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## *The Influence of the Industrial Revolution on the social- economic relations in Europe and the Polish territories*

### ABSTRACT:

This article describes the social- economic changes in Europe and Poland in the XVIIIth and XIXth centuries. It presents the epoch of industrial revolution in terms of cause and effect. It indicates the most important technical discoveries and their influence on the development of industry (textile industry, extractive (coal) industry, metallurgical industry), agriculture (high- goods agriculture, mechanized). It also shows their influence on social change (urbanization, development of industrial districts, the inflow of rural population to the town, liberation peasantry, the formation of a new social class- the middle-class, factory owners, workers). The article indicate also on the geographic diversification of the industrial revolution in Great Britain, USA at the forefront. In the geographically industrial revolution are also Polish lands (Polish territory which to three different countries, an extremely of diverse economically- Germany, is a very dynamic thriving, Russia remains far behind with the news and Austria with evolvent a slow-growing economy) from developing in Upper Silesia.

*KEYWORDS: the industry in the XIXth century, the social- economic revolution, the industrial revolution, the ideological revolution.*

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## INTRODUCTION

The beginnings of changes in the industrial production were properly placed already in the Middle Ages, almost simultaneously in the milling, textile industry and metallurgy. More numerous, therefore appeared mills powered by water or wind. To apply and use the energy of nature, people had to use machines and devices of natural energy commuting to work. In the first plants where machines existed (manufactures), the division of labor wasn't used. Many manufactures transformed in industrial plants and it happened due to inventions that increase capacity, simultaneously causing the necessity of organizational change, and efficient management. Inventions caused a violent increase of industrial production development, and thus the same demand for machines and consumer goods. The changes that achieved at the turn of the XVIIIth and XIXth centuries are defined as the first industrial revolution (the steam revolution). It was caused by the revolution of technical and technological, economic and social, which was related to arise of factory industry, and modern industrial civilization.

Technical revolution consisted in replacement of manual work by machines, primitive technology by modern technology, the production of individual products through mass production. The economic revolution means changes in production, companies characters and to develop of production planning.

The Industrial Revolution caused the transformation of society structure, decreased the importance of craftsmen, peasants and large landowners with an increase of the significance, more numerous of the working class and industrial bourgeoisie.

The XIXth century dynamised the processes development in the world. Daily life undergo of considerable quicken. Poles and Polish lands were developed in connection with the processes proceed in all Europe, which passed in this century in a great revolution of social and political-wide. Social activity in Europe

and the Polish lands was very high, where proceeded of cultural and social changes, moved concentration of population in large cities (urbanization).

The most important revolution in modern history to achieve no simultaneously and no equally degrees in different countries, and on large areas of the world has not yet occurred.

#### INDUSTRIAL REVOLUTION

The beginning of the industrial revolution took place with the replacement of traditional machines originally powered by the forces of the nature (wind and water) and by machines of energy provided by steam engines and then the electric. There had to be applied new technical solutions, which enabled transmission of the driving forces on the devices as well and the solution of the problem of change rotary motion to the feed motion, change the speed of rotation and the possibility of their disable. Through suitable of gear ratio it could achieve the higher power parameters, and thus it achieved better work results. A landmark and quickening in technical development occurred when the spread of the steam machine (Cameron and Neal, 2003).

As it was mentioned earlier, this the most important revolution, it achieved no simultaneously and in the no equal degree in different countries. The earliest, because in the 70s of the XVIIIth century, a revolution occurred in England, the richest country in Europe. It happened because there was the greatest demand for goods and raw materials. United Kingdom had also considerable the coal resources. In the middle of XIXth century, in the country the energy production rate was higher in comparison with the period before the industrial revolution by 50 kg (100 kg of wood) of coal per person weekly. It was this extra energy contributed to the industrial revolution.

Increased demand on the market in the XVIIIth century, contributed for the searching of the new technologies. Outstanding inventors as J. Kay, E. Cartwright, J. Watt, R. Arkwright, J. Hargreaves, J. Jacquard were looking for a new ways to increase the production volume, and thus profits. Among many inventions that have contributed to the fast progress of technical and technological, which then appeared the principal meaning had to innovations in metallurgy, textiles industry and power engineering.

In the metallurgy a major role has played the new methods smelting and mechanical and plastic processing of steel. During the smelting a charcoal was replaced by a hard coal and then a coke, it allowing to attain of higher temperatures and cast in liquid form. The use of new solid fuel has feed to the construction of a new type the smelting furnaces, and also furnaces to the refining the pig iron (puddling furnaces) and the introduction of the rolling mill to obtain the necessary profiles.

Still more new stage in the history of the iron metallurgy initiated the invention a new method of ore smelting in a rotary converter (Bessemer *pear*) by H. Bessemer. The method of the steel plastic working by rolling made it possible to manufacture a large quantities of products with the same properties and shapes giving the beginning of the mass production of iron (Grübler, 2003).

