

Erie, PA and Lublin, PL – Situational Economic Analysis of Sister Cities over the Last Twenty Years

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Erie, PA and Lublin, PL are sister cities. These cities share similar economic development patterns. Although there are similarities between past and current economic trajectories, the political economic background and history of these two cities is very different. The authors intend to develop a situational analysis of these two cities based on statistical evidence concerning past economic performance indicators. A brief introduction concerning overall economic developments which are a foundation of understanding past, present and future prosperity will be followed by the presentation of economic indicators from each of the two cities over the last twenty years.

BACKGROUND

The trajectory of US economic development has followed a pattern of financialization over the last 40-50 years. According to Palley, financialization is a process which tips the scales towards the financial elites controlling the economic and also political landscapes. Furthermore, financialization alters both the micro- and macroeconomic fundamentals and does this via three ways: “changes in the structure and operation of financial markets, changes in the behavior of nonfinancial corporations, and changes in economic policy. Its principal impacts are to (1) elevate the significance of the financial sector relative to the real sector, (2) transfer income from the real sector to the financial sector, and (3) increase income inequality and contribute to wage stagnation”. Palley further asserts that financialization places the economy at greater risk of “debt deflation and prolonged recession”. Along with neoclassical economic policies of privatization, financialization was also heralded as an economic growth motor. In fact, economic growth has been less than most protectionist regimes and is now becoming endemic to western economies. “Internationally, fragility was evident in the run of financial crises that afflicted the global economy in the late 1990s and early 2000s, and it has surfaced again in the recent U.S. sub-prime mortgage crisis that spread to Europe” (Palley, 2007, p. 1). This transformation of the U.S. economy has had direct impacts on Erie, PA as well as many rustbelt cities and towns. Although the following section deals with more macroeconomic developments, these are *de facto* the developments which have led to the current economic situation in Erie, PA. Interestingly, we can view Erie, PA and Lublin, PL as two varied points on the socio-economic and political spectra. Lublin, via its membership in the parliamentary system of social democracies has a definitive wealth redistribution mechanism which is currently not a

relevant alternative for Erie, PA. However, many of the characteristics of neoclassical economics and financialization are already having their impact in the EU and specifically, in Lublin.

The US economy has transformed from a manufacturing society into a service society with a tendency to outsource. Looking at the past 60 years, one can see “the evolution of the input-output structure – which is mostly due to professional and business services – accounting for 36% of the increase in services and 25% of the fall in manufacturing. Over the past few decades, the reported share of services in the economy has certainly experienced a sharp increase in most countries. In the US, for example, the service sector today accounts for more than 83% of total employment – a considerable increase from its share of 60% in 1947. On the other side of the coin is the widely lamented decline of the manufacturing sector” (Berlingieri, 2014, p. 1). However, this is also coupled with stagnant wage development since the late 1970’s.

“O’Halloran, Epstein and McAllister of Columbia University (2010) did a study on the developments in financial regulations over the last 50 years. Their study, examined 77 major pieces of legislation passed between 1950 and 2008 with respect to the financial industry. The findings indicated that although the financial industry has grown from approximately 3% of Gross Domestic Product (GDP) to 8% of GDP in that time frame, the executive branch has ever less discretionary authority over this industry despite its growth. In addition, the number of political actors involved in “authority” over the financial industry has increased, creating a web of overlapping and conflicting interests. Thus the government is unable to effectively regulate and/or oversee the financial industry. The amount and complexity, as well as increased internationalization of financial products, has increased dramatically in this same period. The obfuscation of these products via this increasingly complex and copious legislation has been accompanied by a decreased ability of federal regulators to ensure suitable risk within the financial markets.

“In 1985, the financial sector earned less than 16% of domestic corporate profits. Today, it’s over 40%. In the 1960s, finance and insurance accounted for only 4% of GDP, whereas in 2007 finance and insurance accounted for 8% of GDP. The purpose of the financial services industry is basically to transfer money from savers to entrepreneurs.... Yet, this relatively simple service cost our country more than \$2 trillion in 2007. That was more than the country spent on health care, construction, food, utilities or transportation.” (Sinn, M., 2012, p. 1).

The following direct quote from the article “The 40 Year Slump” written by Harold Meyerson, writer for *Prospect.org* and *The Washington Post*, best summarizes the history of U.S. productivity and wages from 1947 through 2013: “Productivity had risen by 97 percent in the preceding quarter-century, and median wages had risen by 95 percent. As economist John Kenneth Galbraith noted in *The Affluent Society*, this newly middle-class nation had become more egalitarian. The poorest fifth had seen their incomes increase by 42 percent since the end of the war, while the wealthiest fifth had seen their incomes rise by just 8 percent. Economists have dubbed the period the “Great Compression.” Then, it all stopped. In 1974, wages fell by 2.1 percent and median household income shrunk by \$1,500. Productivity has increased by 80 percent, but median compensation (that’s wages plus benefits) has risen by just 11 percent during that time. The middle-income jobs of the nation’s postwar boom years have disproportionately vanished. Since 2000, even as the economy has grown by 18 percent, the median income of households headed by people under 65 has declined by 12.4 percent. Since 2001, employment in low-wage occupations has increased by 8.7 percent while employment in middle-wage occupations has decreased by 7.3 percent. Since 2003, the median wage has not grown at all”.

According to Meyerson, the decline of the American job is ultimately the consequence of the decline of worker power. Beginning in the 1970s, corporate management was increasingly determined to block unions’ expansion to any regions of the country or sectors of the economy (such as retail and restaurants) that were growing. An entire new industry sprang up, composed of consultants that help companies beat workers’ efforts to unionize. Although the National Labor Relations Act prohibits the firing of a worker involved in a union-organizing campaign, the penalties are insignificant. Firings became routine, as four efforts by unions to strengthen workers’ protections during the Johnson, Carter, Clinton, and Obama presidencies came up short. By 2013, the share of private-sector workers in unions declined to just 6.6

percent, and collective bargaining had been effectively eliminated from the private-sector economy. Supporting conclusions from writer, Lawrence Mishel, author of “The Wedges between Productivity and Median Compensation Growth” and “CEO Pay and the Top 1%”, also lead to jaw-dropping statements concerning executive compensation. Mr. Mishel states: “Since 1978, CEO pay at American firms has risen 725 percent, more than 127 times faster than worker pay over the same time period. CEOs now make roughly 206 times more than workers”. This is a disheartening statistic that sparks issues with corporate governance and profit maximization.

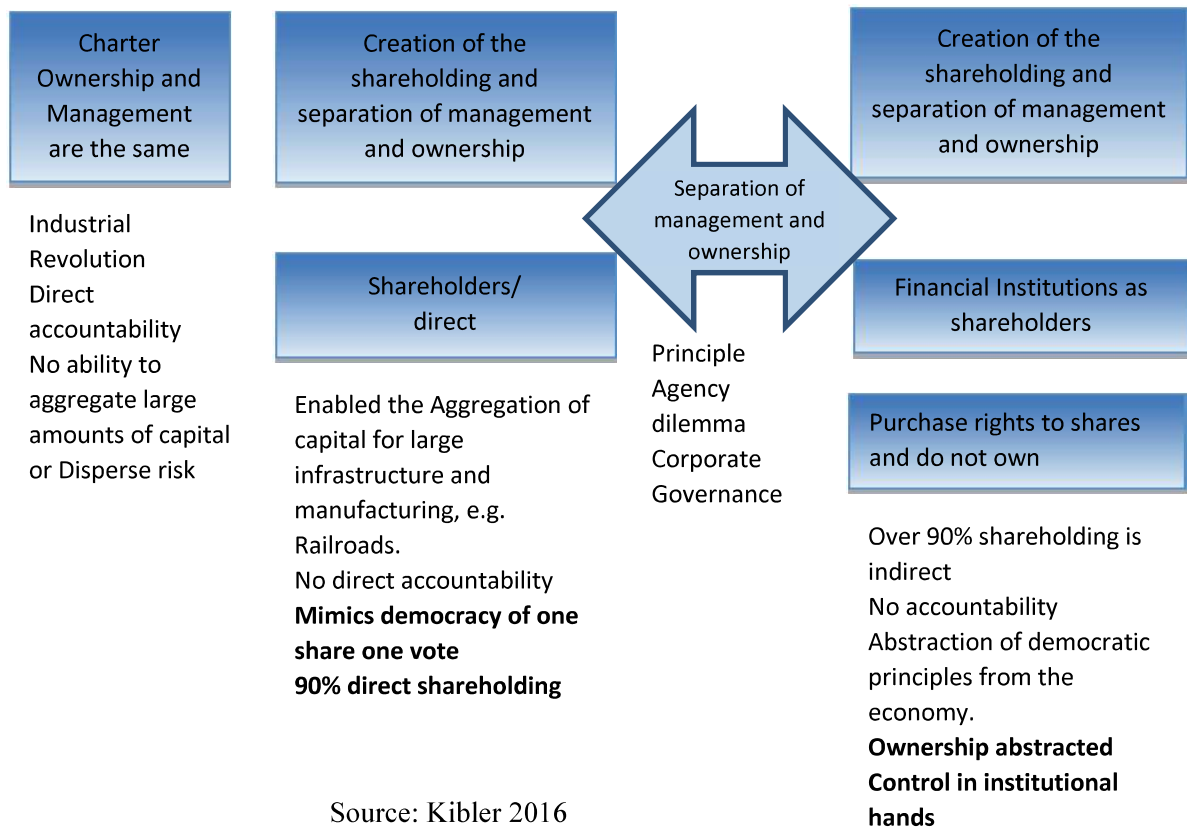
In conventional economic theory, productivity increases should result in pay increases for labor. However, an analysis of wages and productivity in the U.S. and the E.U. shows that compensation has not met the upward productivity trends. Where conventional economic theory flounders is its failure to factor in the power of management and stockholders and the weakness of labor. According to Meyerson, “gains in productivity have been apportioned by the simple arithmetic of power.” Corporate governance has transformed corporate values to emphasize shareholder maximization and employee wage stagnation.”

