

# INDUSTRIAL REVOLUTION: Impetus Behind the Globalization Process

**Dr. Davut ATEŞ**

*T.C. Başbakanlık Dış Ticaret Müsteşarlığı, ANKARA*

## **ABSTRACT**

*There are many arguments related to the origins of globalization process that we are more blatantly experiencing for the last few decades. But few of them focus on the effects of industrial revolution. In this paper, I will try to set a direct connection between industrial revolution and globalization process. For this aim, transformations as a result of industrial revolution in Europe will be reviewed within the context of capitalist mode of production, marketing and consumption. Thus, I will argue that industrial revolution that resulted in the emergence of industrial capitalism is one the most important factors behind globalization.*

**Key Words:** *Industrial Revolution, Capitalism, Globalization, Britain, Europe, Capitalist Economy.*

## **SANAYİ DEVRİMİ: Küreselleşme Sürecinin Arkasındaki İtici Güç**

### **ÖZET**

*Son birkaç on yıldır güçlü bir şekilde tecrübe etmeye başladığımız küreselleşme sürecinin kökenine ilişkin birçok iddia bulunmaktadır. Ancak, bunların pek azı sanayi devriminin sahip olduğu etkilere değinir. Bu çalışmada, sanayi devrimi ile küreselleşme süreci arasında doğrudan bir bağ kurmaya çalışacağım. Bu amaca yönelik olarak, sanayi devrimi sonrasında Avrupa'da yaşanan dönüşümler; kapitalist üretim şekli, pazarlama ve tüketim çerçevesinde gözden geçirilecektir. Sonuç olarak, küreselleşme sürecinin arkasındaki en önemli faktörlerden birinin sanayi kapitalizmine yol veren sanayi devrimi olduğunu göstermeye çalışacağım.*

**Anahtar Kelimeler:** *Sanayi Devrimi, Kapitalizm, Küreselleşme, İngiltere, Avrupa, Kapitalist Ekonomi.*

## **I. INTRODUCTION**

There is a growing literature for the last few decades on globalization and on its origins, structures, actors, facilities, politics, economy, benefits and risks. Although globalization process includes many fields which are closely related to each other, dominant outlook is centered round liberal ideology (Amin, 1997:64-70). Because the process is particularly prompted by economic and trade liberalization, globalization is understood as a new expression of liberalism (Gill, 2000:1223-4). But this is a misunderstanding. According to his/her interest everybody highlights some aspects of the process (Albrow, 1990:8), while others underestimate some other aspects (Scott, 1997: Introduction).

Other social scientists treating the process as an unprecedented human phenomenon try to show certain common points. For example, it is argued that with globalization time and space began to lose their significance in determining human activities through which a common consciousness is emerging on global

scale (Friedman, 1992:70; Robertson, 1992:1-2). Or, it is a new phase in the development of modernity (Giddens, 1990). Although most of the literature emphasizes on homogenizing face of the process, it is a fact that we witness equally rising power of fragmentation in the fields of culture, identity and locality (Clark, 1997; Farnen, 1994).

These argumentations are more related to the reflections of the process on humanity. However, in order properly to understand all faces of the phenomenon, it seems necessary to look at its origins as well. By doing this we can have a schematic evolution of the process, so that we can better foresee possible developments in near future in different areas. It is true that globalization appears as the latest result of modernity which emerged and developed first in the West. From this point of view we should look inside the European history in which drastic transformations took place that produced modernity. Obviously one of the most important changes in Europe was industrial revolution that set the ways for a worldwide economy.

After the 16<sup>th</sup> and 17<sup>th</sup> centuries, medieval political structure in Europe began to be replaced by absolutist monarchies. During this time significant social and economic changes culminated in industrial revolution in the late 18<sup>th</sup> century. Initially the new structure only in England led capital and individual entrepreneurship to develop freely (Hill, 1969:14). Britain developed as an essential part of a global economy and more particularly as the centre of that vast formal and international empire on which its fortunes have so largely rested (Hobsbawm, 1968:7).

Some claims that industrial revolution marks the most fundamental transformation of human life in the history of the world (Hobsbawm, 1968:7). In later centuries world economy began to emerge as a single unit in which advanced regions were linked to the colonies by certain division of economic activity. These interactions may be described as a system of economic flows; trade, international payments, migration and capital transfer (Wallerstein, 1974:349; Hobsbawm, 1968:21).

Others claim that the breaking line between medieval and modern is the idea of enlightenment, that is, people's expectations were transformed from religious appeals to political and economic demands (Hill, 1969:18). Industrial revolution, in this view, originated from a uniquely favorable balance prepared by early capitalism between population and resources (Hill, 1969:16). From industrial revolution onwards, world economy got more integrated and the regions became more dependant each other. This tendency prepared a convenient circumstance for what we call "globalization" today.

