voivodeship is a region which in terms of innovation is at most average and whose position compared to other voivodeships is getting rather lower than higher, though it is not the lowest in the whole country. It is best proved, among others, by such terms as those used by the authors of comparative studies on innovation of Polish regions:

- the voivodeship deepening the gap (Feltynowski 2009),
- the area of low ability to manage innovation policy ('Regional Innovation Monitor' 2012),
- the voivodeship from the group of unstable centre,
- the region with vague tendencies to change the elements of innovative potential.

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 227–235.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

The whole Eastern Poland, compared to other regions of the European Union, belongs to the group of the lowest level of innovation, where the Lublin Voivodeship – like the majority of Polish regions, comes out relatively well in terms of factors encouraging the development of innovation (inter alia, the inhabitants' level of education, public investments on R&D). As regards the rates of innovative activities of enterprises (inter alia R&D investments incurred by companies, innovative activities of small and medium enterprises, a number of patents, including European ones) as well as the results of these activities (among others, the share of enterprises launching new products/services, their sales value, employment in companies of high technology), the rate achieved indicates the category of the lowest level of innovation in the European Union (Olbrycht et al. 2010).

There are two basic models of innovation. One of them is a science-push model, wherein the starting point is science which enables creating innovation which, in turn, is absorbed by enterprises. The other of innovative models – a technology-push model – assumes that the demand on particular innovations comes from business, and science offers innovative solutions of problems reported by enterprises (Czerniak 2013, 20).

Many of the described above problems of low innovation in Poland and Lublin Region come from the lack of structural adjustment between the demand on innovation (reported by companies) and supply of innovation (innovative solutions already developed offered by scientific and research centers). The lack of proper communication between science and business appears to be the main reason.

The analyses of the regional infrastructure supporting entrepreneurship and innovation point to the fact that in Lubelskie Voivodeship cooperation of companies with scientific and research institutions is quite rare – 80,2% of enterprises declare they do not have such co-operation. It was also indicated that the weakness of the relationship between science and business environment is to be thought as one of the main barriers to the development of innovation of Lublin entrepreneurs (Bąk and Kulawczuk 2009, 19).

By the latest statistics of GUS (the Central Statistical Office) only one out of four industrial enterprises from the Lublin Voivodeship admit any co-operation within their innovative activities (mainly with other business entities). Only less than 5% of the investigated enterprises declare any co-operation with research institutions and uni-

versities. It is worth noting, however, that this co-operation lies in commissioning particular research to test a particular innovative solution (product or process) worked out earlier within the innovative activity of the entrepreneur (Główny Urząd Statystyczny 2012).

The low rate of innovative co-operation of Lublin enterprises reflects, on the one hand, both mental barriers and reluctance (lack of knowledge, low level of confidence) of the enterprises to be involved in various networks of co-operation, while, on the other hand, it reflects the lack of any offer of co-operation on the part of partners (mainly science institutions). What should be also emphasized is the ineffective functioning of the infrastructure which goes between transfer of knowledge and its commercialization (Antonowicz 2011, 1).

The issue of co-operation between science and business is particularly acute for the City of Lublin. The more so that in Lublin there are located five remarkable scientific centers: Maria Curie-Skłodowska University, University of Life Sciences, Lublin University of Technology, Medical University of Lublin, Lublin Catholic University. Lublin claims to be the biggest university center in Eastern Poland with around thirty thousand graduates each year, and where students account for nearly a hundred thousand of its inhabitants. Researches (or academics) account for six thousand. The majority of companies from Lublin Powiat (District) are based in Lublin (among 66.820 of business entities providing employment for around 120 thousand persons). Nonetheless, by the end of 2012 the recorded unemployment rate was 11,7% (2013 – 10,1%).[1]

The Essence and Significance of Brokering in Co-Operation between Science and Business

Innovation models which are currently underway in Poland are mainly those of science-push nature where the starting point is set by the offer on the part of the science sector, and the supply of research findings which are not always likely to be later commercialized or employed by business. Unfortunately, such an approach is not much effective and it does not entirely meet the needs of entrepreneurs. Thus, it is essential to encourage and foster the development of a technology-push model based on the needs of the entrepreneur and

[1] According to the data from Central Statistical Office of Poland (http://stat.gov.pl).

his strategy to launch new products and services onto the market.

Taking into account the weaknesses of the already existing co-operation between business and science, it is worth considering introducing brokering between these two spheres. The way in which brokering supporting business-science co-operation would function may hinge on services of co called innovation brokers (inno-brokers). They would be directly responsible for organizing and developing co-operation of entrepreneurs and researchers drawing on the entrepreneurs' needs identified earlier. At present there are hardly any structures or channels of co-operation, both in terms of offers from the business environment and the access to particular experts who would be capable of handling innovation needs of entrepreneurs in a complex way. There is no co-operation which would result from establishing direct relation with science, either. The science environment has little orientation towards entrepreneurs' needs, and they, in turn, are not themselves able to identify their own needs and determine the most perspective areas for implementing innovation.

The idea of innovation has already become an inherent part of the projects of operational programs co-financed by the resources of the European Union both at regional and national levels (Ministerstwo Gospodarki 2013, 75–76; Urząd Marszałkowski Województwa Lubelskiego w Lublinie 2013; Ministerstwo Infrastruktury i Rozwoju 2014, 29–31).

It should be also worth noting that at the moment in Cracow an inno-bokering project is on the way (now it is at its implementation stage). However, what is specific to it is its institutionalization of co-operation as it creates links and networks of co-operants (Zespół ResPublic 2011). It is the effect of a project under the name 'Innovation Broker as a Tool for Effective Development of the System of Małopolska's Modern Economy' co-financed from the European Union's resources.

In Lublin there has also been developed an idea of brokering between science and business, precursory in many dimensions, under the project 'P1: a New Model of Complex Servicing Innovation Needs of Enterprises – Inno-Broker' co-financed within the European Social Fund and realized by the Lublin Science and Technology Park and Maria Curie-Skłodowska University. The uniqueness of this concept is evidenced by the complexity of services of an inno-broker who is provided with the knowledge on entrepreneurs' needs, the

current innovation market (research offer of R&D units, sources and mechanisms of financing, the rules of legal protection of innovation, etc.) and who is to perform the analytical and advisory function in the area of enterprise diagnosis, establishing co-operation with a proper research center as well as gaining resources to finance innovation.

The fundamental assumption is that these are primarily enterprises and their needs which stimulate creating innovation along with the active participation of a broker, and not universities or R&D units. Connections between science and business will lie in applying an independent link (inno-broker) and not using some unit located in the structure of a R&D center responsible for commercialization of its research. The way in which these connections between science and business are to be realized lies in personalization of this link, i.e. designating one person – inno-broker, and not exploiting an institution as an intermediary in building up relation between science and business. One of the key elements in the work of a inno-broker should also be a network of personal contacts developed both through direct cooperation with entrepreneurs and scientists and through participation in fairs, seminars or scientific conferences. A lot of participants of the initial survey pointed at the necessity to create a proper expertise backup for inno-brokers activity (e.g. for carrying out a technological audit) and a IT system to collect necessary expert knowledge. There should also be a possibility of managing an offer base of enterprises and scientists.

