Technology in New Institutional Economics—Comparison of Transaction Costs in Schumpeter’s Capitalist Development Ideology

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In mainstream economics (the neoclassic economics), it is accepted that every company that competes under the perfect competition market has the same technological equipment. So, technology is approached as a simple efficiency increase whose source is unknown. In terms of established economics view, technology is like a “black box” that cannot be predicted. As the creator of the concept of “creative destruction”, Joseph Schumpeter (1883-1950) caused significant changes in terms of the view of neoclassical economics about technology. On one hand, Schumpeter created a new point of view about the concept of “innovation” by using key concepts, such as “invention”, “imitation”, and “business cycles”. Schumpeter’s “creative destruction” concept carries out the role of a new map for the new institutional economics trend which accepts “technology” as an institution. On the other hand, if one is to understand why the ideology differs between neoclassical economics and new institutional economics, “transaction costs” should be analyzed. Since, transaction costs and creative destruction have a relationship between each other; Schumpeter and Coase’s ideas are resembling each other. While doing this, this paper will try to discuss the question of how to accept the technology as “external” instead of “internal” limit neoclassical economics. In this process, it will primarily base the dimension on the concept of “technology” developed by Schumpeter. The second station is an inquiry between Schumpeter’s and Coase’s ideas about technology. Although new institutional economics (NIE) and neoclassical economics can be confused, they can be seperated from each other by the way they look at technology. Because, technology is accepted as an external theme by neoclassical economics, on the contrary, NIE accepts technology as an internal fact. One of the most important reasons why technology is internal in terms of NIE can be evaluated by “transaction costs”. As a result, the author will give effort to create a critical presentation in order to readdress the viewpoint of mainstream economics about “technology”.

Keywords: capitalism, competition, free market, economic imperialism, political economic, political economy

Introduction

The history of capitalism is the history of “how” and “who” will have the capital as well as it is the history of a class war. While directing the capital it saved to different investment areas, capital class has always moved based on the question of “How can I make profit” and it will always make the same movements.

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In terms of history, the key point that will answer this question is hidden in the concept of “technology” besides the capital stock, because technology has helped increasing the capital with every new invention. In this way, capital increase has become possible. This is why, the meaning of technology, what it really is and its relation to capital stock should definitely be thoroughly analyzed. In the 21st century, the connection between having technological superiority, namely advantage, and capital stock has increased.

This relation between the increase in capital stock and technology cannot be sufficiently explained by neoclassical economics, which is also called the mainstream economics, as technology is assumed as an external variable according to this viewpoint. Accepting technology as an external issue causes narrowing neoclassical economics and putting boundaries. Besides this, there is an important figure that internalized technology, thus freed neoclassical economics from boundaries and started a different viewpoint to the capital stock of capitalism: Joseph Alois Schumpeter.

The new viewpoint created by Schumpeter (1939) is rooted from the fact that he looked at capitalism from a different point, and it is important because of this fact. For Schumpeter (1939), technology is the main effect that carries capitalism. Some agents are necessary in order to start and proceed this effect. These agents “innovation” and “entrepreneur” trigger technology. Innovations ensure developments and progresses; individuals who can succeed in this respect are named entrepreneurs. A significant point that should be mentioned at this point is that an entrepreneur should not be capitalist. This difference in terms of the entrepreneur causes Schumpeter to differ from the line and doctrines of neoclassical economics. This drift in the idea can either result in a good way or in restructuring of the hegemony of capitalist class.

In this study, it will analyze the meaning of the concept of technology for Schumpeter (1939) and for neoclassical economics. But as there are various similar studies in the field, the main axis of this study will be the connection between Schumpeter and new institutional economics (NIE), which is sometimes accepted to be similar with neoclassical economics. NIE has various sub-fields. This is why this paper will focus on the connection between Ronald Coase’s “transaction cost” (1992) and technology, because Schumpeter’s concepts of “innovation” and “entrepreneur” (1939) he used in order to analyze the concept of technology and Coase’s concept of “transaction cost” (1992) have some similar points while they are rooted from different viewpoints.

The concept of technology, which can be accepted as the engine of capitalism, will be analyzed in terms of two different notion systematics which also have some similar points. In this way, Schumpeter’s viewpoint (1939) and point of NIE will be synchronically discussed.