Within this framework, in this paper I will try to remind first of the developments going to industrial revolution and later to explain how industrial revolution resulted in the strengthening of world capitalist economy and worked as the motor of the globalization process. Other processes -migration from Europe, development of trade, colonization- are likely to have contributed to the

globalization less than what industrial revolution did. For the world before had witnessed both great population movements and colonization. Neither Central Asian nomadic people's migration toward the West or the colonization policies of Ancient Greeks or Romans did produce as the same result as that of migration from Europe or of European colonization. So colonization and population movements could not be evaluated as the prominent factors on globalization; rather they became significant with unprecedented outcome of industrialization. Without it European population migration could have remained as similar as to earlier population movements on the earth.

## **II. THE WAY TO INDUSTRIAL REVOLUTON**

### **A. History of Industrialization in Britain**

Obviously England is the first country where industrial production and relations emerged. King of the country declared independence in 1534 and had broken the link with the Pope, so-called reformation. English King became the head of the church. Revenue that was being before transferred to the Pope was directed to him and King's financial position was alleviated. This phenomenon also contributed to the national unification of England (Hill, 1969:35).

Protestants after the reformation began to advocate absolute submission to the King and deny loyalty to feudal lords or the Pope. Protestantism strengthened patriotism and helped Englishmen to come together for national matters. Dissolution of monasteries and chantries gave an opportunity for creating a national educational system (Hill, 1969:39).

New educational system and reformation stimulated not only individualism but also in the long run a scientific outlook (Thomson, 1973:79-92; Hill, 1969:41). Writers on science from Bacon to Locke slowly brought about an intellectual climate in which scientific laws of nature were equated with the laws of God. Laws of demand and supply began to come to the agenda as regulator of the free market, including the price of labor force (Hill, 1969:208). Usage of the mariner's compass contributed to the expansion of long distance trade (Hill, 1969:72; Koenigsberger, 1987:291-97).

Prerequisite of capitalism was the existence of a secure national market that was provided in England in the 17<sup>th</sup> and 18<sup>th</sup> centuries through political unification and establishment of London's dominance over the country. English towns were integrated into a single national market (Hill, 1969:21). In post-reformation era, individualism as a city doctrine became respectful at the beginning of the 17<sup>th</sup> century and incited London merchants to bring the country into a single market. The ruler established internal police; law and order were provided for free entrepreneurship (Thomson, 1973:104-20; Hill, 1969:27). Moreover, national unification simplified trader's job, because in medieval time he had to pay tax to local lords whose lands were traversed. But under new regulation, tax is collected solely in the name of King. Numbers, wealth and

political influence of the aristocracy who were traditionally reluctant to take part in trade had declined (Hill, 1969:29).

Merchants needed for a strong and centralized government for the maintenance of internal peace, law and order, and protection from foreign rivals abroad. Government on the other hand needed money to finance war affairs (Hill, 1969:54; Thomson, 1973:46-60). Because during the 16<sup>th</sup> and 17<sup>th</sup> centuries, economic activities were regarded as a source of King's revenue, King had to provide necessary security to the traders. However, with the 18<sup>th</sup> century King and government began to be regarded as the servants to the capitalists. Wars and peace were made for more profit, colonies and markets in order to discard foreign commercial rivals (Hobsbawm, 1968:18).

Agricultural revolution through enclosure opened up the possibility not only of feeding the existing population more adequately but also of meeting food requirement of great urban population that provided both home market and labor force for newly emerging industrialists (Hill, 1969:153). That was the capitalization and commercialization of agriculture (Wallerstein, 1974:248).

Enclosure Act had transformed the lands of monasteries and common lands into self-contained private land-units (Hobsbawm, 1968:77-87), and brought waste lands under cultivation. So wealth began to be measured in terms of Pound rather than of military followings. For more money was needed to raise private armies, freed lands were opened to private management -mainly sheep farming and corn production-. In that period production of wool became a major source of tax revenue for the King. Usage of private land enhanced the power of middle class against aristocracy (Hill, 1969:31).

The origins of English industrial revolution depends to an important extent on the existence of free trade area (Birnie, 1953:2) all over the country, lower cost of transportation through navigable waters (Hobsbawm, 1968:24) and industrial techniques imported through Dutch and French Protestant refugees and German capitalists (Hill, 1969:82); rather than influx of American silver (Wallerstein, 1974:71). However, it seems to be undeniable that precious metals that had been brought from Latin America by Spaniards indirectly helped English merchants do good business (Wallerstein, 1974:291).