The proposed solution is characterized by individual and complex approach towards the needs of the entrepreneur from identifying the entrepreneur's needs, initiating co-operation with a proper research unit to working out some mechanism of financing projected co-operation. Therefore (by the opinion of respondents of initial survey) an inno-broker should have fairly wide knowledge on legal, economic and technical issues embracing the problems of functioning of enterprises, universities and governing procedures in respect of creating knowledge, the rules of its protection and commercialization. The main task for brokers is to support enterprises in implementing innovation. Inno-Brokers are to be persons both with general knowledge (in the area of sales techniques, marketing, customer needs analysis, business negotiations, analysis of innovation product market) and more detailed knowledge on innovation products and

technologies. Each broker's activity will additionally be assisted by the support of a personal business and legal advisor.

The proposed solution differs from those already used in the way connections between science and business are realized as it means employing an independent link (inno-broker) a particular person, and not just exploiting some unit located in the structure of a R&D center responsible for commercialization of its research.

The suggested model of a inno-brokering is a new approach and not yet used in Poland. It is in line with a postulate of spending resources on R&D in view of innovation needs of enterprises (end-user financing). The solution which is offered here is more effective in the relation of expenditure/result relation.

Applying the proposed solution is to lead to improving the level of knowledge on possibilities of co-operation, improving the system of information flow on enterprisers' technological needs, improving the access to information on opportunities and proposals to establish co-operation between enterprises and science and research units, deepening knowledge on entrepreneurs' needs for innovation as well as barriers in implementing innovation, increasing the awareness of possibilities of establishing co-operation with science and development units and finally on increasing the possibilities of financing such co-operation. As a result it is to bring about a higher number of projects, and consequently increasing the level of enterprises' innovation.

Yet, if brokering between science and business is to be developed, a few requirements have to be met. One of the most important is establishing by a broker his/her proper relations with entrepreneurs and research and scientific centers as well as getting entrepreneurs and research and scientific centers involved in co-operation.

The Role of the City Administration in Supporting Co-Operation between Business and Science

Given the problems of innovation outlined above, it is imperative to undertake activities for increasing the effectiveness of co-operation between science and business as well as the activity of an inno-broker. To strengthen innovation of national or regional economy it is necessary to implement an effective innovation policy which should take into account close relations between such spheres as enterprises, higher education and administration (Czerniak 2013, 30).

Creating and enhancing co-operation between science and business might be assisted by administration at a local level. Therefore, it has to be emphasized, particular resources are contributed by each sphere in favour of creating innovation. For R&D institutions such contributions are, among others, knowledge and new technologies, human capital and research infrastructure. Enterprises offer markets and distribution channels, investments and jobs, whereas administration provides backup programmes, initiative, co-ordination of activities and public services. Yet, despite the common interest there is a communication gap between these environments. Therefore, the role of administration cannot be overestimated (Nowak, Mażewska, and Mazurkiewicz 2011, 15–16).

Regardless the fact that, for the reasons mentioned above, it would be desirable to include an institution of a broker into the main course of local or regional policy (regional strategies of innovation or operational programmes), the local administration might become a direct participant of the process of increasing the level of innovation of the city of Lublin and improving co-operation between science and business. Such activities might consist of raising the awareness that there is a need to implement innovation, supporting any activities in favour of co-operation between science and business along with promoting the idea of brokering between science and business.

The problems of co-operation between science and business as well as improvement of these relation have already been noticed by the local governments of Lublin. A number of particular undertakings related to support of innovation activities and co-operation between science and business have been included in the strategy adopted by the city of Lublin, with a special focus on two pillars – Entrepreneurship and Academe. More detail assumptions in these pillars comprise searching for investors (external and local) in the strategic directions of the city's development, promotion of the economic potential of the industry sector, supporting the transfer of knowledge into the business sector and building up co-operation on the common ground for universities and business (Urząd Miasta Lublin 2013).

One should emphasize the possibilities of the involvement on the part of the local authorities of Lublin in popularizing an innobrokering model which is coherent with the strategy of the city already adopted and realized. Some works initiated in the frames of

adopted assumptions in the pillars mentioned above already been undertaken for a couple of years. It can be best illustrated by the economic awards of the President of Lublin with a specially extracted category for the most innovative company (creating among entrepreneurs awareness of the need to realize innovative projects). There is a possibility of introducing competition category for companies which co-operate with science and R&D centers as well as for such science centers for successful implementations of the effects of co-operation between science and business.

Current actions meant to hold meetings of potential investors such as investment funds and networks of business angels with potential or young entrepreneurs (investment forums) may be extended through arranging meetings of both science and business also at the presence of inno-brokers.

The support of the local administration for developing co-operation between science and business as well as popularizing the idea of inno-brokering could also lie in giving access to a network of contacts and allowing to refer to the local authority while establishing contacts (e.g. letters of recommendation).

It seems, however, that the scope of activities of Lublin local administration could be much wider and this might significantly back up the precursory programme of inno-brokering between science and business, while the administration itself would be benefited by drawing tangible benefits.

Conclusion

The importance of innovation results from its multidimensional benefits both for enterprises, science and local administration, thus improving economic innovation of the whole country. So it is vital to make every effort to intensify activities aimed at increasing innovations implemented by enterprises, also including those innovations resulting from co-operation between science and business. Inno-Brokering is this element which may support this co-operation as it is intermediary fostering co-operation between these two spheres. It seems that the local administration of Lublin has interest and holds the resources which would allow to disseminate the idea of brokering between science and business. And this might appear beneficiary for all the parties involved.

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Part Four

Opportunities for Lublin: Toward the Network Metropolis?

Network Model of Local Innovation

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Public innovation policy is often considered as an important factor of social and economic development. Governments play a key role in promoting innovations by implementing new laws, institutions and other material and non-material incentives. However, in a digital, globally interconnected economy governments need to continuously redefine and improve its public policies. Every community and government have to find the effective way to build innovation climate and environment. Without diverse and sustainable innovation policy socio-economic welfare cannot be achieved.

The aim of this chapter is to build a general and applicable network model of local innovation (NMLI). Such a model tears off many socioeconomic dogmas produced by authors delighted with successful stories of regions, business clusters, firms etc. The latest findings and achievements of network research on innovation help to create a model based on certain definable and measurable parameters reflecting the changeability of the network system. The main goal of proposed model is to support the relational capital releasing or blocking creativity and innovations at the local level. We believe that network models are useful tool in public innovation policy.

Relational Dimension of Innovation

There are many competing or/and excluding definitions of innovation in contemporary social science. The most popular definition has been coined by Everett M. Rogers, for whom 'An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively" new as measured by the lapse of time since its first use or discovery. The perceived newness of the idea for the individual determines his or her reaction to it' (Rogers 1983, 11). Rogers did not distinguish innovation from technology. He used both terms as synonyms (1983, 12). Subsequent definitions of innovations brought distinctions between innovation and technology.

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In the third edition of the *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data* (2005), exposed by Organization for Economic Cooperation and Development (OECD) innovation has been recognized in four areas: product, process, marketing and organizational (pp. 46–7). 'An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations' (*Oslo Manual* 2005). This classification is a good starting point for many theoretical and practical research on innovation. However, the authors of the manual emphasize that 'The definitions of these new types of innovations for use in surveys are still under development, in much the same way as product and process innovations were in the first edition of the *Oslo Manual*' (p. 46).