Writer Steven Greenhouse, of the New York Times, believes “overall employee compensation — including health and retirement benefits — has also slipped badly, falling to its lowest share of national income in more than 50 years while corporate profits have climbed to their highest share over that time”.

Meyerson goes on to explain that Germany’s identity is more greatly defined by manufacturing than America’s is. However, this is a result of national political and economic structures in Germany that not just bolster manufacturing through vocational education but also give workers more power via codetermination, a facet of corporate governance which is unheard of in the United States and carries the culturally distasteful label of ‘socialism’. By law, all German companies with more than 1,000 employees must have equal numbers of worker and management representatives on their corporate boards. By practicing a brand of capitalism (Social Market Economy) in which employees and communities still matter, Germany has been able to subject itself to the same forces of globalization that the United States has without substantially diminishing its workers’ power and income, yet.

A study performed by the Economic Policy Institute, titled “Understanding the Historic Divergence Between Productivity and a Typical Worker’s Pay” provides information supporting the widely known productivity to wage disconnect in America. The authors of the report, Josh Bivens and Lawrence Mishel, stated: “The gap between the growth of average and median hourly compensation reflects the growing inequality of compensation, as the highest-paid workers enjoyed far faster growth in their compensation.”

The following chart shows the abstraction of ownership from the actual population to the financial institutions and the loss of any form of democratic control. The piece missing from the diagram is the government, i.e., the regulatory regime which is now dependent on the money flow controlled by the institutional investors.



There has been an abstraction of the control of the market away from direct shareholders to indirect and institutional shareholders which results in a funneling of money to the institutions and their executive management. This is probably best exemplified via Vitali and Glattfelder's essay on Global Corporate Control and the corresponding TED talk 'Who Controls the World' (https://www.ted.com/talks/james_b_glattfelder_who_controls_the_world?language=en). Additionally, this development eradicated the semblance of democracy underpinning our economic system by taking shareholding voting rights away from individuals and placing them in the hands of institutional investors.

According to a 20 year study by Princeton and Northwestern Professors illustrates Congress's likelihood of passing legislation according to the general population vs. the financial 'elite'. There is a 30 percent chance Congress passes laws that people want, regardless of % of the people who want the legislation, i.e., no correlation. However, the elite representation are corporations that employ lobbyists and laws passed in their favor. For this sector there is an over 60% chance that legislation that is in their favor will be passed.

All in all these developments have led to a hollowing out of the US economy, the stagnation of worker participation on productivity gains, which is inherently coupled with the loss of higher value manufacturing jobs to the benefit of lower wage service jobs and a loss of direct control from the population on the system as a whole.

Erie, PA has been a traditionally manufacturing economy. Erie still maintains approximately 20% manufacturing jobs. This must, however, be ameliorated by an almost 40% loss in population as a city over the last 40 years. So, the manufacturing sector has held steady at 20% of a diminishing population, ergo it has also constricted by about 40%. All of the developmental aspects described above are endemic to a myriad of smaller cities and towns throughout the United States, especially in the so-called rustbelt.

Erie is in the throes of a battle with poverty, with a poverty rate of almost 30% in the city. This rate goes down to 14.7% when looking at county data. Additionally, most economic and even societal indicators are below U.S. averages, from educational spend to household income. As international companies either continue to evacuate by sending production to lower cost locations (also within the U.S. as is the case with GE at the current time sending jobs to Texas), or consolidate their industries by buying up competition and closing local plants (Hammermill Paper), economic, social and even environmental indicators have continued to fall. This is exemplified in a series of charts in Appendix 1.

Again, the overall macroeconomic developments discussed are symptomatic not only for Erie, PA but for many rustbelt and small to mid-sized cities in the U.S. These developments are also relevant for Lublin as the infrastructure buildup is still in progress via the wealth redistribution mechanisms of the European Union. However, as is also evident, financialization is already eating away at European countries' abilities to maintain their social programs and there is already clear evidence of the wealth gaps and their coincidental erosion of social benefits developing there as well.

We will now turn our attention to the developments in Poland which form the background of analysis and understanding of the situation in Lublin.

Economic Development of Poland, 1990-2015

A development of cities and regions takes place under specific macroeconomic conditions. It is not only the country level which should be taken into account, but also the wider transnational context, including also the global level (internationalization, globalization etc.). It is no different in the case of Lublin – the largest city of Eastern Poland. Unlike the USA, since the turn of the 1980s and 1990s of the twentieth century, Poland went through a difficult process of political, economic and social transformation. This represents substantially different development characteristics for Lublin, PL compared to Erie, PA. This difference does not mean, however, that both cities cannot learn from each other. On the contrary, it seems that the successes and failures experienced by both cities can provide valuable lessons, which can and must draw conclusions for the future. It is important, therefore, to present, at least briefly, the evolution of conditions in which Polish cities have a chance to develop their potential.

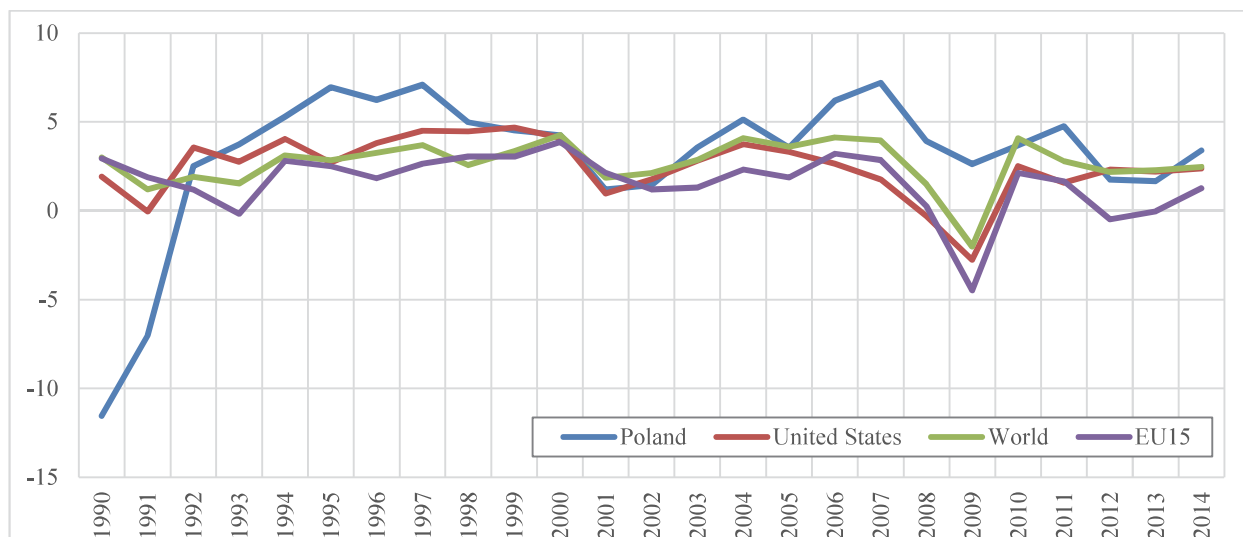
Geopolitical changes that occurred in Europe in the early 1990s meant that the majority of post-socialist countries radically changed the direction of their political and economic interests, turning westward. The adoption of a democratic system meant the necessity to build state structures from scratch and based on a tripartite division of power – legislative, executive and judicial. In the economic sphere Europeans rejected the model of a centrally planned economy and went towards a model based on the market mechanism with a limited state intervention. These changes were made possible because of the favorable political conditions in Europe and the world. Strong support from the United States and Western European countries for democratic change was a necessary condition of political transformation. At the same time a disintegration of the bloc of socialist countries contributed to significant geopolitical transformations in Europe. The majority of post-socialist countries opted for a pro-Western orientation, which finally manifested itself in the so-called Eastern enlargement of the European Union in 2004 and 2007. The EU was enlarged first by 10 (2004) and then by 2 (2007) new member states, including Poland.