Expanding population and increased demand for food and cloth (Thomson, 1973:64-76) resulted in price revolution in England (Wallerstein, 1974:69) which brought increasing production. Enclosure removed the obligation of landlords -as the guardians and overseer of vassals (Hobsbawm, 1968:79)-, deprived them of a source of dependence and got them into the market (Hill, 1969:151). Free labor including children and wives after enclosure had to work especially in clothing industry to attain subsistence. In pre-industrial period, much of labor worked only part-time. Men did not work more but less when wages were high. Poor Law, at the beginning of the 17<sup>th</sup> century, encouraged payment of low wages that impelled labor force to work more to survive (Hill, 1969:83-4).

This development increased demand for and production of basic commodities, such as cloths, foods, fishing and fuel (Hobsbawm, 1968:30). At this time, clothing was transformed from wool-leather to cotton, just because to meet the demand of layman with standardized and cheaper cotton products. Cheaper clothing created a mass market. In fact the first phase of British industrial revolution could be associated with the advance in cotton industry (Hobsbawm, 1968:40). Division of labor in this industry was composed of complex of highly specialized firms and merchants, spinners, weavers, dyers, finishers, bleachers, printers etc. These were linked to each other by a web of individual business transactions in the market (Hobsbawm, 1968:48). In early period of capitalism both laborers and landlords got worse while merchants accumulated capital through profit (Wallerstein, 1974:77).

In medieval time, the right to trade was a privilege under the protection of a landowner or the crown. In towns guild system strictly controlled these privileges and restricted trade to certain persons. However, clothing industry and its trade was able to escape easily from towns to rural areas. So guild system was ineffective to prevent the rising of new merchant class (Hill, 1969:90). Before industrialization, most of the industries and manufacturers of England were rural, in the form of village artisan or smallholder specializing in the manufacture of some products, mainly cloth, hosiery and metal goods. Industrial revolution transferred the rural industries into towns and craftsmen became the wage laborers (Hobsbawm, 1968:15).

Peddling traders transported domestic clothing products as far as to remote villages (Hill, 1969:93), which strengthened the formation of national market (Hobsbawm, 1968:24). However, after the middle of the 17<sup>th</sup> century guild system became difficult to enforce. This led to a naked confrontation between big capitalists and small producers. As small producers lost their power and the King backed the big capital, another obstacle in front of the realization of national market was removed (Hill, 1969:169).

After 1614 wool export from England was prohibited and export of finished clothing was encouraged (Hill, 1969:88). Consequently, export of English clothing increased very well (Thomson, 1973:93-103; Wallerstein, 1974:228-29; Hill, 1969:87). English clothing industry supplied cheaper goods at lower prices to middle class market all over Europe, Latin and North America, while Italian clothes were still luxury and addressed to the aristocracy (Hill, 1969:90). The years from 1815 to 1840s saw the spread of factory production throughout the cotton industry. From 1805 thereon cotton masters lengthened working day by illuminating their factories with gas (Hobsbawm, 1968:43). Factory imposed discipline and hard working hours. So that labor was used more efficiently and productively.

Growing influence of new merchants and investors' classes produced their own ethics supported by Protestant appeals (Thomson, 1973:122-140), that is, benefit of the capitalists is the benefit of the whole community, and poverty is

a crime (Hill, 1969:98). Free entrepreneurship and profit were so highlighted that even roads and canals were constructed and maintained by profit motive. Protestant reformation created a special capitalist ethics (Hobsbawm, 1968:13-23).

Civil Wars in England between 1640s and 1680s significantly contributed to the transformation of economic and political life. During the war King needed more money, and taxation emerged as an easy source of revenue in return of speeding the upset of feudal economic and social structure, and providing security to the works of newly emerging business classes. Furthermore, taxation was left to the control of the Parliament (Hill, 1969:135). This was followed in Europe in general where representative institutions were initiated by the monarchs to take the support of nobility in taxation process (Wallerstein, 1974:135).

In the early 16<sup>th</sup> century there was a revolution also in changing energy usage from wood to coal. This was partly because of the exhaustion of forests and increasing demand for heating. Coal was the basis of many industries, such as sugar refining, armament and paper production. Coal mining itself needed heavy capital investment (Hill, 1969:88). The general urbanization after the second half of the 18<sup>th</sup> century provided a substantial stimulus for coal. English homes were consuming coal (Hobsbawm, 1968:52). Aristocrats and landowners whose land had coal reserves and other mineral resources began to sell their land to investors in return of quickly high revenues (Hill, 1969:90).

The colonies were initially important source of raw materials, like cotton, sugar and tobacco which were processed in England and re-exported. The growing use of such entirely imported commodities not only contributed to the expansion of overseas trade but also commercialization of rural life (Hobsbawm, 1968:15), which was an important source of capital accumulation (Birnie, 1953:2). But in time the colonies became even more important as markets for English manufacturers (Hill, 1969:159).