In contemporary social science but also in some ambitious programs sponsored by public and private partners a new type of innovation is appearing quite frequently. This is a social innovation not present yet in the *Oslo Manual*. A comprehensive definition of social innovation has been offered by Geoff Mulgam 'Innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organizations whose primary purpose are social' (Mulgam 2007, 8). Social innovation is both distinguished and defined by the 'social purpose.' However, sometimes it is quite difficult to recognize whether innovation has a pure social purpose (Filipek 2013, 402–7). We believe that social innovation is emerging as people become interested in multilateral cooperation to find solutions for urgent social problems and issues.

Innovation is always created and diffused in certain social environmental conditions. An individual or other social entity interacts with a number of others in order to find solution for specific problem or intriguing issue. Thus, social fabric or social context plays an important role both in creation and diffusion of innovation. The dynamic configuration of social relations determines the innovation process taking place at different levels of social reality. Socially isolated individual have no chance to become a big innovator. Innovation sprouts, blossoms and fades in social contexts. It needs to be confirmed in relations with other social entities. We believe that structural context, often compared to different types of networks (static and dynamic),

is a key determinant of creativity and innovation. However, network environment can both stimulate and block the innovation. So, it is important to recognize, diagnose, understand and manage the structural properties of networks stimulating or blocking creativity and innovation at the local level. 'People need access to a diversity of skills and knowledge in order to innovate. This argues for being as well connected as possible' – emphasizes Steve Borgatti (2005). But social connectivity goes into various directions. We will offer a NMLI based on three axes derived from structural properties of the networks.

Two Basic Assumptions

Thus our research is based on the assumption that creativity and innovation are direct or indirect effects of multidimensional social relations. In the Web 3.0 reality, every innovation policy is more or less derivative of various relations established in both virtual and real world. Quantity and quality of business, political and social links determine the shape and amount of relational capital. However, relational capital can both release and block social creativity and innovation. Roughly speaking, relational capital is peculiar, more advanced and technologically powered version of social capital emerging in the Web 3.0 environment (Granovetter 1973). The idea of relational capital is derived from theoretical findings and research results delivered by James Coleman (1990), Nan Lin (1999), Ronald Burt (2000), and more recently by Michel Acevedo (2007). We consciously resign to develop the specific features of relational capital due to space limitations. Anyway, it is necessary to understand, diagnose and manage relational capital in order to support creativity and innovation at the local level.

It is also assumed that relational capital can be recognized and measured through network models. Social network analysis is rich of abstract models, approaches and theories applicable to various socioeconomic phenomena (Granovetter 1978; Watts and Strogatz 1998). Unfortunately, most of them cannot be effectively and interchangeably used in many contexts. Cultural, social, political or economic specificity compels us to modify and adjust existing models, approaches and theories in order to correspond with local specificity. The emerging model is composed of few combined network parameters applicable to the innovation field. Each parameter can be de-

scribed by the finite axis with defined values ranging from 0 to 10. We propose a NMLI composed of three axes: (A) closure vs. brokerage, (B) homophily vs. heterophily, (C) highly clustered communities with short range links vs. less clustered communities with long range links. It is possible to build a model with bigger number of axes, but at this stage we are rather interested in 'technique' or 'philosophy' than ultimate model.

Network Closure vs. Structural Holes

Before we turn to the model we need to give a brief account on two competing network structures that create social capital. First proposal has been given by James Coleman. He focused on a 'closure' as the source of social capital. Closure is built by short-range and dense ties delivered through family, community, and religious affiliations (1990, 99). Closure strengthens an exchange taking place in the market. It protects against the undesirable actions and destructive effects of social unconformity that sometimes turns into innovation. 'Closure of the social structure is important not only for the existence of effective norms but also for another form of social capital: the trustworthiness of social structures that allows the proliferation of obligations and expectations' (p. 107). Coleman delivered convincing arguments that closure: (a) effectively distributes the obligations and expectations, (b) accelerates the information flow, (c) strengthens and disseminates the norms accompanied by sanctions (p. 119). In other words, networks with higher closure produce social capital more effectively than networks with lower closure. Therefore, closure should be considered as an important, but not an ultimate, determinant of both social/relational capital and innovation.

The alternative picture of structural attributes contributing to social capital has been delivered by Ronald Burt. He offered and developed the concept of structural holes in a social network. Burt questions the idea of closure offered by Coleman. He is not concerned of density, as Coleman was, but rather concentrates on the unique positions appearing in network structures. Due to Burt 'There is an impressive diversity of empirical evidence showing that social capital is more a function of brokerage across structural holes than closure within a network, but there are contingency factors' (2000, 345). Brokers occupy a strategic positions within the network and they are able to control the flow of various resources. Burt proved that actors playing the brokerage roles are the most vital and precious part of

a network because they connect isolated subgroups of vertices. They are key hubs enabling flows of material and non-material goods. Brokers serve as intermediary or liaison between social entities driven by distinct goals and purposes. Thus, the concept of structural holes proposed by Burt needs to be analyzed in comparison with the idea of closure developed by Coleman. These proposals make a good starting point to build a NMLI.

As far as we know, both structural combinations e.g. networks with closure and networks with structural holes are sources of social/relational capital. So, is it possible to reconcile these apparently excluding concepts? How to choose the most appropriate solution? Closure and structural holes (brokerage) mark out two opposite extremes of the first axis composing a NMLI. This is a first parameter recognized in our research. Like any other parameter, it is definable and measurable factor helping to grasp ephemeral or complex properties of the relational system.

Homophily vs. Heterophily

To explain some tendencies and activities taking place in the innovation networks we need to introduce two important structural attributes: homophily and heterophily. 'Homophily is a principle that a contact between similar people occurs at a higher rate that among dissimilar people. The pervasive fact of homophily means that cultural, behavioral, genetic, or material information that flows through networks will tend to be localized. Homophily implies that distance in terms of social characteristics translates into network distance, the number of relationships through which a piece of information must travel to connect two individuals' (McPherson, Smith-Lovin, and Cook 2001, 416). Homophilic relations are based on shared characteristics e.g. values, knowledge, skills, beliefs, wealth, social status, geographic closure, ethnicity etc. Heterophily is the opposite of homophily. Individuals connect to each other for love of dissimilarity and diversity. They bring various, diverse, manifold material and non-material resources composing or dynamizing the network structures. Homophily and heterophily are two opposite extremes of the second axis composing a NMLI.

There are many competing evidences in the subject literature on effectiveness of homophily or heterophily in the processes of creation and diffusion of innovation. Great piece of research has been done by Everett Rogers. Rogers compared homophily to 'an invisi-

ble barrier to the flow of innovations within a system' (Rogers 1983, 275). High degree of homophily slows down the rate of diffusion of innovation. 'Heterophilous network links often connect two cliques, spanning two sets of socially dissimilar individuals. These interpersonal links are especially important in carrying information about innovations' (Rogers 1983). But if system is characterized by extreme degree of heterophily diffusion occurs only between limited number of opinion leaders or agents (p. 276). So, it is necessary to realize that there is no one appropriate direction in constructing the innovation networks. All structural properties need to be balanced and fitted to a specific phase of the system development life cycle. It is worth to mention that Rogers' remarks are partly convergent with Granovetter's proposal of the strength of weak ties (Granovetter 1973).