The mass production of iron has caused the revolution in the all economy, giving the basis to the development of coal mining for which demand is ceaselessly increasing. Spacing of industry centered around rich places in coal resources lead to the fact, that the coal basins occurred gradually of the industrial districts. In parallel, dynamically developed of textile industry, where the most important determinant of development was the mechanization of work.

At the beginning development of cotton textiles production was the introduction of spinning machines, invented in the years of 1765-1769, which allowed to achieve capacity representing 200<sup>th</sup> times in comparison with existing methods.

In 1785 was created mechanical weaving workshops, and that brought to the mechanization of the cotton industry. The revolution of power industry achieved through the application of the steam engine to energetic drives turbine, metallurgical and mining equipment.

The first steam engine which was able to power the devices was started in 1770. This invention brought to a significant unconditional source of energy from natural conditions. Technical changes have brought change in the allocation of production, favour made for a large plants in certain areas e.i. industrial districts. The Industrial Revolution started *the age of iron, machines, coal and steam*.

The Industrial Revolution in England produced principal sequences of technical and technological of global range. It became the pattern of a role model. Industrialization spread out primarily through technology transfer. The consequences of the industrial revolution were everywhere similar, but its course was different due to different natural conditions, economic, intellectual and political.

In Europe and the USA the industrial revolution was achieved in the years 1815- 1870, and in other countries later. Technical transformation began in the Industrial Revolution and continued in the next stage of the technical revolution that began in the 70- th centuries of the technical solution (Bairoch, 1993).

#### EUROPEAN INDUSTRIALIZATION OF DIFFERENT MODELS

In the XVIIIth century European Elites enough enriched that it could become of products consumers of the four continents, including such Chinese silk, Indian or Persian cotton, Canadian or Siberian furs and various ornaments of pearls and corals. In the kitchen began to use spices, sugar and foreign drinks (tea, coffee, cocoa and rum). It occurred fashionable to smoke a pipe, cigars or

taking snuff. It appeared new medicines, such as: quinine, made from the bark of trees called quiniquina (Kaliński, 2004).

Increasing demand for the foreign wood (ebony or mahogany) necessary to manufacture exclusive furniture. Consumption needs to increase, not only on the European continent, but also on the American or African, through developed the international exchange of goods.

Also in agriculture, proceed significant changes. It has undertaken a new cultivations such as wheat, potatoes, rice, maize and sugar beet. It has entered a new technique of cultivation and fertilization. This means that people started to use new tools, on which constantly increased demand (Mathias and Pollard, 1989).

It appeared significant changes in the structure of agricultural technique of the agriculture, forced the increased demand of industrial cities. In the XIXth century it started to introduce of agricultural machinery.

The XVIIIth century may be taken approximately as a period quickening of technological progress in Europe (Skodlarski, 2000). At the beginning of the XVIIIth century, the most industrialized country was the Netherlands, on further places were such countries as England, Saxony, Bohemia, Silesia and some regions of France, Italy and Spain. At the end of the XVIIIth century, determined priority gained of the United Kingdom.

The Industrial Revolution, the violent increase of production and technological has been achieved in one country- the United Kingdom of Great Britain. The factors have undergone here significant of technical changes.

Intensive development of the mechanization of the textile industry has forced progress in other branches and thus favour the technical and technological progress. Thus, systematically increased demand for steel, needed to build the machines, which resulted in the development of the metallurgical industry and use in it of new technologies in order to be equal to requirements of steel strength.

In the iron blast furnaces the pig iron smelted who was enriched by burning coal in it in order to obtain steel with decreased carbon content, which causes brittleness of steel (Maddison, 2001).

For the ennobling of pig irons served puddling furnaces where it was obtained with higher physical and mechanical parameters, destined for the further of plastic forming by rolling and forging. The metallurgy industry has free the demand for hard coal and the necessity to be processed into coke, which in turn contributed to the development of mining and processing of coal (coking plants).

The extractive industry started to reach over for natural resources of the earth deeper and deeper, and thus the man has solved a new problems, such as attraction with considerable depths and drainage deposits. The first steam engines to pump water from mines of iron ore was used in England (Czapliński, Kaszuba, Waś and Żerelik, 2002).

The Industrial Revolution started in the cotton industry, metallurgical and coal industry, and thus initiated the rapid development of machine industry. It increased demand for technical innovations and new inventions to allow for further development.

In parallel, there was a rapid development of science in chemistry, physics, electrical engineering and natural sciences. On the new tracks entered the organic chemistry, the discovery for which allowed to the use of manures in agriculture.

The great progress has made a science of electricity science. It was discovered by the Danish physicist in 1820 of the magnetic field generated by the electric current, which created the electromagnetic theory. It developed both optics and acoustics, and thermodynamics (Skodlarski and Matera, 2004).

The rapid development of science dynamised development of technique. Until 1815 the whole of Europe lagged behind the United Kingdom and only the United States rivalry with it in the domain of technical inventions. The United Kingdom underwent completely in this period on the production of machine and me-

chanical engines which used of hard coal as a energy source. In the manufacture of spinning completely controlled factory industry.