As a result, the paper will proceed as such: In the second section, the reasons of capitalism’s important notion and the reasons of “technology” being inherited in its hard core for Schumpeter will be discussed. In the third section, the considerable similarities between NIE and Schumpeter’s technology (1939) will be discussed. At the final section which is also the conclusions, this paper’s premises for the connection of entrepreneur and technology will be rendered.

**Schumpeter’s Technology and Capitalism**

How capitalism has developed? What kinds of factors have meaned to call “capitalism” as “capitalism”? Those kinds of questions can be accelerated in order to understand capitalism. However, if one is going to give a simple answer to understand it, the followings might be the simpliest answer:

Capitalism can simply be defined as the ownership of means of production by private ownership. Freeholders carry out three main duties: (a) activating financial stock; (b) employment and coordination of the
means of production, management, and operation of the firm; and (c) making strategic decisions about investment. Thanks to the existence of institutions such as capital market, financial capital presentation and other functions can be separated. While obtaining inputs and routine business functions can be assigned to fee-earners, final decisions, such as entering a new market, making, or not-making investments can only be made means of production freeholders. The position of making decision and the function of businessman are called entrepreneurship. In terms of history, entrepreneur, who holds the position of the employment of labor in production process, supplying financial stock, and decision-making, firstly attracted the attention of Cantillon. Besides that, this thought systematic, which started in the last quarter of the 18th century, did not muster up support except big philosophers, such as Condillac, Smith, and Turgot (Alada, 2001).

Before Schumpeter (1939) has discussed very carefully the hard core of capitalism, the concepts of “entrepreneur” or “entrepreneurship” have been discussed by many philosophers. Nonetheless, Schumpeter was the one who conceptualized it systematically. How Schumpeter (1939) gave a systematic way for technology can be considered by aspecting of his evolutionary economics. Also it must be emphasized that this evolutionary view can be caused by the difference of statics economics and dynamic economics which will be discussed in the following sections of this paper.

Not giving the deserved value to entrepreneurs during the times of these important philosophers does not mean that they were accepted to be insignificant. During the era of these thinkers, capitalism was newly beginning and sometimes earning money and doing business were accepted to be humiliating. Surely as “capitalist” class started to gain dominance with Smith, changing of all class structures was inevitable; with the Industrial Revolution, preeminence of capitalist class increased the interest in entrepreneur.

Competition in international trade increased in the 21st century. Surely technological development had an important role in this increase. Developed countries increased the developments in technology after the progress in industrial capitalism and this resulted in the increase in the production and wealth. Countries and/or firms which increase technologic innovation capacity have significant advantages in terms of increasing production and income besides having international competitive capacity. In today’s fierce competition environment, the country which makes the cheapest production will gain advantage in the competition. So, it can be said that international trade conditions function not like Ricardo’s way, they function according to Adam Smith’s approach (Eşiyok, 2011).

So, why is the significance attributed to technology valuable this much? It is important because human beings firstly scratched the soil with hands, then used anchor, and then plow. All of the modern tools that are used today in order to cultivate soil are invented and developed thanks to technology, and this is why, technology is very important. Shortly, every kind of technology that increases the productivity and life quality of human beings is important in terms of finance. The origin of technological progress is established on creating and destroying something, which is an inseparable part of capitalism.

The adventure of capitalism’s birth is also the birth of entrepreneur, which can also be named as a sort of capitalist. Important thinkers starting from Condillac, Condorcet, Turgot, and Adam Smith supported the new class group who are called entrepreneurs. Of course, this is not the kind of entrepreneur group as it is today.

Adam Smith, who is the first person that realized the newly beginning situation, uttered a significant sentence as “the first price of everything is labor”. Shortly, according to Smith, “creator is labor”. The structure it defines is very simple and understandable. Capitalists organize production unit and make production: This forms a class. The rest are laborers. According to Smith, “capitalists organize production, workers produce,
goods are brought to the market, and consumers get consumer goods. This is the way it is” (Özkan, 2010, p. 99).

Capitalist-entrepreneur was born in the western world in the process of transition from feudalism to capitalism. The reason of this is that the conditions of transition from feudalism to capitalism were formed in Western Europe in history.

The lifestyle that was brought by the new production system ensured new opportunities to people when compared to the feudal system and society, this is favored by the mass. The fate and life of slavery and lower class members and the domination of noble class almost vanished. Everybody had identity. Old serfs had names and surnames. Everybody had the chance to work and earn for himself. The ones who had the courage and ability to organize production, including the newly rising capitalist class, moved forward in the new re-structuring of society. The places and positions of new classes became obvious (Özkan, 2010).