The role of homophilic networks in processes of creation and diffusion of innovations cannot be totally ignored. The transfer of information occurs more frequently between similar agents or individuals. Rogers was aware of that fact 'Homophily occurs so frequently because communication is more effective when source and receiver are homophilous' (Rogers 1983, 274). People tend to communicate with others who are alike. In unknown and risky environment we will rather look for acquaintances with similar, familiar and reliable individuals. There are many types of homophily distinguished in the subject literature (McPherson, Smith-Lovin, and Cook 2001, 419–428). At this point we would like to mention about a structural homophily based on network attributes. 'People who are more structurally to one another are more likely to have issue-related interpersonal communication and to attend to each other's issue positions […] There are powerful homophily effects in who we consider to be the relevant others in our organizational environment: those whom we compare ourselves, those whose opinions we attend to, and simply those whom we are aware of and watch for signals about what is happening in our environment' (p. 428). A structural/network homophily is an important factor determining local innovation. According to a developmental phase of the system homophily can be analyzed both as stimulant or depressant of creativity and innovation.

Highly Clustered Communities vs. Long Range

Another dimension of the emerging model of innovation is composed by two mixed structural attributes: (a) highly clustered communities

with short range links, (b) less clustered communities with long range links. A great number of researches has been focused on clustering in social networks (McPherson, Smith-Lovin, and Cook 2001; Rogers 1983; Watts and Strogatz 1998). There are many models of clustering in contemporary social network analysis based on connectivity, distribution, density etc. Intuitively, by cluster we mean a group or subset of same or similar nodes (vertices). Vladimir Estivill-Castro warns that a notion of 'cluster' is not and cannot be precisely defined because of many competing clustering algorithms existing in the subject literature (Estivill-Castro 2002, 71). The top-down approach (divisive) regards clustering 'as the segmentation of a heterogeneous population into a number of more homogeneous subgroups' (p. 65). The bottom-up (agglomerative) view divides entity into the smaller datasets by chosen criterion of similarity. To meet the purpose of our research we propose to use the Johnson's hierarchical clustering algorithm (Johnson 1967, 241–53). The Johnson's algorithm allows us to divide networks into optimally connected or optimally compact clusters. This procedure is available in the UCINET software but there are many more SNA programs offering the Johnson's hierarchical clustering procedure. However, many researcher use other clustering models to grasp the important factor differentiating or unifying objects in a given networks.

The long range problem has been already discussed in a contemporary social science (Acemoglu, Ozdaglar, and Yildiz 2011). There is no one simple answer on how effective are long range links in creation and distribution of innovations. That effectiveness is a corollary of many major or minor effects and determinists. In 2011 interesting results has been delivered by Daron Acemoglu, Asuman Ozdaglar, and Ercan Yildiz. They revealed that 'networks with a small degree of clustering and with long range links might diffuse the innovation further' (2011, 10). Nevertheless, diffusion of innovation is highly path dependent. A few minor shocks of insignificant events may change the structure of local business. The long range links provide a diverse and up-to-date information. They secure an access to the various resources of knowledge and information. If we consider moderate or limited performance of many cluster initiatives it is more rational to assume that the long range links better stimulate creativity and innovation at the local level. However, we also need to bear in mind that innovation, path dependency and public policy is deeply influenced

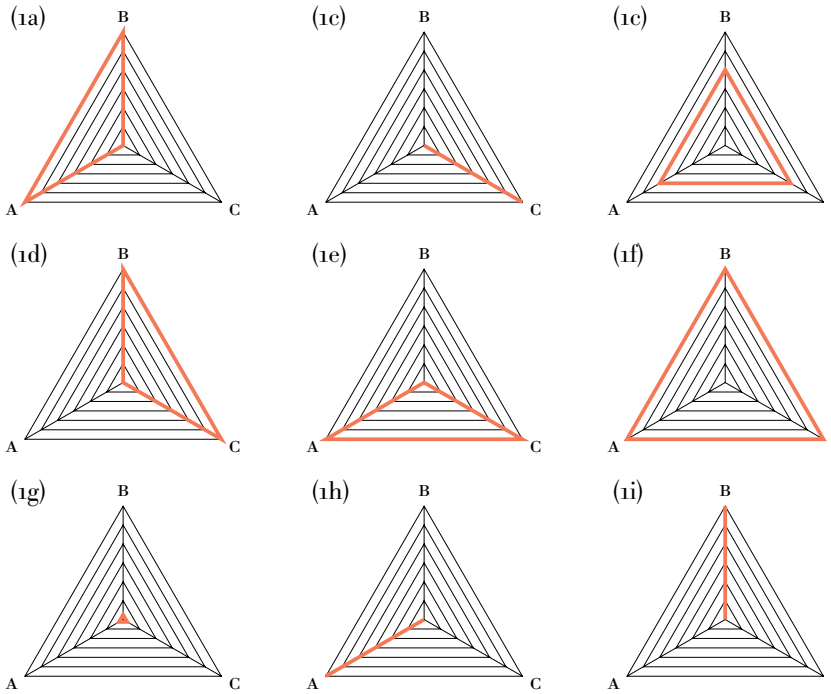

FIGURE 1 The Examples of Value Distribution for Three Axes (A – clustered community vs. long range, B – clusure vs. str. holes, C – homophily vs. heterophily)

by the performance of all agents forming the innovation network(s).

Highly clustered communities with short range links and less clustered communities with long range links compose the last axis of emerging model of innovation. As we mentioned before, it is possible to add new dimensions to the proposed network model of local innovation.

Graphical Presentation of Results

Proposed model measures three dimensions of social relations emerging both in real and virtual world. In figure 1 we presented nine graphs with various distributions of values from all three dimensions of NMLI. Each graph can be interpreted its specific way. For example figure 1a illustrates situation of (A) high level of closure, (B) high level of clustering and (C) high level of heterophily (0 for homophily). Figure 1g illustrates (A) high level of brokerage/structural holes, (B)

high level of long range links and (c) high level of heterophily. Nine extreme situations/graphs taking place at the local level show the general way of reasoning. Next step in the process of relational capital management is comparison of NMLI with qualitative data derived from local environment.

Conclusion

NMLI is a first step in the complex process of relational capital diagnosis and management. We believe that network models help to understand social relations emerging and developing in real and virtual worlds. It is possible to add more network dimensions to NMLI in order to adjust it to local specificity. But at this stage we focused only on methodological rules showing how to build NMLI. In order to stimulate local creativity and innovation NMLI needs to be supplemented by (a) IT tool designed to handle multidimensional relational data and (b) complex management strategy for relational capital.

Acknowledgments

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Cyberculture in the City on the Example of Lublin

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The subject of this paper is a particular form of network organization known as CouchSurfing. The goal of this article is to illustrate a pattern of integration between cyber-culture and the city life.

Network: Definitions and Meanings

Network organizations, organization – a network or organizational networks are a popular research subject in the recent times. The most frequently associated with the analysis of network sociologists are probably Jacob L. Moreno, Anatol Rapoport, Steven Strogatz, Duncan J. Watts, John Scott, Linton Freeman i Mark Granovetter. Often they are also associated to virtual organizations and cyberculture. Numerous specific concepts of a that have been formulated by such authors as Lev Manovich, Arturo Escobar, Fred Forest, Lawrence Lessig, Manuel Castells, Howard Rheingold. The elements of such a network is the relationship created by the network partners who have specific expertise and trust and ethics. The organization, which divides and optimize their value chain between the different entities, operating in several countries, becomes the model for an integrated network.