Improvement of the steam engine, which was applied in new areas, contributed to the development of the cotton industry, mining, metallurgy and communication.

Made with 1863, ships were of steel construction and steam powered. Application of an improved steam engine for ships (in 1830, paddle wheels replaced by a screw), it triggered the application of a similar machine for land vehicles. Rail transport was known since the XVIth century, but the first locomotive was built in 1797, by Englishman of Richard Trevithick (Pollard, 1999).

The second country, after England, where capitalist economy developed, was the United States. In Europe in terms of economic development, in the middle of XIXth century, another place in England occupied Belgium, where the industrial revolution started before the year 1830.

No uniformly developed German industry. Obstacle to the industrialization of the country were numerous customs barriers, the variety of legislation, the value of money and prices. In 1818 the Prussia abolished internal customs, thus creating a single market. Gradually developed metallurgy and railway transport.

Germany lagged behind France, but the tempo of development was faster than in England and was 75% and 60% in England in 1840. Has resulted in worse economic situation in Austria, where the interests of landowners inhibit technological development. There were no cheap manpower because on the backward feudal legislation. Equally economically backward countries were Italian. The worst was the situation in the Papal State and the Kingdom of Sicily.

Since the beginning of the XIXth century, the Russia lagged behind countries where the industrial revolution were. The Industrial Revolution in Russia ended only in the end of XIXth century.

The admit befit therefore, that about 1830 is ended the industrial revolution in United Kingdom and the USA, while France,

Belgium and Germany at the end of the first of the XIXth century (Ross, 2008).

#### THE POLISH LANDS IN THE DAY OF THE INDUSTRIAL RESOLUTION- THE SPECIFIC REGIONAL

Manage situation of the Polish lands, in many cases depended on the situation of socio- political and economic of occupation countries and internal conditions. However during analyzing the economic history of any region (partition) we notice that political events do not constitute a brake on their development, because economic developments and social changes appear to be continuous processes.

Polish territory after the loss of independence came under the influence of the three partitioning powers, and thus in three different of business cultures. The western and central Polish lands pocketed by Prussia, the southern part of Polish came into the borders of Austria, the eastern part were occupied by Russia.

Industry in the Austrian partition did not have favorable conditions for the development because of the weak resource base and lack of capital. The part developed of the Bohemia and Cieszyn Silesia and the Austrian province. The situation changed after the Congress of Vienna in 1815, when the Polish central parts received Russia.

After the partitions a considerable manufacture metallurgy development and mining occurred in the Polish Kingdom, thanks to government protectionist policy. Technical transformations initiated during the first industrial revolution was continued during the so- called *Second Technological Revolution*.

Developing economies in different partitions, related to the markets nationwide invaders, were not uniform, and therefore the industrial revolution in the Polish lands did not proceed uniformly. Thus the Polish Lands could be divide into three phases

of the industrial revolution. In the first phase made attempts to introduce a new technique, attempts were often unsuccessful due to the relatively low level of economic development of country.

The second phase achieved in the most important industry branches. Occurred also important of the social changes- established class of industrial workers. In the third phase of the industrial revolution took more backward branches.

The earliest and the fullest achieved the industrial revolution in the Polish Kingdom, in Upper Silesia and in Coal- field. In the Polish Kingdom come to the final transformation of the manufactured industry in modern factory industry, where all the time to increase of export. At that time, it formed three industrial districts- in the environs of Lodz, where developed textile industry, in the environs of Warsaw, where developed metal and machinery industry and in the environs of Dabrowa Gornicza, where developed mining and metallurgy industry. The Staropolski Basin is declined.

In the Polish Kingdom formed after the Congress of Vienna, was visible the economic crisis caused by the Napoleonic Wars which left destruction of that time the Duchy of Warsaw (Szczeptański, 1997). Development of industry require the supply of raw materials for processing, what forcing a new solutions in agricultural science. To increase yields, it started to use new varieties of cultivations (e.g. sugar beets and potatoes) and new agricultural techniques. Sheep developed in order to obtain wool for new nascent of wool spinning mill.

As it limit number of feudal labour it started to use new methods of cultivation and the implemented also the mechanization of fields Works. Slightly otherwise represented the situation of agriculture in other annexed territories. After 1815 in the Grand Duchy of Poznań was issued a decree on the abolished of serfage, and 1823 years in the Prussian Partition of area implemented was introduced the law, that allowed peasants to buy of land.

In the Kingdom of Prussia lands started to develop distilling of alcohol, sugar industry, and milling industry (Rostworowski, 2002). The worst of all was in the Austrian partition, where a general hunger of earth and lack of employment opportunities in the industry, resulted in continuous of grinding up and such small farms. It is much faster than the progress of peasant agriculture took engaged in the industry.

In the Kingdom of Polish the peasants personal freedom resulted in arise necessary of a resources manpower to worked out. Another important factor was the technical improvements and a protective policy. Of the government of the Polish Kingdom, having a greater ability to self determination, that it was in order of occupations. Obstacle to the development of industry was the lack of external markets and capital resources (Kochanowicz, 2006).