Economic progress is the topic of classic theory. Some researchers analyzed economic progress in details. When marginalism started to dominate Neo-classical theory, the theory of value, the theory of distribution, and general equilibrium theory issues started to be discussed and analyzed more. In these theories, population and technology are accepted to be fixed while factor composition ratios in production function are accepted to be non-fixed and changeable. In this way, it was possible to separate the theory of capital and population theory (Savaş, 2007).

Mainstream economics theory presents relations between goals and instruments, but it does not question how they change. In other words, Schumpeter’s entrepreneur (1939) is a figure that resists to the uncertainty (change) about future. He does not need to reach information he needs through reasoning; he can regulate his behaviors through inborn implicit knowledge and experience (Kızılkaya, 2005).

Neoclassical economics, which is accepted to be today’s dominant economy doctrine, does not give entrepreneur what he deserves. It attributes a different role to the entrepreneur and this is one of the important differences between neoclassical economics and Schumpeter’s views (1939). Neoclassical economics degrades entrepreneur to an input in production function and it assumes that market actors have the entire information. This thought is mostly a continuation of a method followed by Ricardo and his followers. So it can be said that when people accept that entrepreneurship has a sort of decision-making role, there happens to be a variation from 18th century to today in terms of the evolution line including Cantillon-Say-von Thünen-Knight-Schumpeter. Accepting that individuals completely act rationally eased analytical abstraction, but it excluded the typology defending that individuals do not have the complete information, so they continuously make researches and they are aware of time-space finiteness and act accordingly.

All that was left was a typology defending that individuals invest fund on more advantageous fields according to their wishes, and they know the amount of income or profit beforehand. Ricardo said that, when all these aspects are valid for capitalists, profit rate will tend to be equalized in all of the markets. (Alada, 2001, pp. 48-49)

On one hand, the biggest deficit of static analysis is that it cannot answer the question of where the profit comes from. Schumpeter, on the other hand, gave a brilliant answer to this:

Profit did not come from exploiting labor or from the income of capital. Profit occurred when it did not follow the annular flow routinized direction in a static economy… Because only one of the forces that cause disruptions in the routine attracts attention. This force is entering of technological and organizational innovations into the annular flow: new or cheaper methods of producing goods or ways of producing completely new things… A new process gives an innovative capitalist the opportunity to produce the same products with rivals, but with lower cost; just like the fact that a landowner
who has a land in a good place can produce cheaper grain when compared to the landowners whose lands are in worse places. (Heilbroner, 2013, pp. 255-256)

The reason why there is not a special theory field about entrepreneurship in neoclassical economics is that mariginalism has a significant place in the tradition of Jevons-Walras and Marshall. As is known, two of the basic assumptions of mariginalism are subjective value theory and significance attributed to micro-economy. In subjective value theory, benefit replaces labor theory of value. Namely, the determinant of exchange value becomes benefit. According to this paper, it is possible to say that one of the most important reasons why mariginalism and accordingly neo-classical economics have a missing point in terms of entrepreneurship is the aspect of what is stated above, because, “entrepreneurship in neoclassical economics tradition is limited to the function of combining, to the motive of the protection of individuals from the risks of future” (Alada, 2001, p. 51).

Gathering production factors together is about the production of a product. Every product is evaluated according to the benefit it ensures to the consumer. Every product that ensures benefit will be produced while the ones that do not ensure benefit will not. But while these non-beneficial products are not produced, an idea of a beneficial product that will show results in long term will be missed.

Shortly, the process of creating innovations, which can also be named as entrepreneurship spirit, has a significant place in Schumpeter’s thought system and it is the growth and development motor of capitalism, which is neglected by neoclassical economics because of its thought system.

Joseph Alois Schumpeter (1883-1950) analyzed neoclassical theory thoroughly in his work named *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie* (Schumpeter, 1908) that he wrote when he was 25. This work had not been translated into English, thus got stuck in German-Austria economic thought. As a result of this, there was some time before Schumpeter was famous. The book named *Theorie der wirtschaftlichen Entwicklung* was translated to English as *The Theory of Economic Development* (Schumpeter, 1934). This book had a key role in being accepted in Anglo-Saxon world. Put it differently, this translation is based on the second publication of the work in 1923. While in his book in 1908, Schumpeter (1939) analyzed neoclassical approach which is about static economic order, in the later version, he attempted to build the spine of a dynamical theory in order to show how the economic development occurs. In his work titled *Business Cycles* (Schumpeter, 1939), he presented historical, statistical, and theoretical analysis of the concept of development in capitalist economic order (Kızılkaya, 2005).