A net, in its primary meaning, 'it is a piece of open-meshed material used typically for catching fish […], a fine fabric with a very open weave.' Then the concept evolved in 'a structure with a net used in various games, e.g. as a goal in football, to divide a tennis court, or to enclose a cricket practice area' or as 'a means of selecting or securing someone or something: he spread his net far and wide in his search for success.' The more modern meaning of the net is from 'a communications or broadcasting network' throw 'a network of interconnected computers' to 'the Internet' (*Concise Oxford English Dictionary* 2008, 961).

Kadushin (2005) has defined the network as a relational system consisting of objects and a map or description of relations between

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these objects or nodes. Each network system consists of two basic elements, which are listed in the definition of nodes and connections (Kelly 2001, 1). The least complicated structural network system consisting of two objects and a relation connecting them is called in the literature *dyad* (Wassermann and Faust 1997, 8).

Nodes can be both individual actors, groups, organized social institutions and companies. While the bonds which are connecting them symbolizing the nature of relationships that link them, such as shared values, visions, ideas, trade, friendship, kinship, the flow of information, exchange of experience, employees, customers, or conflict. Connections - so the relationship between the nodes are structured in a network. The relationship between parts of the network is the basic unit of analysis. The most interesting feature of this system is the model showing the example image of the individual relationships, such as kinship, friendship and communication links at the organizational level (Levine and Mullins 1978, 16).

The most simple model of network is a diagram consisting of spatial points plotted and connected by linear structures emerging from this position, indicating the most important types of connections between individual nodes. In network theory, the concept of the node should be connected with the concept of the node's position occupied in the network, which implies the nature, direction and destination of potential links that can be established between the most valuable objects in the structure of the network (Lovaglia 2006, 112).

Granovetter defines a social network 'as a set of nodes or actors (persons or organizations) linked by social relationships or ties of a specified type' (Granovetter et al. 2000). Both compounds as well as the relationships have a certain content and strength. In Social Network Theory, alternatively known as Social Network Analysis, social relationships are analyzed through the prism of nodes and linked them connections in a structured network (Haythornthwaite 1996, 323). Theoretical considerations concern the relationship between individuals expressed through the emerging patterns of interaction. In the social system, treated as an abstract pattern of points connected by lines, the importance has a specific structure of the relationship, pushing analysis of the identity of nodes into the background (Strogatz 2003).

The personal characteristics of individuals are marginalized, sticking to the fore the study of complex network beyond the traditional

boundaries separating many scientific disciplines. All properties of a network system are the direct result of the particular structure of relations, not the characteristics of its individual nodes.

Creating the network of relations is often associated with forms of cooperation based on communication activities, analyzed by Habermas (1999) as a culturally rooted process for social consensus. The structure of the relationship, so that the main processes of interaction in the network, are based not only on the linguistic forms of communication, but also on the nature of the media which do not have this character, which could be for example power and money.

Each approach has been connected by some common characteristics of the network: links, points (nodes) of the convergence of these links, one common point of reference, or overview of these relationships and these nodes and the fact that the destruction of the network element does not involve the destruction of the entire network. An example of such a network is CouchSurfing.

CouchSurfing: The Social Network

CouchSurfing is an international organization bringing together thousands of people from around the world. In the 2013 there are more than 7 million of members in 100,000 cities in 207 countries, speaking 366 languages.[1] Its main purpose is to bring together different people – hosts and guests, travelers and locals. Members of the organization help each other during the journey – offering the place to sleep or a guided tour through the city.

Participation in the Club is free – anyone can join. Members have the option of providing information and pictures of themselves and of the sleeping accommodation they offer, if any. Registered and approved members have access to information about other members of the Club.[2] The organization was founded and run by volunteers who believe that facilitating the contact of travelers and local people in other countries and other cultures will contribute to build a better world.[3] However in 2012 Couchsurfing started to be provide by for-profit organization which is now very controversial in CS world. More information provided by a member, and other members, improves

[1] See http://www.couchsurfing.com/about.html
[2] See http://www.couchsurfing.org/about/about-us/faq/
[3] See http://www.couchsurfing.org/about/couchsurfing-team/founders/#fenton

the chances that someone will find the member trustworthy enough to be his host or guest.

Members looking for accommodation can search for hosts using several parameters such as age, location, gender and activity level. It depends of the host and the guest the duration, nature, and terms of the guest's stay. It is not provided monetary exchange, except for compensation of incurred expenses (e.g. food, ticket etc.). CouchSurfing provides editable travel guides and forums where members may seek travel partners or advice. The main focus of CouchSurfing is 'social networking' and members organize activities such as parties, camping trips, meetings, picnics and sporting events. Couchsurfing as a term is a neologism. It's refer to the practice of moving from one cs friend's house to another, often sleeping in whatever spare space is available, sometimes couch or floor, staying one day or more before moving on to the next house. The mission statement of CouchSurfing is:[4]

> At CouchSurfing International, we envision a world where everyone can explore and create meaningful connections with the people and places they encounter. Building meaningful connections across cultures enables us to respond to diversity with curiosity, appreciation and respect. The appreciation of diversity spreads tolerance and creates a global community.

Club members, by traveling and sharing experiences are trying to connect to each other oceans, continents and cultures.

The purpose of this paper is to reflect on whether hospitality exchange networks can be developed through new technologies? What is the influence of such groups on perception of the city like Lublin? What is the role of the Internet in everyday explanation of reality? At the beginning, though, we need to explain the term 'cyberspace' and 'cyberculture.'

Cyberspace and *cyberculture*

The concept of 'cyberspace' and 'cyberculture' is very known in sociology and anthropology. Numerous specific concepts of a cyberculture have been formulated by such authors as Lev Manovich, Arturo Escobar, Fred Forest, Lawrence Lessig, Manuel Castells, Howard

[4] See http://www.couchsurfing.org/about.html/mission

Rheingold. At the same time, the process of quick change fosters an arduous attempt of describe its characteristics and to verify the implications on the level of individual experience. For these reasons Giugioni compares this idea to the New World (Guigoni 2002, 218). There is a palpable reality of cyberspace, its ambiguity (presence and absence), difficulty in understanding how to manage a broad community of the things, clarifying by the language that brings the shared experience terms, references and practical knowledge.

The arbitrary consequences of 'Cyberspace' network is using the term of 'Cyberculture' in the describing the network. We can defined 'Cyberculture' as the culture that has emerged, or is emerging, from the use of computer networks for communication, entertainment and business. It is also the study of various social phenomena associated with the Internet and other new forms of network communication, such as online communities, online multi-player gaming, social gaming, social media and texting (Lakoff and Johnson 1998). In this way the 'cyberculture' can be any kind of social communities in Internet. There are also other terms which started to have different meaning in the virtual life.

The results of inclusion to research the terms 'surf' and 'Internet' allow to create two different combinations of their use. May be a connection of establishment of the various relationships between objects and the reference field with different prepositions: 'This spatial orientations beginning to take in the same constitution of our formation and our functioning in the physical location which is surrounding us' (Lakoff and Johnson 1998, 33). In this case, we observe the use of the expression 'navigating in the Internet.' Here, the entity is located inside the network: the Internet is seen as a half immersed in it. We can observe the quality of input and information; we only imagine the unit while is trying to deal with the diversity of stimuli selected in the appropriate preferences or abandoned, looking for intuition, in a fit of the currents.