Also, the Internet market was weakened by the ravages of war. After the Congress of Vienna Russia signed a customs agreement with the Prussia, and the Polish Kingdom was flooded in good industry of Prussia. Submitted by Alexander I and duty on the border between of *Congress Kingdom* and Russia, a let stagnation in industrial growth increase. Only through negotiations by ministry of the treasury the Ksavery Drucki- Lubecki in 1823, introduced a duty of products imported from Prussia, which contributed to the development of domestic production.

The most important changes concerned the mining and metallurgy in the Staropolski Basin, where it introduced partially the plan of Stanisław Staszic. However, the greatest investments have taken place in the Dabrowa Coal Basin. There were mining of hard coal, smelted iron and zinc. The textile and cotton industry were developed around of Lodz. To Lodz brought from abroad to start skilled workers even Silesia and Wielkopolska.

Industrial development in the Russian partition accompanied also development of communication- the Augustowski Channel was being made, macadam road built (Żywczyński, 2002).

The Great Reich is created in 1871, was developing at a temp exceeding the British development. This dynamics of caused was to a industrialization delay of German lands.

The industry, coming after a phase of intensive development, occurred in some ways more modern than the British, which stabilized in the first stage of industrialization. One reason this success was to put to good use of potential scientific which disposed of Germany, thanks to the reforms in the early of the XIXth century. Industrial development in the state of Prussia helped victory of economic liberalism and germanwide currency- *deutsche mark* (Myška, 1996).

German Silesia experienced a development similar to that on the Polish Kingdom, which was based mainly on the German capital. The great industrial potentates many times have large estates. In Silesia developed mostly mining and metallurgical industry. The temp of changes in the economy can provide testified the power of steam engines installed in the factories. To the 1880, the Kingdom had an advantage over Russia and Silesia over Prussia.

The realized reforms in the first half on the XIXth century have brought to significant changes in the rural and in towns. It began of internal migration, the rural population began to look for work in industry, and thus followed the increase of urban population. The reforms contributed to a better job in the country, more efficient, because the peasant worked on his own. Waste management fallows, it increased agricultural and by introducing new cultivation methods and new plant varieties. It started to develop the agricultural industry and processing e.i. sugar industry, milling industry, distilling and brewing industry. Seriously developed of coal mining, especially in Upper Silesia, which outrun the Walbrzych Basin (Branc, 2000).

Economic relations of particular partitions with different nationwide markets causes, that the industrial revolution in the Polish lands did not proceed uniformly. The earliest and advanced

cause occurred in the Polish Kingdom and the Upper Silesia, the others districts of the Polish lands were agricultural facilities. Upper Silesia since in the middle of XVIIIth century was part of Prussia.

Since the beginning of the XIXth century became one of the fastest developing regions of the Hohenzollern monarchy. It was where the metallurgy has developed rapidly, which in the process began to play a major role. In Gliwice was made the first on the continent of the iron blast furnace fired coke. It started to introduce improvements such as hot air blow-in, pudlingary, rolling mills and steam engines. It made a modern metallurgy of non-ferrous metal, it developed intensive mining industry. Increased demand for coal, which the mining in the period 1800-1870s increased from 41-st thousand to almost 6-th million tones.

Also in Cieszyn Silesia coal mining was developed. Output in the Ostrava- Karvina Basin gave a quarter of the output in entire of the Habsburg monarchy. Quite late, it started to develop of brown coal mining. The mining centers were located in Lower Silesia near Lubań, Zgorzelec and Wołów. Iron ore was mined in Upper Silesia, in area of Bytom and Tarnowskie Góry, some in Lower Silesia and Cieszyn Silesia. A zinc, lead and silver ore mining are also developed.

Working in the mining was in progress of human effort the hard work and it had a little place of technological progress. Transport of excavated material was made by human muscular effort and supported the work horses, pulling carts with the excavated materials. Extraction of raw materials on the surface was done with the turnstiles. Steam engines were used to pump water. (*Archiwum Główne Akt Dawnych, Komisja Rządowa Przychodów i Skarbu, sygn.1758, s. 167; sygn. 2459*).

The importance of mining for development of mining had the situation in the metallurgy. Ferrous metallurgical plants during the Napoleonic Wars produced primarily the weapon. After the wars ended the steelmaking industry experienced a crisis caused

by difficulties competitive with British products. Introduced the customs on the steel products by Prussia has allowed on the further development of the metallurgical branch. A significant of ready market for steel products made in Silesia, in connection with the development of other industries, particularly connected with the development of the railways. Not without significance was, that Silesia had outlets for their products on Polish lands.

The development of the steel metallurgy was occurred only just in the middle of the XVIIIth century, since the replacement of charcoal by coke in iron blast furnaces and the invention of the steam engine in 1769. Of that time of steel rolling mills powered by water have been equipped in heating stove, rolling stand with adjustable rollers with pig iron casting and shears. Rolled of metal plates cut into narrow strips to obtain a material rod. Rollers and shears powered of water wheels.