The relationship between the metropolis and the colony was not a kind of free trade, rather colony was fixed to the metropolis through legislation that granted privileges to certain companies, and prohibited any external relations of the colony. All European states had special legislation in respect to the colonies (Blanqui, 1968:235), like Navigation Act of England. Colonies were supplying man power in the form of slaves as well as raw materials to the centre. An essential prerequisite of industrial revolution was the existence of large and stable colonial monopoly. Colonial policies provoked all European nations and prepared the way for the industrial and commercial rivalries from which almost all modern wars have risen (Blanqui, 1968:232).

Slave trade was an important source of capital accumulation for industrial revolution. Slaves were carried to Latin and North America through English ships and merchants, in return gold and raw materials were transferred to England (Hill, 1969:163).

Foundation of joint stock companies was a great advance in the capitalist organization. A group of merchants arranged a single voyage, then several and at the end they formed permanent partnership in trade. Formation of these firms in the 17<sup>th</sup> and 18<sup>th</sup> centuries resulted in great earnings of English merchants from overseas trade. In 1600 East India Company as a monopoly was founded for trade with India (Hill, 1969:79). Moreover, King used the plundered wealth of the church to establish a powerful navy to facilitate the job of overseas traders (Hill, 1969:77), because colonial trade necessitated a strong navy for the security of English traders (Hobsbawm, 1968:11). Construction of navy stimulated expanding shipping industry (Hill, 1969:160), which in later times increased demands for coal and steel (Hobsbawm, 1968:52). Usage of coal and iron was important for further development of mass production. And wars resulted in more iron needs (Hill, 1969:240) and encouraged iron industry (Hobsbawm, 1968:52).

In some sectors, industries were directly stimulated by the state itself, mainly ship building, arm production and the clothes of the soldiers (Hill, 1969:170). Wars in general and commercially-minded English navy in particular directly incited technological innovations and industrialization (Hobsbawm, 1968:34). In the 18<sup>th</sup> and 19<sup>th</sup> centuries Britain established dominance all over the world with the help of its early industrial revolution (Hobsbawm, 1968:203).

Working class acquired the right to vote in the elections of 1867 and Master-Servant Code was abolished in 1875 in Britain and trade and labor unions began to take part genuinely in the process of industrial society (Hobsbawm, 1968:102). By these developments politics in a capitalist society was genuinely formed.

### **B. Industrialization in Continental Europe**

Industrial revolution in other parts of Europe gained strength immediately after 1830s and faster than the case in England (Birnie, 1953:1). In respect to Germany; at the beginning of 1800s it was divided among so many small states which had their own independent economic policies. Progress towards industrialization was hampered by the absence of economic unity (Henderson, 1961:11). With the establishment of customs union (Zollverein) in 1834 among German states, an important obstacle was removed in front of realization of a national market and industrialization of the country. After this time a great impetus was given to the expansion of the German economy first by the construction of railways (Henderson, 1961:18-20) that enabled Germany's natural resources to be fully used and encouraged establishment of new branches of manufacture.

The rapid growth of Berlin's authority on other towns was fostered by the construction of railways. Improved machines, some driven by steam, were introduced into Germany in 1830s that led to the establishment of a certain number of factories instead of workshop. The growth of coal industry was strengthened by the use of improved methods of production (Henderson, 1961:21). The establishment of Zollverein, the building of railways and the

introduction of technical improvements contributed to the industrialization of Germany, whose social consequences were similar to that of England. Joint-stock companies began to be established first among railway companies (Henderson, 1961:30) in Germany which supplied capital accumulation.

Although there were revolts against industrialization in the country on the ground that it was rendering workers to the slaves of capitalists, national unification wars worked as the motor of industrialization in Germany (Henderson, 1961:45). It was late in industrialization process but soon caught up with England and towards the end of the 19<sup>th</sup> century became one of the centers.

In France in the 17<sup>th</sup> century there existed no revolution like in England, for feudalism had a perfection and classical vitality, which prevented any *embourgeoisement* of the nobility (Henderson, 1961:79). Qualitative peculiarities of French economy made impossible a group of class that would have permitted a bourgeoisie revolution in line of English model (Wallerstein, 1974:286). Relative strength of French state machinery in contrast to that of England did not necessarily serve well to the commercialization of rural life (Wallerstein, 1974:291).

Feudal structure had been abolished in the first years of the Revolution in France. Most importantly guild system was removed and anymore everyone could do business he may choose. Local government structures which impeded the realization of a national market were liquidated. Napoleonic era was a further step in centralization of political power. He established the continental system which aimed to discard Britain and make France the centre of European economic system. Industrial expansion was fostered at the time of the Revolution by passing of patent law, establishment of collection of machines and the encouragement of technical education. In 1793 slave trade was abolished, which was the first example in Europe (Henderson, 1961:77-8).