The phrase 'surfing in the Internet' can be seen as another case. Now the object is where the object is placed: it refers to the idea, that the platform of action and interaction is a kind of surface. On this surface operate individuals. They have the need to activate the communication. In this case the network is more similar to the map oriented by the present.

Similar transitions will proper verify in the retinue of the mecha-

nisms, connection of the technology data, where 'the intelligence is always self-reflection, which interiorize also its external instruments, which become part of due process of reflection' (Lakoff and Johnson 1998, 122). The three technologies, that are most significant in the evolution of communication decisions, are writing, press and the computer (Lakoff and Johnson 1998, 122). The transition from one to the other techniques require the use of other instruments that man has adapted and created a base for their use. Perhaps the only one is not fully interiorized yet, is that in computer technology you can see the ease with which children, from the youngest age, are able to manage the computer programs. To understand how, in fact, the rate of interiorization is coming with incomprehensible speed for generations which were before. If you ask a boy 'do you navigate' it is very possible that he respond affirmatively thinking immediately about the computer rather than about a sailboat. A metaphor for navigating in the virtual world is already very deeply rooted.

These tools are evolving, differentiating and adapting to the culture, lifestyles and usages. Therefore, the development of the Internet, the evolution, which in the mid-nineties invaded the field of information technology is the mirror of the evolution of the society. The two key words acting as axis and binder are *cooperation* and *sharing*. This serves to the development of software, which provides and manages the contents. These actions are taking place in an environment which we imagine as a platform – this term is used today to define *webpages*. In the case of CouchSurfing another metaphor is added to that of sailing: moving from couch to couch can be defined as different surfing – riding the wave of hospitality. This frees the energy that comes from the mutual exchange and circulate offered hospitality.

Networked Sharings

Couchsurfing is classified as a form of 'networked sharings,' in which participation is both on-line and off-line. The interaction begins at the website and finishes in the real world. It is the trend to not view the two worlds as dissociative environments, but as pure variables. We observe that more and more aspects of everyday life integrated and are getting integrates into the Internet: 'websites are becoming more closely linked with physical activity, which has an impact on the world created out of objects, events and roads. This is happening

because we are moving the solid parts of our lives on to website' (Lakoff and Johnson 1998, 99).

Understanding between strangers is activated by on-line contact. In the network the opportunity to know each other is very large and interactions occur also between people who are unknown off-line. Perhaps this is a way to destroy this little wall of fear that exists, although it is normal for members of the Club to contact each other by a web, exchange phone numbers and then to meet.

Overcoming barriers leads to an understanding not only at the level of restrictions between countries and distant places, but also in terms of interpersonal relationships. Social networking has two dimensions: real life and on-line interactions. They become more integrated and compatible with the time, and each of them is essential. There is no question of splitting or alienating from the identity. In this sense, it is important to reconsider the idea of 'virtuality' and how it can interfere in daily life. 'This is particularly the case for the question that dominated the debate on the social dimensions of the Internet during the 1990s: does the Internet favor the development of new communities, virtual communities, or, instead, is it inducing personal isolation, severing people's ties with society, and ultimately with their "real" world?' (Castells 2004, 386).

Who keeps the isolation and alienation, pledged today a trap for himself. Some authors (Castells, Baudrillard) emphasize that thinking about the dichotomy of real/virtual is very interesting. According to Castells' concept of virtuality: the reference to virtual reality, to show the symbolic, constitutes all forms of communication: 'all realities are communicated through symbols' (2004, 404). Today range of news is not the transposition of characters, but is rather a construction, which the author calls the virtuality of reality: 'It is a system in which reality itself (that is, people's material/symbolic existence) is entirely captured, fully immersed in a virtual image setting, in the world of make believe, in which appearances are not just on the screen through which experience is communicated, but they become the experience' (2004, 404).

At the level of the ordinary it is very interesting going beyond the dichotomy virtual/real and its serves considering how these relationships are born reciprocity and support. Further they integrate the dynamics of interaction present in traditional face-to-face relationships, their further procreation. They not only play a role in the commu-

nity, but actually reproduce the same community and, consequently, deserve other scientists attention.

An example of this are locals city groups of CouchSurfing. They grow even in small cities and their core is to bring together people which are connected in the local virtual life. Those groups are more or less active in ordinary life and serving as locals as travelers. Usually any of the groups have one or more forums which work as boards to exchange information. It is possible to ask help while traveling, find interesting news about the place interest or usually find company for spending free time together. Every group has its own moderator, more than one for larger groups. Moderators work to keep the group together and try to taking care of the travelers and topics which are posted on the forum.

The CS Community in Lublin

An example is the CS Lublin Group, which has been active for over six years. The group has own moderators which are trying to animate the group city life. It is not the biggest polish group. Has more than 3 thousand profiles but active members, living CS city life is of course much less. This group does not have an official website (like for example CouchSurfing Milan[5]) as a platform to exchange news about coming events, but use group's Facebook profile[6] where constantly active are 137 persons.

Also very active is the group forum on the CS website, where travelers coming to Lublin can find a lot of interesting news about the city and what is going on in the local group.[7] The forum is also the place where people share information about interesting things to do, events, meetings or their city problems. It is especially useful for those which are new in the city and don't know where to go, what to visit, what and where to eat or normally searching for a nice company to share a spare time. It is not a place for search a couch. It is forbidden to ask about that on the forum. Every person should ask about that personally, sending couch request. For those who have some problems to find a place to sleep moderators of the group cre-

5 See http://www.csmilano.org/carnival2012/main.html
6 See https://www.facebook.com/groups/148926855132380/
7 See https://www.couchsurfing.org/n/places/lublin-lublin-voivodeship-poland

ated Emergency Couch Lublin[8] where it is always possible to find someone who would like to share his home with those who need a help. 'Are you in Lublin and still don't have a couch? Here you find people who are almost definitely and almost always ready to give you a couch.' So they are trying to help in the virtual life as well as in a real one.

Very interesting sub-group is also Language Exchange Club Lublin.[9] This group is for people who want to help each other in learning and practicing languages through conversation groups and tandem exchange. Couch Surfers are the natural core of such a group because usually part of that making foreigners which are living in the city. And at the end this is another very interesting group in Couch Surfing community in Lublin. Lublin Hard working ppl 26+' group[10] which is strictly directed to working people. This group is small (33 participants) and was is not really common in CS world. The existence of this group in Lublin is not surprising. Lublin is well known as an academic city which could not exist without students. Also this category of people is the basic of Couch Surfing in Lublin. But this is also very specific category of people, living daily life if different way than workers. It can be then understandable that elders members of CS in Lublin wanted to created different activities and life inside Couch Surfing. But this fact does not influence the way of hosting people. It is only another method of transfer cyberculture to the real life.

Conclusions

Internet is a privileged space in which a gift can be transmitted. In such an environment the relationship of reciprocity can be established, the amplitude of the network and the physical distance of the nodes are not an obstacle to the transmission. It could be even an incentive (especially in our case, since the offer of accommodation has the prerogative mobility, originates from moving from one point to another). The gift is not far from the technology and persists right through the most advanced forms of the use of computer tools. In our case, the element that allows the circulation of the gift hospitality is the spirit that unites the members, a quality not only a material

[8] See https://www.couchsurfing.org/group.html?gid=25191
[9] See https://www.couchsurfing.org/group.html?gid=29469
[10] See https://www.couchsurfing.org/group.html?gid=25128

factor. Hospitality is a very special gift where the donor is included in the same offer, welcoming the guest to its presence is determinant.