The second half of the XIXth century brought a fundamental changes, particularly concerning to the methods of rolling. It appeared the shape mills for rods and used to drive from the steam engines. In 1799 the first time brought into a continuous process of rolling rods, increasing productivity. In 1828 it starts to produce of railway rails were produced by shape rolling. By achieving by high productivity it occurred the rapid development of railways on the world.

In the middle of the XIXth century, invented a method of producing of cast steel. This method proved to be much cheaper than current methods, as prepared by the liquid steel, suitable for direct casting. Three- roll mill (trio) does not require change of direction rotation of rolls during rolling was used in 1857. In the late of the XIXth century, it used electric drive, which proved to be better and more economical than the steam drive, simultaneously enabled the introduction of work mechanization in the rolling mills (Chwalba, 2001).

The development of the forges, and the next rolling mills in Poland proceeded in parallel with the expansion of the metal-

lurgy, mining and coke industry. The first metallurgical plants built in Poland, as evidenced about this notices with the period reign of Boleslaw Chrobry, in the environs of the Starachowice and Bialystok. Historical entries of the existence of metallurgical plants in Silesia date back to only in the XIIth century. The development of metallurgy in the country ran in an arbitrary way and disorganized.

The first rolling mills appeared in connection with the demand for nails and armours. In period of prepartitions there were already small rolling mills in *the Augustowskie Lakeland* and in Rudniki near Częstochowa. Only in 1827, under a policy of industrialization of the Ksawery Lubecki- Drucki in the Polish Kingdom, there was economic development. It making was being made shape rolling mills and plate rolling mills in Starachowice.

In 1834, Antoni Henryk Łubieński initiated the building of the first big factory- *the Huta Bankowa* in Dąbrowa Górnicza. The capital for this purpose come from the hands of the Polish, from the newly established in 1828 at the initiative of *the prince Ksawery Drucki- Lubecki Polish Bank*. The name of the steel-works comes from the Polish Bank, who was a creditor of government industry. The *Huta Bankowa* was to be a modern steel plant, equipped with modern machines imported from abroad. There arose iron blast furnace on the coke, puddlingary, rolling mill and machine shops.

Coal supply for existing the steel plant provide mines as: Ksawery, Cieszkowski, Labedzki and the glass of: Koszelow and Aleksander (their output is not satisfied the current necessities). It should be noted that in this period the *Dąbrowskie Basin* was dominated by German capital. It was an effect of liberal policies of the Russian authority. In 1873 the mines owned by Germans, 79% of coal mined in the *Dąbrowa Górnicza Basin*, which was reflected in the economic condition of the operation Basin (Misztal, 1974).

In the 40s of the XIXth century, the *Huta Bankowa* had a six of the iron blast furnaces, which were equipped with the cylindrical bellows, moved by steam engines of 80HP and heaters.

A small production fall into arrears of magazines. The reason was the low quality of products and the high price in compared to better- quality of English steel (Chwalba, 2001).

Plans and technical assumptions of steel plant the sight incorrect. Incorrect evaluate the Dąbrowski coal properties, who was not of coking coal, wrongly evaluate of the market demand, excessively expansion of bureaucratic. The work modernizing of the *Huta Bankowa* durable almost without interruption, did not bring of results anticipation. Improvement of machine parts resulted in the necessity of further modernization. There were no planned complex operations and definition of height possibility financed.

The marks given to the lack of highly qualified staffs knowing modern technologies. Staff were took with Germany and France. The situation of the *Huta Bankowa* was improved only after 1854, thanks to developments proceed in the Polish Kingdom. As a result of bringing the railway line to the steel plant, and the extension of the railway lines in the country, it demanded increase for rails. Thanks to the railway connection with Silesia could have been brought coking coal from here. Absolute of rolling mills developed only enough, in order to to be able to give direct profits (Kizwalter, 2003).

In the area of Upper Silesia was the first created the Royal Steel Plant (Kościeszko) in Chorzów (1802), then the steel plants: *Renard (Cedler)*, *Falwa (Florian)*, *Baildon*, *Laura (Jedność)*, *Zgoda and Pokój*. Zink has more lesser mining and was displaced by iron (Zielinski, 1979). The development of mining was an integral condition for the development and metallurgy and vice versa. Technological and technical progress in metallurgy caused increased demand for the fossil row materials as: iron ores, coals, limestone and others minerals needed to produce more and better of steel. On the basis of the chronicles, it can be assumed that the carbon was known in the Xth century. He had no great significance, because regardless superstition about its infernal origin, rich forests provide an easy accessible of fuel material. Only the development of metallurgical

industry contributed to the increase in coal production. It these favourable of development also the invention of the steam engine. Whereas it was getting of coke from coal, which transpired to the best material to be fired of the iron blast furnace for smelting iron, even more dynamic development of coal mining (Popiołek, 1976).

Poland is not affluent in iron ore deposits. Polish iron ores are generally low and medium in percentages and exploitation of deposits is not much profitable. The main domestic of ore is silty siderite, also known as silty limonite and limonite and of the same kind of bog iron ores.