Schumpeter was born in 1883 in Moravia (then part of Austria, now part of Czechoslovakia), the only child of wealthy bourgeois parents: His father was textile manufacturer and his mother was the daughter of a physician. His father died when he was quite young and, on the marriage of his mother to general in the Austrian army, he moved to Vienna. That city had highly structured social classes, with a hereditary land-owning aristocracy (the “second society”) open to all individuals of accomplishment, although it was dominated by high-ranking civil servants. For the most part, except for bankers, businessmen were not part of these classes. Because of his stepfather, Schumpeter was part of the lower aristocracy and fully enjoyed its privileges, one of which was a secondary education at the prestigious Maria Theresa Academy. Upon graduation, he entered the University of Vienne, where he studied both law and economics (Grossack, 1989, p. 71).

This paper has already stated that Schumpeter’s capitalism (1939) is evaluated in two stages as static and dynamic. So, for Schumpeter (1939), neoclassical economics is a stable process put on a static analysis. But as
his concept of entrepreneur constantly renews itself, it means a dynamic economic process.

As it is known, Schumpeter and Paul Samuelson were friends, and they finished their Ph.D. thesis at the age of 25. They have very common characteristics. “At that age, both of them had ploughed through an enormous literature with an emphasis on the underlying formal structures and analytical tools” (Andersen, 2009, p. 39). Also they both shared similarities in their masterpieces: *Wesen und Hauptinhalt* and *Foundations of Economic Analysis*. They both believed in mathematics very much. However, two great philosophers concentrated on mathematical economics,

… They do so in very different ways. Shumpeter argued that mathematics is the natural language of analytical economics, but he developed this argument with hardly any explicit use of mathematics. Samuelson demonstrated the importance of mathematics by applying it. Second, the two books have entirely different strategies of how to extend the reach of theoretical economics. Samuelson (1947, 284-5) considered dynamic analysis as implicit in Walrasian statistics and formulates a “Correspondence Principle” according to which the “statistical systems are simply degenerate special cases” of dynamical systems. The perspective is the gradual movement towards a “comparative dynamics” that ranges to the problems of “the business cycle, and even to the majestic problems of economic development” (p. 355). In contrast, Schumpeter conjured a basic dichotomy between “Statistics” and “Dynamics”. (Andersen, 2009, pp. 39-40)

Because of Schumpeter’s origin bears with Austrian-Hungarian Empire, this situation reflects itself in his world of thought.

“… readers of Schumpeter’s Wesen … they have to endure his elitist suggestions about the differences between routine-based behaviour and the behaviour of innovative entrepreneurs” (Andersen, 2009, pp. 41-42).

Austrian-British philosopher Ludwig Wittgenstein, who was born in Vienna in 1889, had a significant effect on Schumpeter. The reason why Schumpeter has intended to advocate mathematics in economics, can be discovered by comparing both philosophers’ books: *Wittgenstein’s Tractatus* and *Schumpeter’s Wesen*.

… Since Wittgenstein’s Tractatus notoriously dense while Schumpeter’s Wesen is very verbose, the similarity is definitely not a matter of style. Instead, it concerns their overall method of analysis, and the reason for the similarity in this respect is not least that mathematicians and physicist-philosophers inspired them both… This sounds like formulations of a hard-core physicist and positivist, and the natural-science-oriented intellectuals of Vienna Circle interpreted Wittgenstein in this vein in the 1920s. These logical positivists were convinced that what we speak clearly and meaningfully about is all that matters— but Wittgenstein did not agree. (Andersen, 2009, pp. 41-42)

At the end of long discussions about the method of social sciences, scientists focused on the question of whether or not natural sciences and social sciences have a similar method. As this discussion cannot be included in this article, it should only mention that: According to Schumpeter’s thought (1939), economics is the social science type that is closest to natural sciences. So, social transition can be explained under the guidance of economy (Kızılkaya, 2005). Separation of economic phases as static and dynamic is closely related with Schumpeter’s methodological viewpoint (1939), because for him, entrepreneur is also an individual who makes innovation, an economic typology that constantly renews itself like natural sciences who can be an entrepreneur.