Accession to the EU was a milestone in the economic development of Poland. Even the preparatory process, having been performed before the official accession has brought numerous benefits. The tangible manifestation of these benefits was access to European funds. The period of Poland's membership in the EU has been a time of intense modernization of the economy, partly due to the structural funds. In the years 2007-2013 and 2014-2020 Poland was the largest beneficiary of these funds. The EU funds are changing socio-economic reality of the country, and their skillful use leads to long-term positive results. During this period, Poland has increased its investment attractiveness for foreign companies, improved export opportunities, increased transnational mobility (open labor markets to Polish workers), as well as improved productivity of factors of production.

The most important result of development efforts taken in Poland was the creation of conditions for stable economic growth, which was reflected in the steadily increasing value of Poland's GDP, and the

GDP *per capita*. In the last 25 years Poland has doubled the real value of its GDP and reduced the difference in the GDP *per capita* level compared to the average for the EU15 from 32% to 60% (McKinsey&Company, 2015, p. 1). Figure 1 illustrates the dynamics of the GDP in Poland and selected economies since 1990.

FIGURE 1
GDP GROWTH IN POLAND AND SELECTED ECONOMIES, 1990-2014



Source: Own preparation based on (UNCTAD, 2016).

Figure 1 confirms that the overall results of the structural funds in Poland were positive. Against the background of the United States, the European Union and the world's average, Poland's economy was growing the fastest. After an initial steep decline (-11.6% in 1990 and -7% in 1991), beginning in 1992 Polish GDP growth was positive, sometimes exceeding 7 percentage points (1997, 2007). Even in times of severe economic crises Poland remained a 'green island', i.e. the only country in the EU that did not note an absolute decline in GDP (2008-2009 and 2012-2013). At the time, numerous countries reported either an absolute decline in GDP, or a significant slowdown in growth. For instance, in 2009 Japan reported a GDP decline by 5.5%, US by 2.8%, the EU by about 4.5%, and the average for the world was a 2% decline. Meanwhile, in the same year Poland showed a GDP growth of 2.6%. Although the GDP growth rate is a synthetic measure of business activity and the overall economic situation of a country, it is not the only measure we should take into account. There are other indicators that characterize changes in the economic conditions.

Basic macroeconomic indicators reflecting changes in the economic situation of Poland in the years 1990-2015 are gathered in [Table A2.1](#). Although not all of them show continuous improvement, however, they clearly illustrate the positive changes that took place in Poland within the period under scrutiny. A suppression of inflation, a decline in the unemployment rate, an increase in GDP *per capita*, an increase in the value of goods exports, and growing inflow of foreign direct investments are the most important observations that can be drawn from the data of [Table A2.1](#). Poland is currently one of the fastest developing market economies in Central and Eastern Europe, open and deeply involved in economic cooperation with the world.

After more than a quarter of century of economic change in Poland, beginning in the early 1990s, one can assess these developments rather positively (Financial Times Special Report, 2014). Though this did not all happen without difficulties, not only did Poland cope with the problems being faced by all post-socialist countries, it coped exceptionally well, becoming sometimes a point of reference for other

countries and an example that political and economic reforms are not only possible, but that they can also be effective.

In the macroeconomic conditions described above, the development process of Polish cities was taking place. Some of these cities have become beneficiaries of the new reality and nowadays they function quite well, while others still have much to do. Nevertheless, all cities are seeking their own paths of development that could ensure success to them in the future. One such city is Lublin.

City of Lublin

Lublin is a medium-sized city, the capital of the Lubelskie voivodship. It is an important academic center and a significant transportation hub, connecting Western and Eastern Europe. In 2014 the number of Lublin's residents amounted to 341,700, although over the last twenty years a downward trend can be observed. Between 1995 and 1999 Lublin's population increased (from 354,600 to 359,200), but since 2000 this number has been declining. The greatest loss of Lublin's population occurred in 2012-2013, when the number of inhabitants fell by 4,000. With respect to other cities in Poland in the years 1995-2014 Lublin's population decline remained at a relatively low level (-3.6%). As a comparison, Lodz population decreased by 4.24% and in Katowice they saw a decrease of 14.13%. On the other hand, it should be remembered that in some Polish cities the number of residents increased – among others in Rzeszow (+ 15.51%) and Bialystok (+ 6.09%).

The total population number is relevant with respect to the city's overall economic potential. However, just as important, if not more, is the division of the population of working versus unemployed groups. The data illustrating this have been collected in the [Table A2.2](#) and illustrated in [Figure A.2.1](#). Based on this data, some characteristic points can be made. First, in 1995 and 2014, the percentage of the working population of Lublin was the same (62.5% vs. 62.4%). At the same time, after an initial increase of this percentage in 2005 (up to 67.1%), the following years show a decrease. Second, there was a strongly unfavorable decrease in the percentage of people in pre-working age. The decline from 88,100 to 56,000 is a manifestation of negative demographic changes taking place in Lublin. Third, an increase of the percentage of post-working age population in relation to total population confirms the ongoing aging process of employable persons. The increase in the number of people from 44,800 (1995) to 72,500 (2014) meant an increase in the percentage of this group from 12.6 to 21.2%.

The above mentioned tendencies show that, despite a relatively minor change in total population of Lublin, serious structural changes are taking place in the demography of the city. At the same time, these trends mean that the demographic dependency ratios change adversely. While in 2002 a ratio of population in non-working age per 100 persons of working age was 50.5, whereas in 2014 it had already reached 60.2. Yet, the ratio of people in post-working age per 100 persons in pre-working age changed even more dynamically. In the same period, this ratio increased from 75.9 to 129.7 (Local Data Bank, 2016). Another indicator showing a burden for working-age population is a ratio of post-working to working age population. Here, the changes included the growth of 21.8 to 34 (Local Data Bank, 2016). Unfortunately, population projections suggest that these problems will be exacerbated moving forward. The trends are illustrated in the [Figure A2.2](#). The unfavorable predictions for Lublin of a large decline in the group of working and pre-working age population and an increase in the number of people of post-working age can be observed. The situation is even less favorable against the background of changes in Poland. It is expected that in 2050 the number of people in pre-working age will fall by 37.9% (in Poland 27.8%), working age by 31.9% (22%), and the post-working age will increase by 19.9 % (39.3%).

These changes affect the size of the economic potential of the city and shape the versatility potential of labor resources. At the same time this demographic shift represents the most important policy challenge to the city.

The analysis of employment by economic sectors shows that Lubelskie voivodship follows the transformation towards a growth in services and a decline in agriculture. Unless these trends are consistent with nationwide trends, Lubelskie voivodship is characterized by a much larger share of an agricultural sector and a smaller share of industry and services (see [Figure A2.3](#)).