Iron ores occur in several areas of Poland, as the deposits of the district of Częstochowa, Świętokrzyski, Radomski, Silesia-Cracov, Lower Silesia, the Carpathian, Kujawski, Podkarpacie and Cieszyn Silesia.

In the second half of the XVIIIth century, also in Cieszyn Silesia which was initiated a process of economic transformation. Began with the Ustroń, where in 1772 it achieved heat test of pig iron. Since in the valley formed the new objects of new steel-plant created here, and the whole army of car pushers supplied to it in the area of extracting iron ore in environs and exported to the world of constructional steel and manufactured here various industrial equipment. Serfs have become skillful workers. Also, thanks to their ingenuity it discovered, that blast furnace slag heated of water attenuate of the rheumatism pains, that slowly began to develop activities of health resort (Caban, 2004).

During the Napoleonic wars in Cieszyn Silesia the iron blast furnace was installed in Baszka. It modernized the steel plant in Ustroń, which activated the first iron blast furnace in 1839. In Trzyniec was developed the founding, which created convenient conditions for built of the machines, thus reducing the costs of goods produced there. The development of the economy life, especially industry, was accompanied with the expansion of roads, and above all the railway. The built and the next expansion of railway, was a great meaning for the economic life of the

country, mainly for the industry. A railway needed coal, made contributing to increased production. This required building of new plants and an expansion of old coal mining (Jeziernski and Zawadzki, 1966).

The increase of industrial production, and also the development of industry caused the formation of new construction companies to meet the needs to the development of factories, mines, and construction of housing for workers (workers' settlements). More and more people (coming from agriculture) were employed outside the mining and metallurgy in processing industry, services and transport. Next to factories were building of industrial settlements, such as: Katowice, Siemianowice and Zabrze. Rapidly increasing the number of city-dwellers of existing cities. At the same time a high tempo of increase in the number of workers and work productivity (for example, in the years 1879 to 1912, the steel production per worker has increased from 23 to 74 tons. Manufactured goods were exported by rail and by waterway (Gliwice Channel and farther on the Oder). With thought about the export of the products formed dense railway system. Agriculture was also developed, established of sugar factories and mills driven by steam engines.

In the last quarter of the XIXth century in the global economy began to increase the formation of the monopolistic economic fundamentals. The concentration of production was moving forward in large and large of manufacturing organizations, created by the conclusion to the contains the monopoly agreements and centralization of capital. These processes didn't pass by the Polish lands, through visualization in different grade (Archiwum Państwowe Katowice, Archiwum Górnicze Dąbrowy Górniczej 1799-1918, sygn. 839, p. 3).

#### 4. RECONSTRUCTION OF THE PUBLIC CONSCIOUSNESS

There is no doubt that the man is a social being no doubt. The man cannot live outside the community, is an entity, but at the same time its product. This membership in human society requires from the man to have by his a specify feeling of the community, in the form of social consciousness. This term is generally understood of the ideas, opinions and convictions, common to whole groups, classes and societies, appointed by the tradition and their social being. In the system of social consciousness develops its components: the national consciousness, the historical consciousness, political consciousness (class) and economic consciousness.

Inhabitants of the Polish lands of the XVIIIth to the XXth century were diversified of socially and political. National and historical consciousness for centuries reserved only for people born, it only began to reach to the Pole overall population in the area of national insurrections. Then it began to shape the political consciousness. The economic consciousness in large part by the roots, stick still in the epoch, when the tradition and ethics dominated over the economic thinking. However, the new more and more dynamic reality, forced a change the way of thinking and attitudes in relations to the changes proceed.

Thus, as the writing- cited earlier R. L. Hilbroner: *the great coach of society, for so many years quietly sliding after gentle of slope the tradition, now gather accelerate. The new and amazing powerful of driving force became the transactions and profits.* Similarly, interesting and picturesquely the opinion on the new periods presents U. Altermat, writing about Catholicism in the period of the industrial revolution: *On the traditional order of the day and week it imposed a time sharing of society harnessed in the rigors of industry and communications. Church tower, factory chimney and clock station were distinkted of the conflicting symbol tensions between religion and modernity. Since in the middle of XIXth century the church towers,*

*factory chimneys and schools towers stand near abreast in a kind specify of asynchrony, which create a sense of confusion and contraction. On both sides of a different world and different time, different mentality, and different sensitiveness. School bell and the factory sirens were constitute the embodiment of a new consciousness of the time, that has not been followed of the natural rhythm of work and rest, but above all economic values and profit.*

Since then the societies organize their lives according to a simple set of *abvious* truths:

1. Every person by nature needs the money.
2. Not any rights not win with a profit.
3. Profit is the axis of the trade.

Therefore it befits agree, that in this modern world, the quest for profit has become fundamental of stimulator of human actions and possessed of money, determined and determines the position of man in the social hierarchy.

How then in great simplification, was the process of rebuilding the social consciousness of the people living in the Polish lands, the more that the situation was complicated still lack of own statehood, the relatively low level of education, and even the fact that economic relationships with markets of partition countries tended to the co-operation with invaders.