CS members are finding new technologies very useful in daily hospitality exchange. The platform which they created and are everyday re-creating is also making easier the understanding of the city – the city, even though you are a tourist, begins to be viewed from a local's perspective. In this way internet cyber-culture becomes a real culture in the city – with real people which are living there as well as citizens and tourist in the same time – in a perfect harmony. The conclusion of this paper is that the hospitality exchange network can be perfectly developed through new technologies – which are only the beginning of 'real' urban networks. CouchSurfing project is a very interesting example of this special coexistence of the virtual and real society in the city.

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Virtual City in the Abstract: Changing the Nature of Urban Space

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Introduction

Internet technology has often been viewed as an example of an active, virtually-based agent of social disintegration, responsible for the decay of traditional urban space. Common perceptions of spatial processes taking place in cities were aligned to the recognition of abilities of Internet technologies to effect a moral decline of urban societies (Nieszczerzewska 2005, 19). The latest technological and social changes have inspired social scientists to consider virtually embodied transformations of cities as key factors for the advent of new urban space meanings (Grębowiec 2010, 160). Virtual spaces have started to develop in parallel with changes of conventional urban spaces that people inhabit.

The arising of a new kind of urban space – a virtual city, with its cyber-residents and networked-based interactions – is a quintessential social Internet phenomenon. The Internet pushed cities and their residents to grow and develop and conquer new social lands of cyberspaces, free from problems of overcrowded populations. Cyberspatial forms of virtual cities are still impacting urbanism and traditional architectural forms, providing different perspectives of communication possibilities, reinstating social activity, redistributing the populace (Baudrillard 2001).

The paper presents a changing nature of urban space connected with the Internet technology impact. The author shows how virtual city is transformed into collections of different phantom landscapes for collective actions of invisible crowds in cyberspace.

Space: A Place We Lived in

A *space* is one of the most meaningful and important notions for the whole of humanity. To discuss matters connected with its functioning means to enter into the crucial debate about the conditions of human beings in the present and the future, still more virtually immersed,

Peripheral Metropolitan Areas in the European Union: The Case of Lublin, edited by Z. Pastuszak, M. Sagan, and K. Żuk, 261–269.
Bangkok, Celje, and Lublin: ToKnowPress, 2015.

social order. The overwhelming power of the space discourse has been prominent for over twenty centuries. The general framework of a *space* includes three main concepts of its nature and specific features.

Geographically understood *space* is often considered as land, a territory, a private property, which enables a general description of the Earth in terms of some kind of specific location, an awareness of existence of objects in geographic data (Zarycki 2000, 5–22). Spatial awareness is strictly connected with cultural determinism (Jelonek 2011, 389–91). People can conquer and posses geographical lands.

It can be characterized as an abstract idea and referred to as a hypothetical, complete homogeneity space, but its impact on human and cultural behavior is invaluable. Buildings, designed by architects, create real and powerful social structures of relations (Tarkowski 2006, 21–38). *Space* is understood as a matter related to human collectivity (Burszta 2011). The geographical understanding has been recently asserted by colloquial language resources and popularized on a large scale.

Physical discourse characterizes a *space* as the boundless, three dimensional extent in which objects and events occur and have relative position and direction.[1] A space is treated as a geometry: all that surrounds us, and is a background for all physical phenomena, is an example of space. The traditional Euclidean space was changed in the 20th century, after the acceptance of Einstein's theory of relativity. A space is connected with time. This special kind of connection creates a *space-time*, which is independent from objects. Albert Einstein concluded that the past, present, and future exist simultaneously. Einstein proved that time is relative, not absolute as Newton claimed. The spatial discourse impacted the discussion which is being carried out on the changing nature of urban features from the early days of those forms of collective life.

The global changes can be seen from many theoretical perspectives. A changing nature of urban architecture is one of the most interesting aspects of transformations of cities from traditional, strongly culture-oriented structures to virtual forms, more universal and autonomous models. The building of cities has a long and complex history (Zarycki 2000, 5–22). The origins of urban forms are con-

[1] See http://www.britannica.com/EBchecked/topic/557313/space

nected with the history of human kind. Cities always served as centers of storage, trade, and manufacture (Wolek-Kocur 2011, 373–86). City space was reserved for centers of governments, sacred religious places and played the role of economic-oriented structures (Sitarski 2005, 397).

Cities have provided a fertile ground for the evolution of human culture. In antiquity, a city played a very important role as a meaningful space for living. The most important values which established architectural rules and determined a specific character of city space, were connected with a wider philosophy of life. Architectural space was transformed into a symbolic order of the times and referred to as the crucial feel of the age.

The Roman city reflected the geometrical rules of the times. Urban structures mirrored the human body symmetry based on the binary divide: bones, eyes, ears – the body shape was perceived as the most beautiful organization model (Głyda 2010, 153). The human body shape was treated as the base for the architectural design of cities. The human body shape determined the symbolic order of the decade and influenced the localization policy. The body has many meanings and influences the spatial philosophy connected with the aspects of symbolic power of structures. The human body was at the center of common interest.

The Middle Ages destroyed the role of the body symmetry and demoted the universal place of the body, as an imperfect, sinful organism. The ideological transformation influenced the urban structure. Cities started to be defined as dangerous places, full of deprivation and deviation. The architecture of mediaeval cities mirrored the global vitiation process: plenty of dead end streets, warrens of channels and unknown, anarchic spaces. The anarchy of the labyrinths met the moral organization of the main architectural solutions: temple and market.

The next historical decades brought many similar changes to urban planning rules. The 16th century invention of perspective transformed urban spaces into open ones. The effects of, for example, the Great French Revolution are very well seen, even in contemporary times. The width of the streets, and other solutions, which affected the emergence of social anonymity in the city being understood as the model of life. The 19th century and industrial structures, so characteristic for the epoch, brought the *architectural devastation* of many

symbolic human spaces. The 20th centuries metropolis also mirrored the specific changes of the dominant ideology.

The greatest transformations are linked with the 21st century alterations. Nowadays, symbolic spaces are being produced by one technology, dominating all aspects of human life – the Internet. The Internet is considered not only as a technological tool, a root-like structure system, a case of a typical machine. The term 'Internet' is often used as a synonym to 'Cyberspace' – a new social space in 'cyberworld' where a real virtually embedded life of posthumans takes place (Balsamo 2001, 495). Communication is more often treated as a new social tie, a new social communion being sacralized in acts of connectivity among the non-identified others – coexistences of the hard to define experience of 'e-presence.'

Electronic communication is based on a text and words (Miczka 2008–2009, 207). Hyper-text and worlds are involved in a postmodern and multimedial culture of interactivity.

Hyper-text is immersed in views, pictures, images and voices of cyberspaces. The Internet technology impacts the flow of intellectual and informational resources, determines the main attributes of the networked social order and indicates its features. The status of cities in the Internet Age is still subject to ongoing change.