The structure of employment in Lubelskie voivodship described above does not match the structure of employment in the city of Lublin. Lubelskie voivodship has in fact a high, one of the highest in Poland, share of the agricultural sector and relatively low share of industry and services. In contrast, the situation in the city of Lublin looks very different (Kuśpit, Pasierbiak, 2015, p. 217). [Table A2.3](#) presents data characterizing employment in Lublin by sectors. The data confirm that employment structure for Lublin city is more modern than for the entire Lubelskie voivodship. The percentage of agriculture, forestry and fishing in total employment in 2013 was at the level of 4%. Although the indicator increased in comparison to 2005, still, the level was quite low. Interestingly, one can observe a slight drop in industry and construction's share, but percentages of all other sectors remained stable. The most significant change in percentage could be observed in other services (more than 46%), while trade, repair of motor vehicles, transportation and storage, accommodation and catering, information and communication services accounted for 24,3% (2013). Altogether, three services groups indicated in the table, accounted for 77,4% in 2013, the same level as in 2005 (77,5%). In comparison to the average for Poland, the sectoral breakdown of employment in Lublin city has transformed more to a services oriented economy. According to the data by the Central Statistical Office, the average employment in Poland for: 1) agriculture, forestry and fishing; 2) industry and 3) services stayed at the level of 16,7%, 20,2% and 63,1%, respectively (Central Statistical Office, 2015, p. 242). Although it should be remembered that these are average levels for all of Poland – metropolitan and rural areas altogether. Nevertheless, the sectoral breakdown of the employment structure in Lublin shows that Lublin has its potential in service-related areas but that industry could also be a field of growing interest.

The analysis of wage and income earned in Lublin shows that they grow steadily. In 2002 the average salary in Lublin was 2,145 PLN, which accounted for 95.8% of the national average. By 2012 salaries had increased to 3,711 PLN, reaching 99.1% of the average (Local Data Bank, 2016; Municipal Employment Office, 2016). In the [Figure A2.4](#) the total available monthly income in Lublin city and its relations to Poland's average is shown. Only in 2005 did disposable income fall compared to the previous year, but the decrease was very small.

Some interesting information can be derived from the data relating to disposable income in Lublin to the national average. From 2005 to 2009 there was a constant downward trend, as in 2005 a disposable income accounted for 88.3% of the national average, and in 2009 it fell to just 81.6%. Since 2010 an improvement of the situation can be observed, with particular emphasis on the year 2013, when disposable income in Lublin rapidly increased and reached a level of 94.5% of the average for the country. Recognizing the positive changes that are occurring in the last few years, it should be noted that despite such high dynamics (2013), the monthly disposable income in Lublin is lower than the national average. Relating this data to other major cities (e. g. Warsaw, Wrocław), the situation would be even more unfavorable.

An increase in income is partly a result of the improving situation on the labor market in Lublin. Lublin is an important regional labor market, attracting labor from the surrounding areas. The unemployment rate in the city is much lower than for the whole region of Lubelskie voivodship. The relevant data are gathered in the [Table A2.4](#). Analyzing the data, one can surmise several characteristic trends. First, the unemployment rate for all territorial units showed similar changes from 2004 to 2008, followed by a significant improvement of the situation, and from 2009 to 2013 by its deterioration. It was not until 2014, when the unemployment rates started to decline again. Second, the situation of Lublin in the entire period analyzed was better than in Lubelskie voivodship and in Poland. The unemployment rate in Lublin remained always at least 3 percentage points lower than in Lubelskie voivodship. This is one of the important incentives to work in the city of Lublin. This remark applies especially to people coming from smaller surrounding towns, but also to graduates of universities and secondary schools.

An attractive labor market attracts an educated and skilled workforce, which is an indication of the high potential for development. On the other hand, the education system and its structure should be adjusted to meet the demand for labor reported by companies. In this context, a coordination and cooperation between the city and high schools and universities is essential for achieving the strategic development goals. In the case of Lublin, as an important academic center, there are fairly intense

migration processes. For instance, according to a report monitoring the implementation of the strategy of Lublin development for the years 2013-2020, 90% of students at the largest university (UMCS) came from outside Lublin (Lublin Municipal Office, 2016a, p. 170). After completing the studies, most graduates leave Lublin, but this is due to their return to the place of residence in the region where they come from. The others remain in Lublin. Some graduates of bachelor studies completed in Lublin, continue their education at the master's level in another city. Frequently, the cities chosen by those graduates are larger academic and economic centers (e.g. Warsaw or Wroclaw). According to the monitoring report, emigration abroad is not a significant issue, although such a migration exists. According to the research, one year after graduation from UMCS, 97% of the surveyed graduates still lived in Poland (Lublin Municipal Office, 2016a, p. 170).

One of the important aspects of cities and other territorial units' assessment is a level of public safety. This issue is important among others for the assessment of investment attractiveness, competitiveness, economic potential and quality of life. From this point of view, the city of Lublin, and Lubelskie voivodship is rated very highly. In published reports concerning investment attractiveness of regions and subregions of Poland, Lubelskie voivodship is cited as one of the leaders in terms of public safety. This is due to the low crime rate and a relatively high rate of crime detection. In [Table A2.5](#) the collected data give an indication of the security situation in the years 2002-2015. The crime rate in Lubelskie voivodship is low in relation to the country level. The relatively high number of crimes in 2002 (24.6 thousand) fell sharply by 2015 (7.7). This happened because of the decline of most types of crime, but above all those of a criminal nature, e.g. property and road offenses. Moreover, the improvement of public security is also evident in the rates of crimes committed per 1000 inhabitants. Since 2005 this number has decreased from 36.5 to 22.6, which should be assessed very positively. In addition, an important indicator illustrating the level of safety is crime detection. In the period 2002-2015 the ratio exceeded 50% in most cases, while in 2011 and 2012 the levels exceeded 60%.

Against the background of Lubelskie voivodship, the situation in Lublin is even more advantageous in some respects. In 2008-2015 the number of recorded crimes fell from 13,785 to 6,380 (53.7%). At the same time the detection rate increased from 43.2% to 65.4% (Lublin Municipal Office, 2016b; Local Data Bank, 2016).

Perhaps the level of public safety is not the most important criterion for assessing the economic attractiveness of cities, but it certainly has some significance, at least in some areas of its assessment. Safety is significant in attracting tourists, but it is also considered by investors during a decision-making process of whether or not to locate capital in an area.

CONCLUSION

There are many conclusions that can be drawn from the experience and economic stages each of these cities is in and is developing into. The more macroeconomic investigation of the U.S. as it applies to Erie, PA and the more microeconomic analysis of Lublin are indicative of the varied developmental stages and economic and political systems driving each. That being said, there are many points of intersection on the developmental continua. Erie, PA has been declining due to its economy being based on macroeconomic models beyond its control (or seemingly beyond its control). Lublin, PL is already enjoying greater economic prosperity due to its inclusion into the European Union and the strategic use of the structural funds, i.e., a dedicated wealth redistribution mechanism. The infrastructure of Lublin is still in the process of being (re)built, whereas Erie's infrastructure has continued to decay and has, as yet, not found the tools and leadership to turn this development around. Additionally, one can also already detect developments of financialization and its effects on social support systems in the EU, in Poland and in Lublin. Additionally, both economies are suffering from the demographic changes in western populations, specifically aging and a smaller number of payers into the social system responsible for an ever growing number of more socially dependent individuals. Lastly, a major difference is that in the EU and as noted in the text, Lublin, political and economic actors cooperate, whereas the U.S. model does not necessarily foresee such cooperation.

An interesting side note is the mention of the hardships through which Lublin, Poland and other former eastern satellites have undergone as a direct effect of their economic transformations. These hardships, with their corresponding changes in perceptions and paradigms has yet to occur in the U.S. and certainly not yet in Erie. However, there are many indications that the inception of a new era is at hand. Erie must embrace new ideas, innovation and entrepreneurship, building an economy which they control more locally than being controlled by macroeconomic forces beyond their influence. On the other hand, Lublin, Poland and the EU must be acutely aware of the specific effects of financialization and the reduction of society, politics and the environment as merely tools to secure the greatest financial profit without regard to human prosperity.

The old paradigm of the race-to-the-bottom, i.e., cities competing to attract companies to build and operate in their economic spheres, bigger companies are better companies', a solely profit motive in a free market are all outdated. In order to be successful moving forward, cities such as Erie need to take control of their own economies (more local entrepreneurship and innovation) as opposed to playing the role of dependent supply chain for industries located elsewhere and with goals not geared towards local prosperity.

On the other hand, Lublin has prospered greatly over the last 25 years even as Lublin, Poland and other former soviet satellite countries have been exposed to extreme political, economic and social transformations. Lublin, the largest city of Eastern Poland, as other Polish cities, is seeking its own ways of development. It has achieved much in terms of new infrastructure and economic forms, but there are still areas of concern. The analyses carried out in this article can be treated as a first step, a diagnosis of a current state of Lublin's and Erie's development and current situation. This can be also perceived as a base for further research aimed at looking for solutions to vital problems these two cities face. A comparison to Erie – the sister city of Lublin can be helpful and in certain areas it can be treated as a benchmark.