Formed and rapid of development of industry and also the need for support the work in agriculture on the wage manpower resulted to imply the formation of a new social class- the proletariat, the first of rural and then the factory. Apart for a small group of specialists brought in from abroad, the main source of raising hands to work in the industry were peasants whose need was to oust in order not to have the land and lived with the work done in estates and in the newly created the industry.

Masses of workers and peons and unemployed live in greater and greater poverty. Significant influence on the increased activity of Poles in the field of economy, was the formation of modern civil

society, a society of people aware of their rights, and belonging to the Polish community.

Upper Silesia, which the Poles outside of Silesia was called Old Polish was an area where industrial development was the fastest in the whole of the Hohenzollern monarchy. In the place of forests and a little fertile lands built mines and steel plants. Economic and social situation was depended in many cases of political and religious situation in the given region.

However, economic development and social change proceeded independently of the political situation, but were closely associated to them.

The first half of the XIXth century was an important time for Silesia, which has set a future as more important region in Europe.

The intensification of industrial development has forced inhabitant to quickly transition from a feudal system to a capitalist. Otherwise, the situation was under Prussian partition, which after 1815 was issued a decree of the abolition of serfdom, and in 1823 in the Prussian Partition was introduced the Prussian Trade Regulation Act, which allowed for some peasants to purchase land. Polish territory during Prussian ruled a tough competition with Prussian agriculture standing on a fairly high level. With the resourcefulness of the Polish population, they gradually became of the agriculture and food-processing area for the economy of the Prussian monarchy.

In the Polish Kingdom during the Congress of Vienna was visible the economic crisis caused by the age of the Napoleonic wars and the accompanying her destruction. Destruction was disadvantageously affected on the condition of Polish agriculture in Russian Partition. Not without significant was also inflow a cheap and competitive of Russian grain. A mentioned earlier in the Russian partition the peasant was personal freedom since 1807, which caused emigration of peasants to the cities in search livelihood, and this fact affected the economy of manors. The manors pursuit of increase profitability increased serfdom owes remaining on the

role of peasants. Along with personal freedom the peasant has not received the rights to the land and had to make up for a leased field serfdom which was a form of payment.

The situation of the workers lack in agriculture forced the search for solutions as the aim of maximized profits, by intensification of agricultural production, through the introduction of new cultivation as potatoes cultivation, fodder plants and sugar beets cultivation. It also developed a sheep breeding. The cultivation of sugar beets was due needs the developed of the sugar industry (Hojka, 2004).

The worst the situation was in Galicia. As a peripheral district remained outside the area of the interests to the Austrian Government. Characteristic for the Galician agriculture was the land hunger and lack of employment possibility in the industry caused the division of the already dwarf farms (progressive of break-up). This condition was also reflected disadvantageously on the public consciousness. Since here the longest remained the residue of the era bygone, both in thinking and farmed.

The changes in the country have influence on urban development, and thus the development of industry and vice-versa. While the situation of the peasants was some improved, especially legal, then the situation of the petty nobility has deteriorated off all partitions. Began to rapidly to develop of the cities, the followed population growth and hence the development of economic consciousness of society. But the most important changes occurred among the middle-class, especially in industrial cities. In the industrial centers began to create a diversified proletariat, but the major part of the peasants. From the old mercantilism was formed a bourgeoisie, it came the foreign capitalists mainly of German and Jewish origin.

The forming a new social stratum has achieved under the influence of changes in the economy, simultaneously the social situation has an effect on the economy. The favorable market op-

portunities, facilitate the intensification of production and a shift on the capitalist economy.

They began to see the profitability of the implementation of technical progress, improvement of production or use of new ways of organizing works, while the implementation of the progress caused of the increased profits, thus increasing of the capital accumulation.

The development of industry and the demand for manpower has caused to increase the demand to use for new technical solutions in the country. In the middle of XIXth century were more commonly used mechanized of agricultural equipments as: chaff cutters, threshing machines and mills. etc. The manor farmsteads and peasants farms gain on the characteristics of goods. The incentive to the country development was growing demand for agricultural products, connected with growth of urban agglomerations.

Along with this follow the process of conversion the people thinking and action in new directions. Thinking of *the market* category on constant settled in the consciousness of people. The motor of actions has become motive of profit. The concept of *earning for life* found. Land of *divine gift* transformed into a commodity (the market land is formed), similarly the work, and wealth is transformed into capital (Gazda, 2000). Go into forgetfulness residues of the previous system: serfdom, hierarchical of the state and at the same the traditional system of value.

In the feudal system the peasant was forced to work on the land of the landowner. In capitalism from itself depended on himself to worked or not. To work and under what conditions depended on the agreement what signed with a manufacturer or landowner. Be in forced the principle of *free of work contract*. However, it is only seemingly gave equal right.

The worker had to offer only their work and did not have the skills needed in industry. This fact caused, that they agreed on the conditions offered no to have choice. It caused, that the peasants

and apprentices gradually transformed in industrial workers, the guilds foreman could become the capitalists, societies changed with traditional in modern.