Freedom of Forms

Second Life is a cyber-world developed by Linden Labs. It was started on the 23rd of June, 2003. The game offers possibilities for living in virtual reality on self-created terms. Everyone can live, exactly as he or she wants to, and do whatever one wants to in a limitless way.[2] It is a massively-multiplayer online real-life game with a six-million-player population endowed with a power to create structures in their living environment according to players' changing needs. *Second Life* users are called Residents. They can interact with other co-residents through avatars. All of the users explore a virtually-based world and perform their online activities – such as meeting, working, free time spending, creation of groups and communities, virtual property trading, services – impacting the economy of offline reality. The most

[2] The possibilities of life and space transformations are of course bounded by the software from the technological point of view. Virtual citizens do not think about limits.

important game feature is its core promise of allowing the building of tailor-made spaces.

The virtually originated architecture of the cities undergoes constant evolution. In other words, the architecture of cibercities is a permanent process. The virtual world is built on a main land surrounded by islands, where virtual cities are still emerging and changing the virtual architecture of social relations. Avatars can construct homes, buildings, shops, as well as greater ensembles such as cities.

The idea of the game does not impose any restrictions in the field of architectural patterns. Virtual compositions of urban components are open and the openness of buildings implies interesting effects according to the virtual cities theme. Residents can create any of their dream projects. They are free to choose homes – their forms, colours, localization, etcetera, and modify them as many times as they want to, thereby taking total control of virtual space.

The shake-up of human imagination, fancy and invention of space seems to have no end. Despite the given possibilities, freedom of spaces brings about surprising effects. The virtual structures of *Second Life* are often banal and do not imply any of the new emergent qualities of urban solutions. The promise of limitless life made to suit all of the users triggered effects of an unforeseen architectural and spatial disorder. The spatial arrangement of virtual cities design sees awesome architectural solutions coexisting with the spatial chaos of misconceived architectural combinations.

Reaping the harvest of the cyber morphogenesis leads to a strange theoretical disorientation.[3] The 3D modelling software is being used as a tool for building a great variety of geometric models and spatial shapes. They influence the social space through its unpredictable follow-ups. The untidiness of spatial forms, cyber-mess

[3] For example, Anthony Giddens, author of the theory of structuration, explores the question of whether it is individuals or social forces that shape our social reality. He eschews extreme positions, arguing that although people are not entirely free to choose their own actions, and their knowledge is limited, they nonetheless are the agency which reproduces the social structure and leads to social change. He claims, that 'social structures are both constituted by human agency, and yet at the same time are the very medium of this constitution,' and that, 'to examine the structuration of a social system is to examine the modes whereby that system, through the application of generative rules and resources is produced and reproduced in social interaction.' Compare with Ritzer (2003) and Mestrovic (1998).

of uncontrolled space shaping by cyber-citizens is connected with cyber-organization. The analysis of the virtual city structures has fundamental functions for the understanding of the general cyber-transformations of contemporary societies. The cyber-shapes of social spaces produce the cyber-social order rules. The procedural, scripting language called Linden Scripting Language which is being used to add social interactivity to objects, shows the very early emergence of the cyber-symbolic power networks immersed in the online context of human existence.

The cyber-spatial disorder influences also the ways social relations are established and sustained. The lack of the architectural planning in the offline life breaks the social relations structures by determining serious difficulties in cultivating social organizational rules. Unpredictable city structures seem to be understood, at the social level, as possibly dangerous and hard to conquer. The cyber environment brings about the most unpredictable architectural spaces, based on personalized decisions and free choices, but also offers tools for building social bridges between varieties of ever-evolving mobile structures. Residents can travel through these spaces by walking, running, flying or teleporting.

In *Second Life* an alternative virtual world shows possible solutions to unsolved offline communication problems. Teleportation, used when avatars wish to travel from one location to another quickly and efficiently, gives users power over architectural barriers, and tames the potential danger of architectural disorientation.

Walking, running, teleporting, and other virtual possibilities of reaching a chosen destination are bridging structural barriers which seemed to be essential for the process of making friendly, otherwise 'nasty,' urban spaces: industrial and modernist structures, responsible for the growing anonymity of contemporary city citizens. The virtually embedded structures – mobile cities – rejuvenate the offline, broken-up social ties. The virtually immersed cities are examples of this new kind of social mobility.

E-mobility of the e-citizens can be characterized in terms of new communication patterns of the multiple-influence power. E-communication restores potentially unpleasant and anonymous city structures. The analysis of the communication takes a theoretical primacy in the cybercities discourse. The flow of material and immaterial goods between virtually designed urban agglomeration struc-

tures provides the analytical frames for forthcoming transformations of cities. *Second Life* is just one of numerous examples of global changes of urban life. The biggest transformations are virtually embedded. Cyberspaces contain quite a lot of imitations of real life: digital homes for netizens, broadcasting stations, city plazas, multiplexes, clubs, restaurants, bars, schools, banks, city halls, museums, urban clinics, urban emblems, etcetera.[4]

Conclusions

The changes in spatial perception brought about by the rise of virtually embedded technologies pave the way for forthcoming mobile cities – cyber metropolis, phantom landscapes, flexible structures easy to be conquered and transformed by virtual citizens. The technologies of e-transformations will still be reproducing existing social structures. Virtually immersed interactions of Internet users are impacting the perception of the space-time relationship through the creation of a different kind of space. Cyber spaces of virtual cities are still growing. Questions about the future order of cities in virtual worlds are open. The nature of the questions will also alter, accordingly to the new changes in the re-production processes of e-mobility. The direction of the changes is still undecided: towards virtual structures or towards mobile cities?

Architecture of virtual cities seems to resemble well-known offline city structures. Cyber zones are reflections of classic architectural views. We can see conglomerations of different types urban features: antique architecture, modern skyscrapers, ancient settlements, tribal villages, fairy-tale based places, ghost cities, dangerous areas – fighting zones, closed encoded spaces with a limited access – coexisting peacefully in cyberspace. Freedom of forms is being sustained by acts of communication, which imply interactions and networking possibilities.

Cyber cities also swallow up real city institutions.[5] The competi-

[4] *Cybertown*, an online community-based game, shows similar perspectives of urban architecture in cyberspace. The game gives cyber-tools for making virtual zones more domestic. The *Cybertown* zones resemble architectural solutions well-known from 'real life' (Kaneva 2007, 56–73): The Plaza, the ePlex, The Clubs, The Flea Market, The Black Market, etcetera.

[5] In 2007, Brazil became the first country to have its own independently run portal of Second Life, operated by an intermediary-although the actual Second Life grid

tion between the two modes of institutional organization has started. The E-revolution brings about a new credo for a new society gathered around an ever-more complicated technology. The message is a promise of a better life in the world of connectivity built of acts of communications.

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Cities and metropolitan areas have become the major centers of a new socio-economic order in the modern world. Their development determines the success of numerous national economies since it is large cities that integrate the key development processes, innovation and creativity, academic spirit and culture, networks and virtualization, participation and bottom-up civic initiatives.

A particular role in stimulating and diffusion of development is assigned to large municipalities in the peripheral areas, most frequently less economically developed. Exemplary are the regions located at the eastern border of the European Union, Eastern Poland included.

The major city and the only metropolitan area in Eastern Poland is Lublin. The city, being the region's largest demographic center, its primary economic, academic, cultural and administration center, has a major role to play in this area of Europe. A prestigious weekly newsmagazine, *The Economist*, announces that it is Lublin which holds the potential to 'lead' the development of the entire Eastern Poland. Janusz Lewandowski, the European Commissioner for Financial Programming and the Budget, has compared Lublin to the Eastern German city of Dresden and Saxony Region, which have become the driving force as well as a development center for that part of Germany.

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