Political science should have been from the first what it is slowly beginning to be now, namely, an investigation into the realities of political life, in the widest sense of the term, in which it includes also the social psychology of electorates and of parties, the behavior of bureaucratic organisms, of political bosses and pressure groups, and the like. The English classics, and particularly Adam Smith, understood these things instinctively, even though they failed to see the necessity of going into them explicitly. For instance, nobody
can read the *Fourth Book of the Wealth of Nations* carefully without observing that there Adam Smith argues for laissez faire as much because of his clear perception of what politics and politicians are as on purely economic grounds. Though other examples could be adduced, it still remains true that a large majority of economists, when discussing issues of public policy, automatically treated political authority and especially government in the modern representative state as a kind of deity that strives to realize the will of the people and the common good (Schumpeter, 1949).

... Secondly, we have to define what we mean by “our economic system”: We mean an economic system characterised by private property (private initiative), by production for a market and by the phenomenon of credit, this phenomenon being the differentia 8 pecifica distinguishing the “capitalist” system from other species, historical or possible, of the larger genus defined by the two first characteristics... Thirdly, capitalism may be stable or not, simply in the sense that it may be expected to last or not. Its history might be full of the most violent fluctuations or even catastrophes—as it undoubtedly has been so far—and these fluctuations or catastrophes might even be inherent in its working—which precisely is what we want to form an opinion about and we might still, in a real sense, have to call it “stable” if we have reason to expect it to last. (Schumpeter, 1928, pp. 362-363)

According to Schumpeter (1942), there are two kinds of economic situations. The first is:

A stable economy does not change and reproduces itself in a stable ratio from one year to another. The second is a dynamic economy that includes changes in the frame of specific dynamic factors. Schumpeter (1942) based his views on stable capitalist economic model in order to explain the change of capitalist economy, which is according to him a dynamic structure; because according to his view, people can understand the logic of dynamic factors that mobilize capitalist economy only when they look in such a model. In accordance with these thoughts, he built the stable economic model on the assumptions of neoclassical equilibrium theory and took the general equilibrium theory of Leon Walras as the starting point. Schumpeter (1939) is criticized harshly about this point by other evolutionary and institutional economists, but this is only a tool for analysis and starting point for him. According to Schumpeter (1939), development is resulted from the functioning economic life, namely,

External factors like wars, political revolutions, and natural disasters that can change the organizational aspect of economic structure are not included in his analysis. Schumpeter stated that there are three internal factors that evoke a capitalist economy. There are: “changes in consumer choices”, “changes in the amount of production factors”, and “changes in the presentation amounts of goods”. (Schumpeter, 1939, pp. 72-87)

But Schumpeter’s development theory (1939) is completely based on the last factor. According to him, development process of economic structure develops independent from consumer decisions and necessities of consumers can be shaped by producers when necessary. From this aspect, Schumpeter’s theory (1939) is presentation based. According to Schumpeter (1939), change in any stage of presentation process of goods in connection with only innovations, can cause qualitative change in economic structure. At this point, Schumpeter (1939) thought that innovation and invention are two completely different things, because while innovation is a commercial activity carried out by entrepreneurs through financial assets (bank credit) for the aim of profit, invention is made by inventors and it is a technologic deed which does not have a value (yet). This is why, according to Schumpeter (1939), invention may not turn into innovation. In other words, invention is an external factor and becomes valuable through entrepreneurs’ commercial based activities (Gürkan, 2007).

As many economists are accepted that Schumpeter is one of the hardest economists to be understood, this is a very complex problem. How such an economist can be hard to be understood and most mentioned person
about him? Although, Schumpeter (1934) insisted on using mathematical tools and had a very opposite standing to Walrasian static theory, he has bound to one thought, too. Coming from the origins of German historical school, he always felt the pressure of it. Thus, the conflicts between historically and mathematically economics have reflected itself on putting forward to his dynamic system.