The Europe was urbanizing and ceased to be *a one big village*, and the world controlled by the processes of industrialization, which introduced it in the era of *the modern industrial civilization* (Altermatt, 1995).

In the end of the XVIIIth and at the beginning of the XIXth centuries, major changes have occurred in the global economy. As a result of the industrial revolution in Western Europe, although no simultaneously and no the same degree in different countries, a new economic and social system were formed, called of the capitalism, which became pillars: personal freedom, economic freedom, private property, free competition and free market price system. Feudal economy ultimately transformed into the market. Dominant ideology occurred of the *liberalism*. Allowed to speak the freedom took economic actions and free competition, and an essential stimulator for economic processes was the market.

The capital engaged has been oriented to maximize profits. In the new system developed two major social forces, which opposed to each other: a class of bourgeoisie (owners of the means of productions) and proletariat (temps).

Among many inventions, that have contributed to the rapid progress socio- economic, technical and technological, had principal significance at the beginning of the innovations in metallurgy, textile industry, power engineering, and then in transport (railway and foreign navigation) and some industries (Peukert, 2011).

The identified socio- economic phenomena created a demand for their scientific study. This problem deal with the classical economy in the context of the mechanisms regulating the market economy. Its representatives Adam Smith and his successors: T. R. Malthus, J. B. Say, David Ricardo, H. H. Mill, Marx, tried to identify the basic mechanisms of social- economic governing the functioning and development of the capitalist system.

It has also occurred a gradual reorientation in the sphere of social and economic consciousness of people living on the Polish territories.

The Polish lands, which were under the domination of the invaders, as a results of external and internal factors of interaction to reshape also transformation towards industrialization. About the direction and temp of these changes decided socio- economic and political conditions in different partitions (Czubiński, 2000). The industrialization progressed the fastest in Silesia and the Polish Kingdom, and to lag behind in this area of Galicia.

Industrialization implemented in the first half of the XIXth century initiated the beginning of significant changes both in the village and urban areas (external and internal migration, shifts the manors on the goods production, changing the structure of cultivation and breeding etc.). It has also occurred a gradual re-orientation in the sphere of social and economic consciousness of people living on the Polish territories.

Near influence the practice in this area a point out also a part of science. In specific conditions of the province, the liberal economic concepts, attempts were made to adopt to the native conditions. A special role was played here by three Polish economists: Polish economists: Fryderyk Skarbek, Stanisław Szczepanowski and Józef Supinski (Gazda, 1998).

## CONCLUSION

In the end of XVIIIth century and at the beginning of the XIXth century has undergone a major changes in the global economy. In effect *the industrial revolution* in Western Europe, though no simultaneously and in not equal of grade in different countries a new social and economic system called *capitalism*, which became pillars were: personal freedom, economic freedom, private

property, free competition and free market price system. Feudal economy finally transformed into the market.

The dominant of ideology became of liberalism. In the economy admitted the freedom to make economic activity and free competition, and the prime stimulator of economic processes has been the market. The capital engaged has been oriented to maximize profits. In the new system developed in two major social forces, which opposed to each other: a class of bourgeoisie (owners of the means of productions) and proletariat (temps).

Among the many inventions, that have contributed to the rapid progress socio- economic, technical and technological, had principal significance at the beginning the innovations in metallurgy, textile industry, power engineering, and then in transport (railway and foreign navigation) and some industries.

The identified socio- economic phenomena created a demand for their scientific study. This problem deal with the context of the mechanisms regulating the market economy- the classical economy. Adam Smith (1723-1790) and his successors: T.R. Malthus, J.B. Say, David Ricardo, H.H. Mill, Marx, tried to identify the basic mechanisms of social- economic governing the functioning and development of the capitalist system (the market). The Polish lands, which were under the domination of the invaders, as a results of external and internal factors of interaction to reshape also transformation towards industrialization.

About the direction and temp of these changes decided socio- economic and political conditions in different partitions. The industrialization progressed the fastest in Silesia and the Polish Kingdom, and to lag behind in this area of Galicia. Industrialization implemented in the first half of the XIXth century initiated the beginning of significant changes both in the village and urban areas (external and internal migration, shifts the manors on the goods production, changing the structure of cultivation and breeding etc.).

It has also occurred a gradual reorientation in the sphere of social and economic consciousness of people living in the Polish territories. Near influence the practice in this area a point out also a part of science. In specific conditions of the *province* the liberal economic concepts, attempts were made to adopt to the native conditions. A special role was played there by three Polish economists: Józef Supiński, Stanisław Szczepanowski and Fryderyk Skarbek. J. Supinski was believer of the intensive development of agriculture, which was the key to the industrialization of the country. S. Szczepanowski promoted industrialization program on a large scale, but with the help of the state. The count F. Skarbek was considered the *father* of the Polish economy, and it's a matter of doctrine the classical economics, as well as a modern approach to the management of social, became injected on Polish lands.

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