Over-centralization of bureaucracy, lack of coal, limited capital accumulation, slow construction of railways, slow mass production, slow population growth and inadequate consciousness about free entrepreneurship retarded French industrialization (Henderson, 1961:92-95). Industrial revolution was slow in France (Hobsbawm, 1962:213).<sup>1</sup>

### III. GENERAL CHARACTERISTICS OF INDUSTRIALIZATION

One of the important factors which contributed to the industrialization process after 1800s was the boom between 1740s and 1780s. It encouraged an atmosphere of optimism from which a class of individual entrepreneurs emerged, who were willing to organize new forms of production and to invest their money to fixed capital (Thomson, 1973:38).

It is possible to consider industrial revolution in two phases. In the first stage, industry was technically simple, because application of simple ideas and devices, often by no means expensive, could produce striking results. The novelty

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<sup>1</sup> For industrial revolution in different parts of the world see Rostow, 1960.



lay not in the innovations, but in the readiness of practical men to put their minds to using science and technology which had long been available and within reach; and in the wide market which lay open to goods as prices and costs fell rapidly. That is why first stage is more remarkable than second phase where heavy industries began to develop (Hobsbawm, 1968:44).

In the early period of industrialization, capitalist did not need for skilled labor. However in later stages especially capital industries of iron and coal began to emerge, which needed skilled labor. When skilled labor was scarce and the cost is rising, capitalists paid more to introduce labor-saving machinery (Hill, 1969:247). Everlasting cheap labor in fact would have retarded industrialization, because profit seekers would not need to discover new techniques of production (Hobsbawm, 1968:29).

Furthermore, there exists a genuine relation between making profit and technological innovation. Economy of private enterprise has an automatic bias toward profit; if greater profit is promised, techniques of manufacture could be revolutionized (Hobsbawm, 1968:25). This was the case in England in the early phase of industrialization; unified national market, export possibilities due to the lower cost and government procurement did really promised high profits to the investors (Hobsbawm, 1968:27). These are linked to each other so well; domestic economy was combined with international economy which brought about rivalry and competition that incited further expansion of innovations (Hobsbawm, 1968:34; 1962:13).

In the second phase of industrialization after 1830s capital goods industries began to be founded, such as coal, iron and steel. Coal and iron industries needed heavy capital investments in contrast to cotton, and this could not have been provided without holding down the incomes of non-capitalist masses (Hobsbawm, 1968:56). Steam engine began to be utilized and railways were constructed, which revolutionized transportation (Birnie, 1952:32-47). Because at the beginning of this period iron-steel and coal after textile became important export items of Britain (Hobsbawm, 1968:88), vast amount of revenues attained by British exporters led in increasing British investments abroad, particularly in the USA (Hobsbawm, 1968:96).

The remarkable expansion of railways reflected on twin process of industrialization; strengthening the tendency of forming a single national market and opening up to underdeveloped areas. With Britain, Germany and USA emerged major industrialized countries, while others were integrated into world capitalist system through their export of foodstuff and raw materials (Hobsbawm, 1968:93). Between 1890-1895 both USA and Germany passed Britain in the production of steel. During great depression in the late 19<sup>th</sup> century industry went out of British monopoly and unexploited areas were opened up to the world market. Britain ceased to be the workshop of the world and became merely one of the three greatest industrial powers (Hobsbawm, 1968:103).

In the late 19<sup>th</sup> century, people began to witness globalization of world economy, forced by immense production. With industrialization, production multiplied and the prices of the finished good fell dramatically.<sup>2</sup> But markets were not expanding fast enough to absorb the production (Birnie, 1953:2). As the vacuum of demand was filled, markets tended to be glutted, for though they had obviously increased, they had not increased fast enough, at least at home, to keep pace with the multiple expansion of output and capacity in manufactured goods. As the titanic profits of industrial pioneers declined, squeezed between the upper milestone of price reducing competition and the lower of increasingly expensive and mechanized plants, with increasingly large and inelastic overheads, businessmen searched anxiously for a way out (Hobsbawm, 1968:107).

That is why, after the second half of the 19<sup>th</sup> century industrial countries of Europe began to formulate imperial policies (Hobsbawm, 1968:57-8; Birnie, 1953:61-76), whose results were culminated in the World War I. Africa was partitioned among industrialized countries, financial management of peripheral countries was taken over and increasing capital began to outflow from Europe toward territories controlled by the metropolitan countries (Hobsbawm, 1977). Core-periphery differentiation became a mere fact of international capitalist economy (Wallerstein, 1974:349).

At home industrial revolution created a new society described with classes of laborers and capitalists, and with mode of production as massive and with accumulation of capital as an individual goal. Obviously there were revolts against machinery by farmers, local craftsmen and unemployed people. Workers were reluctant to enter into factories, because in doing so they believed that men will lose their birthright and independence. Indeed this is one reason why factories were filled with more and more tractable women and children (Hobsbawm, 1968:50-1).