Schumpeter is maybe the most complicated and resondited scientist in the economics world. He was perfectly educated well. This situation makes him quite comlexity. Also he is one of the most important philosophers who articulated “evoluation” mind in economics. As it is assumed that the theory of economic development was not his first formulation of his evolutionary programme. Since the great economist Marshall, economics has suffered from an important problem. For the turn of the century by addressing “the new generation”, Marshall (1961) emphasized “the discrepancy between… Marshall (1897, 121, 133)” (Andersen, 2009, pp. 23-24). One of the main reasons why Schumpeter was against neoclassical economics can be seen in this idea if one can look deeply. As it is known, Marshall was accepted by founder of neoclassical economics by the mediation of his general equilibrium theory. However, even Marshall (1961) could accept that the discrepancy between neoclassical theory and facts of economic life is expelling contradictory to each other. Especially, the early beginning of the 20th century, economics life has changed so rapidly and the facts and the theory could not go well mutually. Theory could not reflect the economics life reality exactly. So, Schumpeter (1939) has exposed the innovation theory which is removing the dsicrepancy between theory and facts. In other words, Schumpeter’s innovation theory (1939) was a tool of completing the neoclassical theory and the facts seperation.

Walras (1954) introduced the problem of capitalization by assuming that some sellers of productive services save and invest these savings in “new capital goods” which because of this demand come on the market in definite quantities. The price of these “new capital goods” is formed on the basis of their services. This price furnishes in turn the basis for the capital values of the “old production goods”, which solves the problem of capitalization or of the derivation of the capital values of all goods (Schumpeter, 1997).

Schumpeter’s detailed analysis (1939) of capitalism caused a great admiration to the enormous success of capitalism, but besides that, he started to be anxious about the possibility that this successful structure will bring capitalism to the edge of destruction.

Schumpeter (1939) created a model which explains conjectural fluctuations and capitalist development in order to present these ideas. According to him, the basic factor that creates economic change is innovation. He defined “innovation” as changes in the presentation methods of goods. For instance, introducing new products into the market or finding new production methods, opening new markets, creation of new organization structures like finding new stocks or semi-manufactured good resources, establishing new monopolies, or finishing an existing monopoly are kinds of “innovations”. Schumpeter (1939) separated invention and innovation. If invention can not be used and does not have function in real life, it does not form an innovation. In order to create an innovation, it should definitely be applied in production activity. Entrepreneur is the person who forms new compounds and brings innovations to production. This is why most of the managers in business life are not entrepreneurs as they carry out their business through traditional methods, instruments, and thoughts (Savaş, 2007, p. 833).

How can widespread support of aggression come about in a capitalist system that both require produces and rational attitudes? It arises, said Schumpeter, as a result of habits acquired in the past that continue to survive and receive strength from the energy of capitalism (Cramer & Leathers, 1973).
The results of habits will be survived by innovations which are the propellent power of capitalism. Originated from Austria, Schumpeter (1908) had started to try finding quest with other Austria originated people for how economics goes to statistics way to dynamic way. Böhm-Bawerk has critisized Entwicklung I. Schumpeter’s 40-page answer did not satisfy Böhm-Bawerk (Andersen, 2009).

Looking at another view, in static economics, the entrepreneur who brings sources together and serves products does really exist and also capitalist bankers, too. They come across into the market and they take advantage of each others interests. However, their needs have not satisfied yet. Because both of them cannot jump to a next point. However, in Schumpeterian model, as only both sides obtain a positive rate interest, they will continue to understand each other. The reason is that they both obtain a positive rate of interest.

Because Schumpeter was a member of noble family whose step-father was an important military officer, he is known as “brash one-man band, touched hubris” (Balabkins, 2003, p. 204). Due to the fact that his significant accounts, he was a great volunteer of mathematical economics, not historical economics. Schumpeter’s innovator type (1939) is also called “the innovative entrepreneur”. According to Schumpeter’s view (1939), for example, Bill Gates—type individual who, motivated by the possibility of financial gain, could spur almost single-handed the kind of economic growth that America underwent in the 1980s and 1990s—is precisely an innovative entrepreneur. He spent his two years between University of Czernowitz between 1909-1911 and wrote his important work, Theorie der wirtschaftlichen Entwicklung (Balabkins, 2003, p. 203).

The basics of Schumpeter’s theory of innovation (1934) are found in his economic model of the circular flow. This circular flow describes a stationary situation of equilibrium and perfect competition similar to a so-called Walrasian state of equilibrium. Every firm is in perfect equilibrium: costs equal income, prices equal average costs and net profits are zero. The circular flow follows from continuous adaptions to small external changes which are “absorbed” through routine company behavior. It is important to note that this particular notion of circular flow is not identical with the notion of stationary state as it was frequently applied in classical political economy (Hagedoorn, 1996, p. 885).