The statistical data analysis for Lublin has indicated certain positive results but also some areas of concern.

1. Lublin has a high potential for development. Erie also has some excellent attributes with four universities, a beautiful lakeside location and logistically, perfectly positioned between Cleveland, Ohio, Buffalo, New York and Pittsburgh, PA.
2. Both cities face a demographic challenge as the seemingly ever growing elderly population is not being counterbalanced by an influx of younger workers.
3. There is a need to attract people to come and stay in Erie and Lublin for their education and professional lives. People from the larger region must be enticed to relocate to Lublin and Erie for their studies as well as for work. Additionally, incentives for local graduates and residents to remain in the area is imperative. Although the analysis shows that the average income in Lublin city is growing. This is not the case with Erie, whose workforce is not only dwindling, but whose share of the pie is also shrinking as the economy has devolved into a low wage service economy. Both cities, however, have a great need for more autonomous economies, more independent from macro supply chains.
4. As the unemployment rate in Lublin is lower than Poland's and the voivodship's average, and the employment structure is more advanced with a growing share of services and declining share of agriculture, there is a potential in Lublin to develop the service- and industry- related activities of enterprises. Erie has greater issues in this area with high unemployment averages and approximately 30% poverty (Erie city). Additionally, the regulatory environment in the U.S. is much more difficult in terms of economic activity tradeoff. That is to say, the U.S. would certainly prioritize job creation at the cost of the environment. Paradoxically, Erie is moving more and more to a tourism (sports and other) destination, without regard for environmental concerns of the lake at its center.

Finally, the data and analyses presented here are a first step in recognizing the issues and impediments to successful economic development in Erie, PA and Lublin, PA, two cities, sister cities, with different economic and political envelopes and yet many similarities. It was not within the scope of

this article to perform a critical analysis of economic development activities being planned and implemented in these two cities. This will be the subject of another forthcoming article. A thorough handling of all socio-economic and political factors involved is not possible within the framework of an article, or articles. However, the authors will attempt to create a relevant context in their upcoming analyses.

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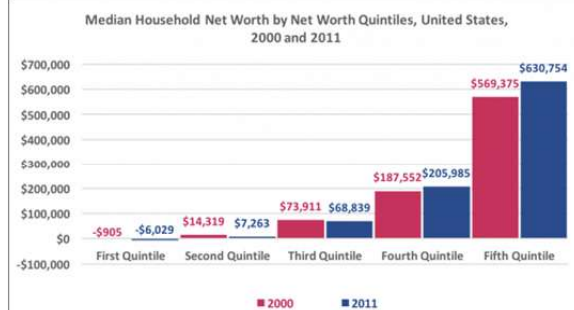
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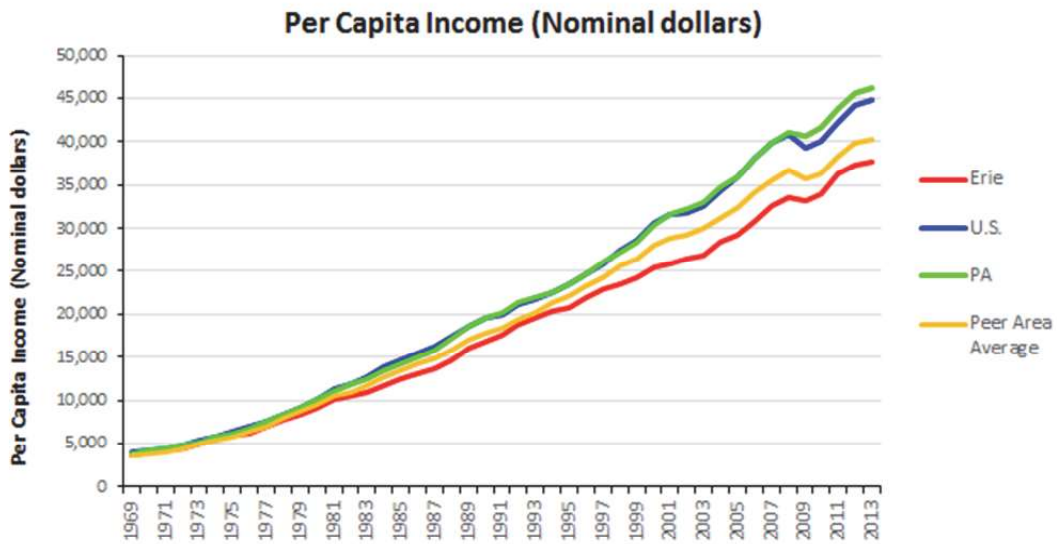
APPENDIX 1



Source: [Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data](#), Emmanuel Saez and Gabriel Zucman, August 2015

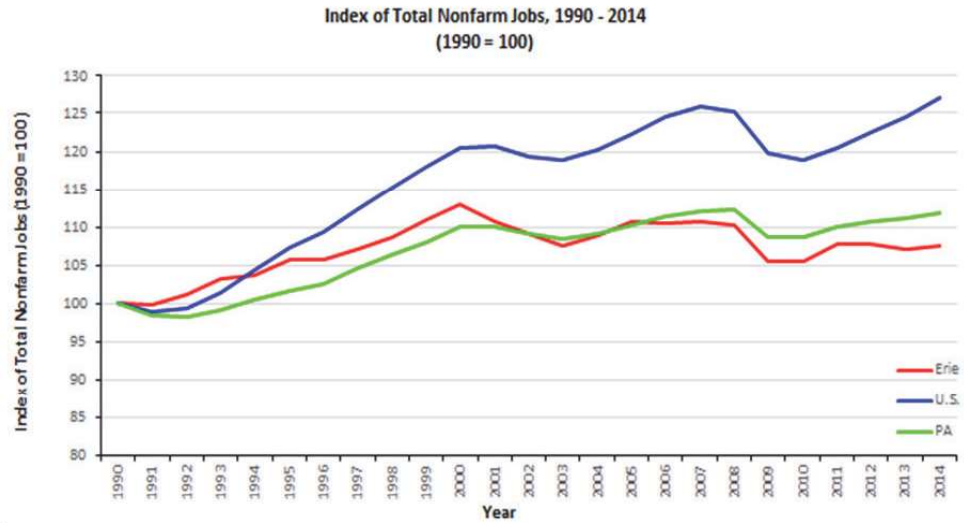


Source: [Distribution of Household Wealth in the U.S.: 2000 to 2011](#), U.S. Census Bureau, August 2014

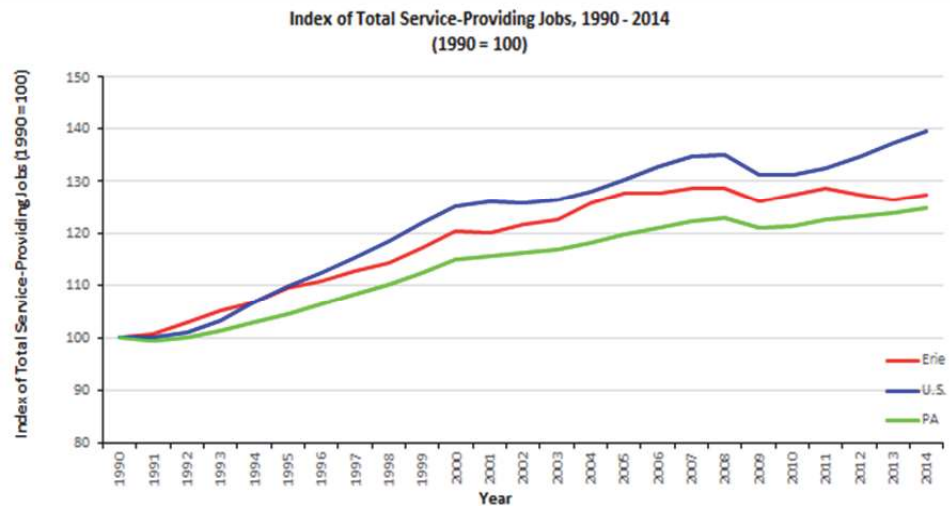


As of 2013, Erie's per capita income was \$37,729. This represented an increase of about 1 percent compared to 2012, and an increase of about 13.6 percent compared to the recession low point in 2009. However, in real terms (after correcting for inflation), though increasing by 4.6 percent compared to 2009, Erie's per capita income actually decreased slightly by 0.5 percent between 2012 and 2013,