#### **IV. LINK BETWEEN INDUSTRIALIZATION AND GLOBALIZATION**

As the review of history of industrialization demonstrates, the world has been undergoing to the globalization process at least for the last four centuries. Before that time grand civilizations, empires and economy had remained confined to certain regions. Mesopotamian Civilization remained around the Tigris and Euphrates. Roman Empire controlled environs of Mediterranean. Silk Road trade was confined to the regions beginning from China and India through the south and the north of Caspian Sea to Mediterranean and Black Sea. Neither of these big structures nor others was able to connect all parts of the world to each other in contrast to what we are experiencing today.

There are different arguments attempting to explain the roots of this expansion -currently globalization-. Fundamental social and political changes

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<sup>2</sup> Some argue that industrialization in the north resulted in de-industrialization in the south (Braudel, 1984; Brioch, 1993).

during reformation era, migration of Europeans to the new world, colonization of non-European territories, industrial revolution which incited the emergence of world capitalist economy and development of technological changes are all seen as the factors behind the globalization process (Polanyi, 1957; Bairoch, 1982; Vayrynen, 1991; Greider, 1997; Scholte, 2000; Greenfield, 2001). If globalization phenomenon is described as a grand process, then former developments could be seen as steps to it. However, one should give special attention to industrialization in the explanation of the origins of globalization.

When we come to the origins of industrial revolution, we see that drastic social and political changes in Europe in the 15<sup>th</sup> and 16<sup>th</sup> centuries opened the way to it (Tilly, 1993). Reformation and enlightenment fundamentally transformed European societies whose consequences in economy paved the way for the rise of global market. Reformation decreased the power the Pope and led to national unifications, and enlightenment freed human reason from scholastic framework. The implications of these changes were so great, that is, innovations, new way of thought, development of physical sciences and the emergence of an unprecedented human adventure in history.

In anyway it could be argued that most prominent impetus of globalization process is the capitalist world economy which was incited by the industrial revolution (Inglehart, 2000: 224-5). It created its own structures all over the world based on capitalist mode of production, whose main components are production, consumption, international trade, rivalry and wars among competing states. While the motor of globalization is the capitalist world economy, its implications are currently felt in every field, such as culture, politics, society, environment, arts and way of life, all of which deserve further analysis on their own. But for the aim of this paper, at this point it seems very necessary to show close link between industrialization and globalization.

Beginning of overseas trade contributed to the development of navigation which created competition among European states. Internal wars in the 17<sup>th</sup> and 18<sup>th</sup> centuries were transferred to overseas rivalries. Spain, Portuguese, France, Netherlands and England were the main powers in this struggle. Most of the European states created their own domestic market and established trade links between colonies and homeland. On that occasion it is important to state that some parts of the capital accumulation needed for industrial revolution was provided by the transfer of precious metals to European Continent and revenues obtained from slave trade. Creation of home market was the result of abolition of feudal privileges, granted to landlords over vassals and the church over its land. Confiscation of soils of the church, liberation of vassals from the land and the undermining of guild system resulted in the emergence of a genuine home market. Because, both idle lands controlled by landlords and by the church and labor force were brought to the market.

Moreover, because dependency link between labor force and land was broken, men had to work more for subsistence. This created rising demand for

primary products like food and clothing. However, it was very usual in that period that people did not need to work when they were provided with their basic needs. As done by Poor Law in England, wages were kept down to encourage people to work more for survival. Hard work furthermore resulted in more need to work, because lifetime of clothes was shortened. This was an enduring interaction between working more and more needs. Particularly in England, low wages resulted in lower cost of textile products and Englishmen began to export clothes first all over Europe then to the whole world. Due to that fact textile industry was the first step of industrial revolution.

Colonies at first instance were used to obtain raw material, particularly cotton. But as the industrial revolution resulted in increasing production, the importance of colonies increased once more as markets to export textile products (Wesseling, 1997). New techniques in production process brought competition and were easily adopted by other European countries. The aim of domestic production soon exceeded the borders of home market, as the whole globe became the target of capitalists. Innovations and inventions accelerated to reduce the production cost and to attain competitive prices.

The crucial relation between the rise of capitalism and the formation of nation states in Europe (Tilly, 1992) is very important to understand the nature of globalization. The development of trade in the 17<sup>th</sup> and 18<sup>th</sup> centuries in Europe was accompanied by scientific outlook, state building and wars. The usage of gunpowder helped central rulers to remove the local lords and reformation broke loyalty beyond national borders. To finance their wars rulers encouraged taxable activities (Anderson, 1974:41), mainly trade and production of primary agricultural products.