Another important interpretation about “Wesen” is that it was the first grief of interpretation of what Schumpeter thought about evolutionary economics. Here to say, this book is a preliminary approach to prepare evolutionary economics (Andersen, 2009, p. 43). Although many economists are not covered by the Walrasian Magna Carta, Schumpeter’s Wesen concerns the first lights of interests in evolutionary economics. The monumental trace Principles of Economics which was written by Marshall (1954) “is designed in a way that makes it very difficult to determine the limits of neoclassical economics. However, Schumpeter found that it was ultimately founded on something that came very close to the Walrasian systems”. (Andersen, 2009, p. 54)

The big gap between neoclassical economics and Schumpeter can be seen clearly at this point. In terms of neoclassical economics, this innovation, presented in a limited way, is accepted as a development. But the points of “how this innovation is formed” and “how can the developed situation be maintained” are not very clear. But in Schumpeter’s theory (1939), even a change in the production factors used in producing a product is an innovation. Production factors are divided into four main groups as labor, capital, land, and entrepreneur. In terms of Schumpeter’s theory (1939), when a product is produced by combining four production factors, and an entrepreneur ensured that this product is more useful or she/he enabled producing it more, this is an innovation. In other words, in neoclassical economics, this is not an innovation.

It concerns the psychological basis of ordinary people’s preferences, a factor emphatically ignored by the welfare economics of his time. Schumpeter (1942) tried to endogenise people’s preferences. In
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capitalism, socialism, and democracy (CSD), for example, he argued that the capitalist process reshapes “not only our means of attaining our ends but also these ultimate ends themselves” (Schumpeter, 1942, pp. 127, 248-253). This is in fact a key topic of his sociological speculations about capitalist civilisation, seen as a whole. The emergence of large firms, led by a centralised bureaucracy, only reflects the way capitalism spurs materialism, rationalism and, ultimately, “utilitarian ideas about the betterment of mankind”, coupled with a rising willingness on the part of voters and policy makers alike to scrutinise traditional norms and to support “social legislation” (Schumpeter, 1942, pp. 127, 248-253; McCraw, 2007, pp. 436-441), such as the “democratization of the workplace” (Medearis, 1997). The “knightly elements”, embodied in the heroic entrepreneur, without which the capitalist civilisation cannot survive, are dismissed (Schubert, 2013, p. 233).

The “creative destruction” process carried out by entrepreneurs not only causes capitalism to pass from one stage to another. At the same time, it causes a “creative destruction” in “psychological” and “moral” sense of people who have a role in the current production process. In fact, the concept called “consumer society” is a reflection of changes in “psychological” and “moral” sensation of people as a result of their experience under “creative destruction” of capitalism. So, during the creative destruction process, entrepreneurs make a profit, maybe one sector goes bankrupt and another sector may become stronger; “psychological” and “moral” demolition or “re-build” process in terms of employees in the sector endure with losing their job or continue in other forms. However, “creative destruction” process in terms of NIE is carried out with the role played by the company in the market. The companies that stand upon market mechanism continue on their way influencing employees partly less in “psychological” and “moral” terms. Yet, “creative destruction” process can bring “psychological” and “moral” collapse for the companies and their employees who went bankrupt after a “creative destruction” process.

Although Schumpeter is a thinker who sees positive aspects of capitalism, he did not hide his concerns about the future of capitalism. Because, Walras’s theory (1954) is hard core of economics, however some deficits are lack to explain the capitalist system. So, Schumpeter made these deficits visible turning this stationary economics into an evolutionary economics.

That is other aspect why Schumpeter focused on economics which both historically and statistically endures that Schumpeter “distinguished between economics as a science and economics as an art” (McCann, Jr., 2015, p. 23). Distinguishing economics as a science and as an art seems like to put forward something’s sociological or ideological economics. Economics as a science seems to like much more releated with sociological way, on the contrary, economics as art seems to like ideological way.

Many readers of history of economic analysis regarded, and regard still today, Schumpeter as having been so fascinated by the formalism of Leon Walras’ method of general equilibrium as to have acknowledged Walras as the greatest economic thinker of all time (McCann, 2015).