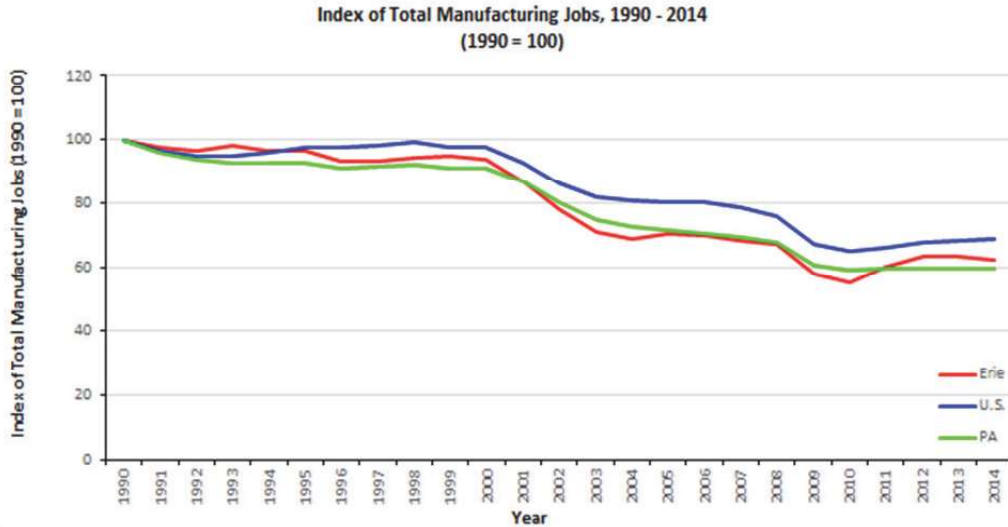
In addition, as of 2013, Erie's per capita income is 15.7 percent lower than that in the United States as a whole (\$44,765), 18.3 percent lower than that in Pennsylvania (\$46,202), and 6.3 percent lower than the average for the thirteen Erie Vital Signs peer areas (\$40,264). See more at: <http://erievitalsigns.org/the-economy/income/per-capita-income/#sthash.x77cKdWC.dpuf>



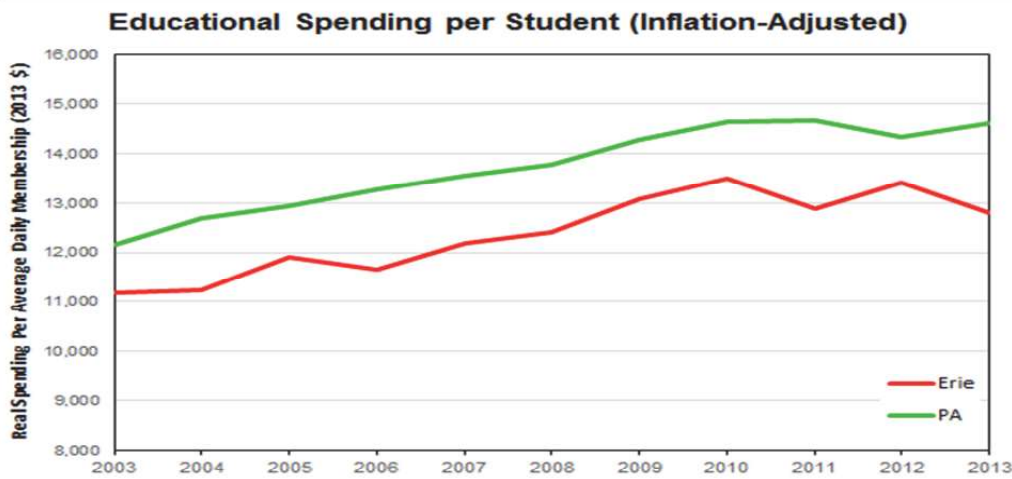
Total Nonfarm; Total Private; Total Goods-Producing; Total Service-Providing; Natural Resources, Mining, and Construction; Manufacturing; Trade, Transportation, and Utilities; Wholesale Trade; Retail Trade; Transportation and Utilities; Information; Financial Activities; Professional and Business Services; Education and Health Services; Leisure and Hospitality; Other Services; and Government. - See more at: <http://erievitalsigns.org/the-economy/employment-unemployment-labor-force/business-community/#sthash.MW6AARNY.dpuf>



Total Nonfarm; Total Private; Total Goods-Producing; Total Service-Providing; Natural Resources, Mining, and Construction; Manufacturing; Trade, Transportation, and Utilities; Wholesale Trade; Retail Trade; Transportation and Utilities; Information; Financial Activities; Professional and Business Services; Education and Health Services; Leisure and Hospitality; Other Services; and Government. - See more at: <http://erievitalsigns.org/the-economy/employment-unemployment-labor-force/business-community/#sthash.MW6AARNY.dpuf>

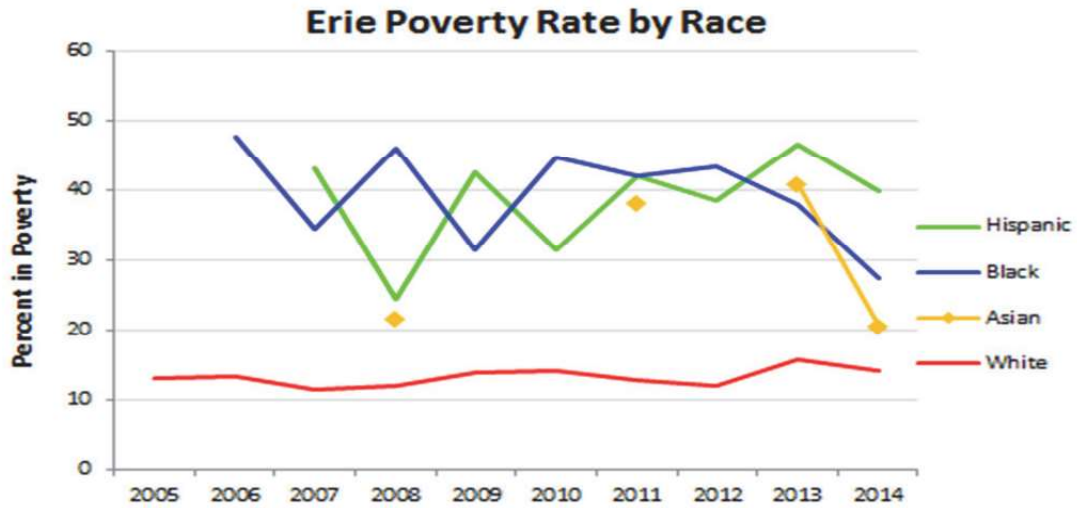


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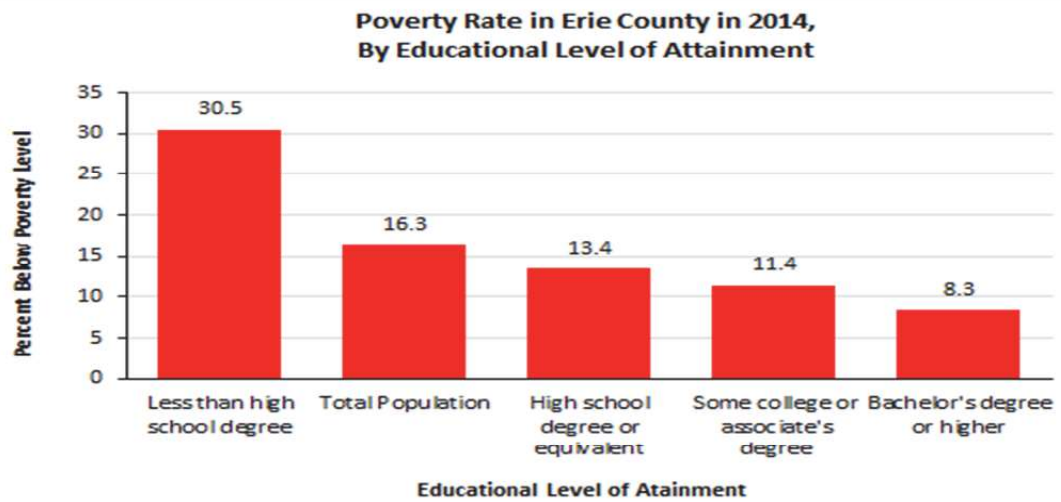


Erie County has historically fallen below the statewide average for educational spending, and the most recent data show that trend continuing. In fact, expenditure per pupil fell in Erie County by about 3.3% from the 2011-12 school year to 2012-13. At \$12,792, expenditure per pupil was 12.5% less in Erie County than the statewide average of \$14,622.