Both development of capitalism and state building in Europe fed each other. Merchants, entrepreneurs, investors and bankers had sought for a secure area for profit and the rulers had needed taxable activities to finance their private armies. The aim of both parties overlapped following the 17<sup>th</sup> century. Nation states were formed and capitalism began to flourish. Capital gained a national character (Anderson, 1974) and states protected their capitalists by introducing high tariff barriers in newly industrializing countries, while industrialized countries like Britain forced the former ones to remove trade barriers. At its early formation European states projected colonial foreign policies to facilitate the activities of their businessmen in overseas.

However, after the late 19<sup>th</sup> century, centralized governments backed by standing armies and strong bureaucracy turned into absolutist regimes (Anderson, 1974:16). Moreover, as the capitalist investments began to enlarge and production increased, aim of capitalists went beyond the national market. The World War I could be seen a result of irreconcilable imperial policies of European countries, while the World War II partly was resulted from the character of national capitalism. Once the national capitalism had been formed within secure national borders, it started to accelerate the forces of globalization

through its activities abroad that would have soon created an interdependent world capitalist economy.

Free trade formulation had always been a suggestion to prevent another world-wide disaster. Ancestor of free trade, Adam Smith argued that resource over the earth could be utilized at optimum level just through an international free trade. By this there exists a division of labor among countries, that is, a country inevitably will produce the commodity for which it has advantageous price. This theory was advocated mostly by English scholars, because England was believed to be the most industrialized country.

It seems that industrial revolution is a turning point in the emergence of world economy. It strengthened capitalism and gave it a global character. Because industrialization created a new kind of society and market relations, world capitalist economy found a convenient circumstance to grow on a global scale. What we are experiencing today actually is the globalization of market before all. Globalized market triggered other dynamics in terms of nationalism, culture, religion, identity and locality all over the world particularly after the communist ideal in practice collapsed at the beginning of 1990s. Despite the fact that globalization is defined as the process in which whole world is becoming a single space for human activities and a new consciousness is emerging worldwide (Robertson, 1992), it is generally ignored how the world has come to current situation. On the other hand defining features of globalization seem to be the results of “something” that is industrial revolution (Martin and Nixon, 2007). Interdependence among countries, increasing world trade, interconnected financial markets, liberalization and democratization, expansion of consumption culture, homogenization in arts and entertainment and emergence of politics of locality in terms of authentic culture and identity are in fact outcomes of what the world has undergone for the last few centuries.

So to understand better why industrial revolution is the main impetus behind the globalization process one has to look at the logic of industrial production and its globalizing forces. In a traditional society people manage to become self-sufficient in most of their needs. Foods and clothes could be extracted from land or animals to a great extent. It is true that worldwide trade had always existed among countries and continents. But this trade was more related to luxury commodities that had targeted a small segment of societies. The rest of the society seemed to be self-sufficient in their needs (Goulet, 2002). So trade that is represented as one of the causes of globalization could be taken as a determinant factor. However, logic of industrial production has transformed the economic life of people (Polanyi, 1957). *First*, because it focused on massive production, production cost of many products has decreased. Before industrialization the world was in equilibrium in terms of economic activities including rural and city life. But industrialization in Europe began to remove this equilibrium (Deane, 1965) and created massive opportunities for competitions and wars among states. Massive production created new area of human settlement

those are industrial cities (Craft, 1989). *Second*, it required different type of combination of inputs in terms of raw materials. Whereas in traditional production number of inputs was so limited, this number and varieties of inputs has dramatically increased. Because each region possessed different kinds of raw materials, secure route to and control them became a strategic objective. This increased the intensity of competition among European powers to control colonial territories. *Third*, reduction in costs and resultant massive production necessitated marketing strategies on global scale. As the amount of production increased, colonies began to be transformed from becoming sources of raw materials into markets for industrial commodities. *Fourth*, cheaper production, need for raw materials and markets fostered dependency links among regions. Trade and economic relations has increased not because of luxury products as it is as in the case of traditional trade but because of basic needs of ordinary people. This tendency expanded the scale of economic activities all over the world.<sup>3</sup> *Fifth*, these developments prepared infrastructure for the emergence of worldwide financial system that connected markets more tightly to each other (Zevin, 1992). Prices of raw materials and of industrial commodities began to be determined in a competitive environment where some cities of the world began to be the centers of financial services. Particularly after the beginning of the second half the twentieth century production and financial services became a new source of division of labor among countries. While many production facilities certainly defined as ‘‘heavy production’’ have been transferred to developing regions, financial services including banking, credits and insurance began to be focal economic activities of early industrialized countries.