See more at: <http://erievitalsigns.org/pre-k-12-education/educational-spending/early-childhood-risk-factors-family-related/#sthash.9st9QjoO.dpuf>



Poverty rates vary significantly across race groups. While the overall poverty rate was 16.3% in Erie County (29.4% in Erie City) in 2014, the rate varied from a low of 14.2% for non-Hispanic whites to a high of 44.2% for those who identified themselves as multi-racial. This 30 point gap between the highest-poverty group and the lowest-poverty group is not unusual for Erie in recent years. In fact, it was as high as 44.7 points in 2007. - See more at: <http://erievitalsigns.org/the-economy/poverty-and-self-sufficiency/dn-poverty-rate-by-race-ethnicity/#sthash.TSiJjq8.dpuf>



As might be expected, poverty rates fall as the level of educational attainment rises. Those with bachelor's degrees or higher have significantly lower poverty rates than those who did not finish high school, consistently across our peer group.

In Erie in 2014, 8.3% of those with bachelor's degrees or higher fell below the poverty standard, while the rate for those who did not finish high school was 30.5%. A similar pattern occurred for the U.S. (4.7% vs. 27.8%) and Pennsylvania (3.9% vs. 26.0%).

See more at: <http://erievitalsigns.org/the-economy/poverty-and-self-sufficiency/ne-poverty-rate-by-educational-level-of-attainment/#sthash.Se59ohGJ.dpuf>

APPENDIX 2

Table A2.1. Macroeconomic indicators for Poland, USA, EU and world, 1990-2015

Specification	1990	1995	2000	2005	2010	2015	Change 2015/1990 (in value or %)
GDP growth (%)*							
Poland	-11.5	7.0	4.3	3.5	3.7	3.4	14.9
United States	1.9	2.7	4.1	3.3	2.5	2.4	0.5
EU15	2.9	2.5	3.9	1.9	2.1	1.3	-1.7
World	3.0	2.9	4.3	3.6	4.1	2.5	-0.5
GDP per capita growth (%)*							
Poland	-11.8	6.9	4.4	3.6	3.7	3.4	15.2
United States	0.9	1.6	3.0	2.4	1.6	1.6	0.7
EU15	2.6	2.1	3.5	1.3	1.7	1.0	-1.6
World	1.3	1.4	3.0	2.4	2.9	1.3	0.1
GDP (USD billions) *							
Poland	64.7	139.4	171.7	304.4	476.7	547.3	745.7%
United States	6012.3	7710.0	10355.0	13181.0	15064.7	17527.0	191.5%
EU15	7288.8	9139.7	8372.3	13412.5	15605.3	17006.2	133.3%
World	22900.3	30871.2	33255.9	47203.5	65430.0	77450.9	238.2%
GDP per capita (USD thousand)*							
Poland	1.7	3.6	4.5	8.0	12.5	14.3	744.1%
United States	23.3	28.4	35.9	43.6	47.7	53.7	130.6%
EU15	19.8	24.4	22.0	34.3	39.0	41.9	111.3%
World	4.3	5.4	5.4	7.2	9.5	10.7	148.4%
Inflation (%. CPI)*							
Poland	555.4	28.1	10.1	2.1	2.7	0.1	-555.3
United States	5.4	2.8	3.4	3.4	1.6	1.3	-4.1
EU15	6.4	3.0	2.3	2.0	1.5	0.5	-5.8
World	116.7	13.1	4.0	3.0	2.7	2.5	-114.2
Unemployment (% of active population)							
Poland	:	:	16.1	17.9	9.7	7.5	-
United States	5.6	5.6	4.0	5.1	9.6	5.3	-0.3
EU25	:	:	8.8	9.1	9.7	9.5	-
Export (USD billions)							
Poland	14.3	22.9	31.7	89.4	159.7	198.2	1284.4%
United States	393.6	584.7	781.9	901.1	1278.5	1504.9	282.4%
EU15	1515.5	2092.4	2311.1	3716.0	4573.0	4670.7	208.2%
World	3495.7	5176.2	6452.3	10502.5	15302.1	16483.9	371.6%
Export (% of world total)							
Poland	0.4	0.4	0.5	0.9	1.0	1.2	0.8
United States	11.3	11.3	12.1	8.6	8.4	9.1	-2.1
EU15	43.4	40.4	35.8	35.4	29.9	28.3	-15.0
FDI (inflow)*							
Poland	0.1	3.7	9.4	9.7	12.8	13.9	15676.0%
United States	48.4	58.8	314.0	104.8	198.0	92.4	90.8%
EU15	94.6	115.3	661.3	399.0	326.0	211.7	123.8%
World	204.9	341.5	1363.2	927.4	1328.2	1228.3	499.5%

FDI (% of world total)*							
Poland	0.0	1.1	0.7	1.0	1.0	1.1	1.1
United States	23.6	17.2	23.0	11.3	14.9	7.5	-16.1
EU15	46.2	33.8	48.5	43.0	24.5	17.2	-28.9

* Data for 1990-2014.

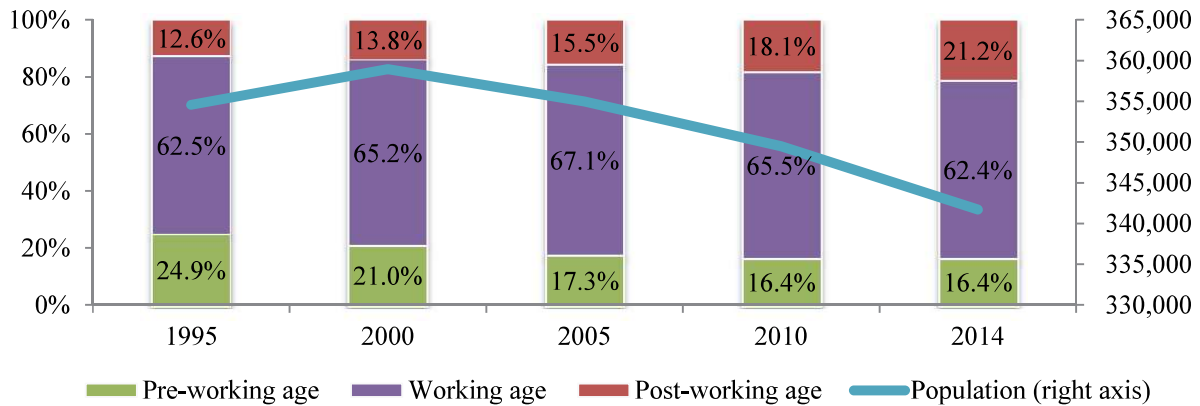
Source: Own preparation based on (UNCTAD, 2016; Eurostat, 2016).

Table A2.2. Working and non-working population of Lublin City, % and persons

Working and non-working age population	1995	2000	2005	2010	2014	Change 2014/1995 (%)
Population	354 552	358 933	354 967	349 483	341 722	-3.6%
Pre-working-age	24.9%	21.0%	17.3%	16.4%	16.4%	-34.2%
Working-age	62.5%	65.2%	67.1%	65.5%	62.4%	-0.1%
Post working-age	12.6%	13.8%	15.5%	18.1%	21.2%	68.0%

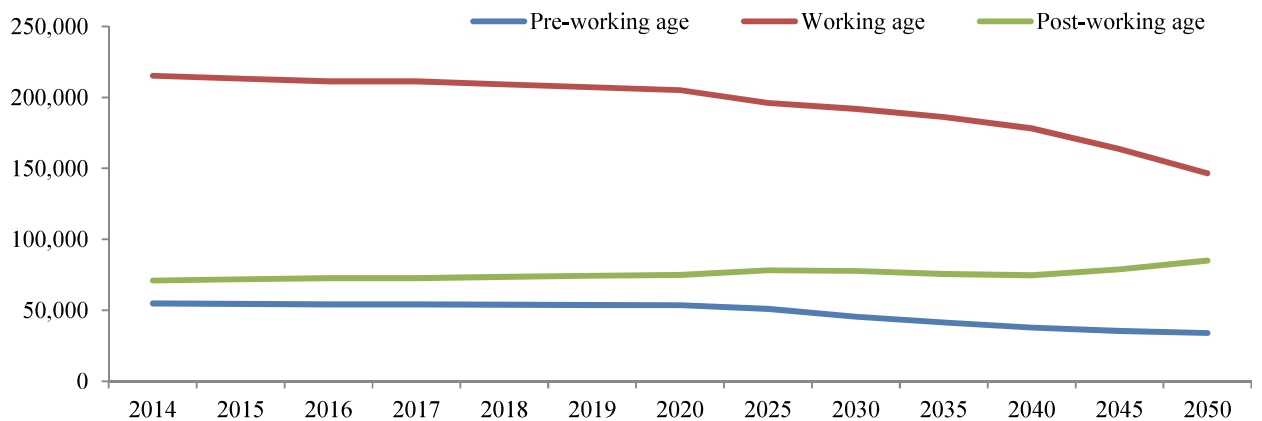
Source: (Local Data Bank, 2016).