Within this framework it is very critical to note that globalization is about everything that connects all parts of the world to each other. But as it is explained above, one has to recognize that the main determinant of ways going to globalization is the logic of industrial production (Goulet, 2002). Because of this reason, although many outcomes of globalization are related to society, culture and politics; the prominent agenda of globalization are occupied with issues like trade, finance, investments and standards all of which are components of industrial mentality. So globalization is still embedded so highly to the logic of industrial production and its global requirements (Von Werlhof, 2000).

## V. CONCLUSION

It should not be surprising that current globalization debate is turning around liberalism, liberal economy, trans-nationalization of advanced capitalism, free flow of finance and goods, even if there emerges some defiance of fragmentation. Except free flow of labor force advanced capitalism forces states to take appropriate measures for the efficient working of market principles. Nation state seems miserable in front of those demands, just because its contemporary legitimacy charges it to meet well being expectation of its citizens.

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<sup>3</sup> For some statistics see Taylor, 1996.

Well being means economic development which required foreign direct investments. By its nature, capitalism needs security to develop further globally. And fulfillment of security is expected from states. There is still a severe area of collaboration for shared interests between capitalism and state.

Actually it is possible to discover a crucial similarity between state-capitalism relations during early industrial revolution and state-advanced capitalism relations today. In both cases state and capitalist actors need each other for mutual development. Particularly states in developing countries are currently turning into security provider to capitalist agents, through which it upholds the goals of employment creation and preservation of its legitimacy. Also there is a fundamental shift in capitalist organization today. Developing countries are becoming centers of heavy industry because of low wages and less environment interest, while developed countries keep know-how and capital at their hand (Amin, 1997). This is the latest stage of capitalist evolution all over the world -domestic production and consolidation were provided at home in early stages when colonies were mainly source of raw materials, later, colonies became also market for products and today developing parts of the world-former colonies are becoming centers of heavy production.

It could be argued that capitalism as an economic mode is based on the fact that the economic factors operate within an arena larger than which any political entity can totally control (Wallerstein, 1974:348). Nation states gained dominance in Europe and their preparation for wars pushed them to collect more money and men as conscripts from the population, so they established large bureaucracy (Tilly, 1984:9). Doing so they had to promote participatory mechanisms through which they began to take on some responsibilities for public service, economic infrastructures and household welfare. Both capitalism and nation-states mutually feed each other's formation (Tilly, 1984:142). Nowadays it is the time of same mutual feeding of capitalism and state in developing world.

What is debated under the rubric of globalization today in fact is a result of tension stemming from capitalist attempt to accommodate itself globally. The same mentality and motives behind industrialization are going on to make the structure global. Democratization voices, re-assertion of local cultures and identities, environmental concerns, global terrorism, ethnic conflicts and wars are reflections of this tension. Besides rapid communication facilities are making the developments in each area of interest urgent and globally blatant. It seems a naiveté, for example, to think that rising power of nationalism or ethnic separatism that results in emergence of many independent bodies -new nation states- is a an autonomous development defying the power of economic liberalism and globalization of market. New independent states of Former Yugoslavia are trying to merge with the European Union, and Former Soviet Republics formed another union based on economic cooperation -CIS-. Identity, nationality and ethnicity emanating from the local are actually reactions to homogenizing enforcement of consumption culture of modernity. They are not

operating against the working principles of advanced capitalism rather demanding to be culturally recognized as authentic units. As well being increases as a result of widening employment opportunities and establishing profitable alliance with capitalist actors -role of the state for providing local security to investments, trade and marketing-, we may witness that evolution of capitalism will continue through accommodating itself onto more peripheral areas of the world. The term “globalization” is the expression of this new phase (O’Rourke, 2002).

In sum, it could be argued that substantial social and political transformations in Europe after the 16<sup>th</sup> century resulted in the rise of capitalist economy. But without industrial revolution it was hardly possible that it could have expanded on a global scale. Because of industrialization, capitalism succeeded in establishing a world wide market in which all parts of the world, whether developed or underdeveloped, are getting integrated within the global transactions. Globalization process we are experiencing today is running on the global market structures created by industrial revolution. Obviously mentality, culture and values -economic, social and political- are going with market principles to all parts of the world, which may temporarily create some reactions and hesitance that sometimes give way to wars.

However, if we remember long civil wars in the former centuries in most European countries for national unification in the form of a single market, current wars on global scale could be appreciated as struggles to make the world a single market. War has two fundamental functions in both cases: *First*, it eliminates local barriers to free flow of factors of productions and opens the way to competition -efficiency increases-. *Second*, it creates vast demand for certain commodities, which triggers investment, production, employment and profit -productivity increases-. It is true that the meaning of “industry” has been also transformed as a result of rapid developments in high technology, but this does not mean that globalization process is independent of the logic of industrial production. In this paper it is tried to show that globalization is closely associated with industrialization and its future is dependent on developments in the industry.

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