Figure A2.1. Working and non-working population of Lublin City, % and persons



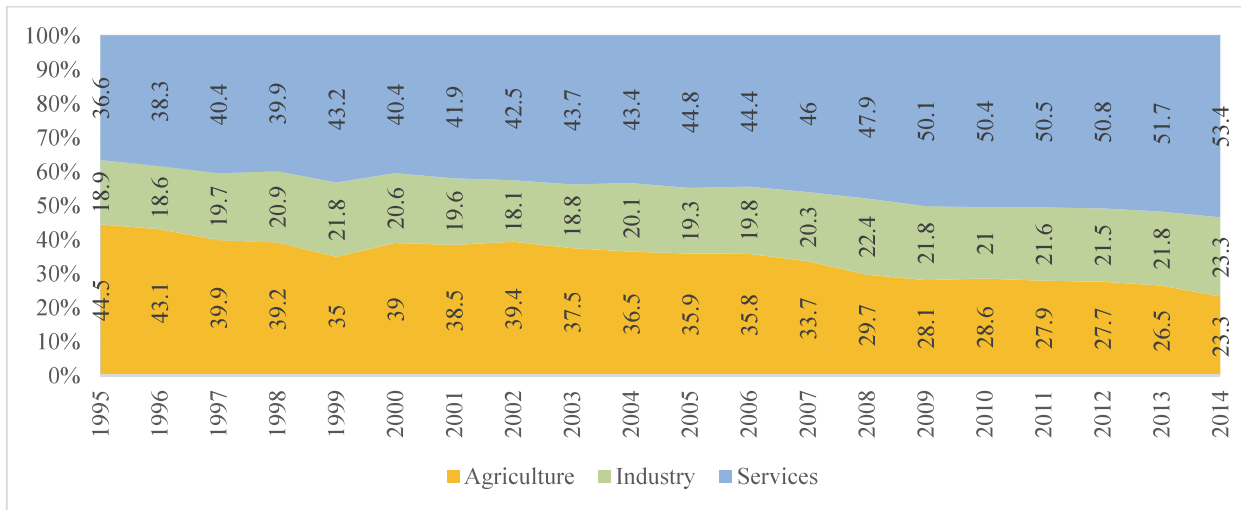
Source: (Local Data Bank, 2016).

Figure A2.2. Demographic projections for Lublin City



Source: (Local Data Bank, 2016).

Figure A2.3. Sectoral breakdown of employment in Lubelskie voivodship, in %



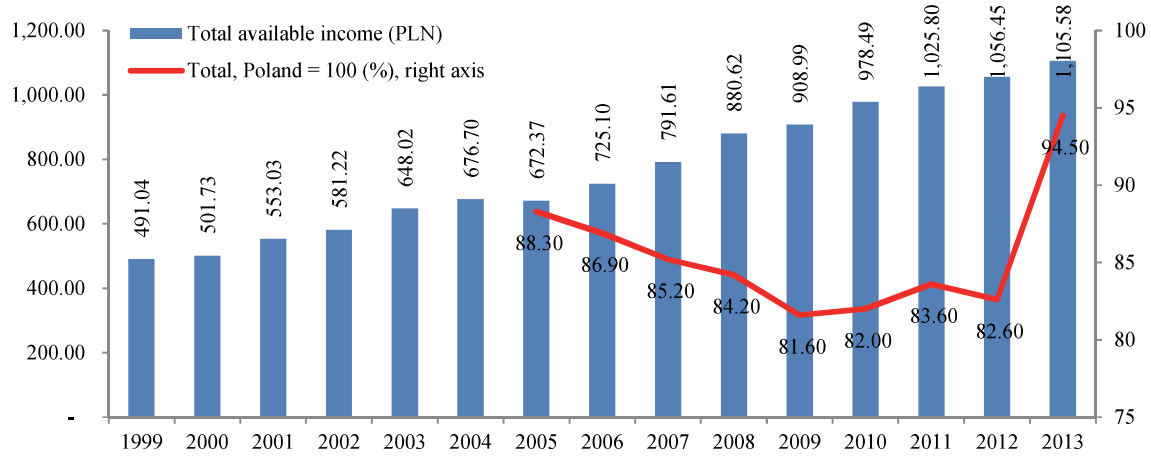
Source: (Local Data Bank, 2016).

Table A2.3. Employment in Lublin City by sections in years 2005-2013, in %

Specification	2005	2006	2007	2008	2009	2010	2011	2012	2013
Grand total (# of persons)	105 600	108 460	111 589	115 448	116 722	120 861	121 095	121 418	122 708
Agric., forestry and fishing	1.7%	1.6%	1.6%	1.5%	1.4%	4.1%	4.1%	4.1%	4.0%
Industry and construction	20.8%	21.1%	21.7%	22.6%	21.3%	20.0%	20.2%	19.2%	18.6%
Trade; repair of motor vehicle; transportation and storage; Accommodation and catering, information and comms.	25.2%	25.2%	24.2%	24.5%	25.7%	24.4%	24.2%	24.1%	24.3%
Financial and insurance activities; Real estate activities	6.5%	7.1%	7.2%	7.3%	7.2%	6.8%	6.9%	7.1%	7.0%
Other services	45.8%	45.0%	45.3%	44.2%	44.4%	44.6%	44.5%	45.5%	46.1%

Source: (Local Data Bank, 2016; Municipal Employment Office, 2016).

Figure A2.4. Monthly available income in Lublin in the period 1999-2013, in PLN and %



Source: (Local Data Bank, 2016).

Table A2.4. Unemployment rates in Lublin, Lubelskie voivodship and Poland in the years 2004-2014, %

Specification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
Poland	19.0	17.6	14.8	11.2	9.5	12.1	12.4	12.5	13.4	13.4	11.5
Lubelskie voivodship	17.8	17.0	15.5	13.0	11.2	12.9	13.1	13.2	14.1	14.4	12.4
Lublin	12.4	12.3	10.7	8.2	7.4	9.0	9.6	9.4	9.9	10.1	9.0

* September.

Source: (Local Data Bank, 2016; Municipal Employment Office, 2016).

Table A2.5. Crimes in Lubelskie voivodship, 2002-2015

Crimes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total	24 632	25 033	26 569	26 143	23 559	21 419	19 694	20 033	19 156	20 146	18 771	11 132	9 724	7 711
Total, Poland = 100	-	-	-	1,9	1,8	1,9	1,8	1,8	1,7	1,7	1,7	-	-	-
of criminal character	-	-	-	-	-	16 637	15 642	15 526	14 843	15 051	14 237	8 905	7 106	5 855
of economic character	-	-	-	-	-	1 934	1 485	1 668	1 362	1 971	1 594	1 176	1 886	
against life and health	669	651	639	584	587	-	-	-	-	-	-	242	261	189
against freedom, freedom of conscience and belief, sexual freedom	829	794	906	968	846	-	-	-	-	-	-	-	-	-
against family	1 273	1 456	1 154	994	1 110	-	-	-	-	-	-	-	-	-
against property	15 013	15 714	17 598	16 602	14 872	-	-	-	-	-	-	6 818	5 545	4 514
road crimes	3 460	3 158	3 023	3 653	3 030	-	-	-	-	-	-	664	496	520
crime detection index	51,8	50,0	47,2	50,4	51,9	52,1	49,7	52,5	56,9	60,7	61,1	52,0	50,0	-
crimes per 1000 habitants	-	-	-	36,5	33,0	30,0	27,6	28,1	26,7	28,1	26,2	32,08	28,34	22,59

Source: (Lublin Municipal Office 2016b; Local Data Bank, 2016).