… What we can learn, though, is to take seriously the fact that along with the process of “creative destruction”, people’s preferences change. People respond to evolutionary change by adapting and refining their tastes. Any Schumpeterian’ approach to welfare should take this fact into account. (Schubert, 2013, p. 239)

The relocation of capitalism from one dimension to another by “creative destruction” process is also the transfer of human preferences from one dimension to another. The goods and services supply produced or offered beyond the goods and services produce until that day will direct people to choose the better. So
“creative destruction” will not only destroy and re-establish capitalism, but also create the same process for consumer preferences. According to NIE, the company affecting the price formation in the market will have a saying on the market price in return. As well as this activity, it will try to make an impact on consumer preferences through advertising, public relations, publicity, promotion, and so on in order for the goods or services offered to the market to be more preferred by consumers. When achieving this, “creative destruction” will be inflicted on the “consumer preferences”.

Innovation in competitive capitalism is typically embodied in the foundation of new firms—the main lever, in fact, of the rise of industrial families; improvement is forced on the whole branch by the processes of underselling and of withdrawing from them their means of production, workmen, and so on shifting to the new firms; and all of them not only mean a large amount of disturbance as an incident, but also are effective in bringing about the result and to change “internal” economies into “external” ones, only as far as it means disturbance. The new processes do not and generally cannot evolve out of the old firms, but place themselves side by side with them and attack them. Furthermore, for a firm of comparatively small size, which is no power on the money market and cannot afford scientific departments, experimental production, and so on, innovation in commercial or technical practice is an extremely risky and difficult thing, requiring supernormal energy and courage to embark upon. But as soon as the success is before everyone’s eyes, everything is made very much easier by this very fact. It can now, with much-diminished difficulty, be copied, even improved upon, and a whole crowd invariably does copy it—which accounts for the leaps and bounds of progress as well as for setbacks, carrying in their wake not only the primary disturbance, inherent to the process, but a whole string of secondary ones and possibilities, although no more than possibilities, of recurrent catastrophes or crises. (Schumpeter, 1928, p. 384)

When all these causes are taken into consideration, it can be seen that Schumpeter formed a typology based on some inborn characteristics, courage, leadership, etc., not on intellectual superiority. In this respect, it is possible to say that Schumpeter’s area of interest tends to be economy sociology. Basic components of this thought are social-cultural tended (Kızılkaya, 2005).

Why NIE Has a Connection With Schumpeter

One of the most important criticisms about NIE is that it could not completely separate from neoclassical economics. As is known, neoclassical economics goes straight. So, as neoclassical economics defends that economy should be similar to natural sciences and could not have completely separated its roots with this view. Schumpeter’s views (1939) differ from both neoclassical economics and from NIE especially in terms of the humane characteristics he attributes to the entrepreneur typology: The role the entrepreneur carries out in socio-cultural field differs from mainstream economics and includes a sociological perspective. With this social perspective, Schumpeter’s viewpoint (1939) is in accordance with economic sociology. In other words, as Schumpeter (1934) defended that economics is a science that is close to natural sciences, he shared a common point with NIE. Although for Schumpeter (1939), entrepreneur is the pioneer of economic change in society and in this respect, only has an economic feature, this change is only one-way. This one-way feature is the common basis that Schumpeter and NIE share.

Incoming from old institutional (OIE), NIE finds itself a new path. This path is very close with neoclassical economics. But, as very new solution NIE tries to jump much further than his ancestor. So, some of the new and important notions try to find neoclassical economics defects. One of the main notion of NIE is “transaction costs” which was developed by Coase (192). Nevertheless Coase was not an economist, he was graduated from law, his prominent article, *The Nature of the Firm* (Coase, 1937) helped to discover a new notion: “transaction costs”.
“Transaction cost” is highly important in order to understand why dynamics or evolutionary economics differs from neoclassical economics. Because, the basic concern of economics is income distribution. All facts are related with who will get how much shares from income distribution and firms are very important relationship between evolutionary economics and transaction costs which can be seen at this point. If economics is stationary economics, firms will be implicit figures; on the contrary, if economics is dynamics or evolutionary economics, firms will be explicit figures. Besides, technology will be the key figure, when firms are implicit or explicit figures or not.

“A theoretical consequence of these methodological considerations is that Coase questioned ‘blackboard’ economic policies” (Bertrand, 2006, p. 299). The reason why Schumpeter’s economics is also called evolutionary economics arisen from his aspect for means of production. “… means of production which heretofore served certain static uses are diverted from this course and placed in the service of new purposes. Schumpeter calls this diversion the ‘effectuation of new combinations’…” (Balabkins, 2003, p. 209). Also, technology has a key role in order to pass stationary economy to dynamic economy. In a stationary economics, there will be a staying equilibrium, no innovational activity will be appear of any kind. The reason of it in a stationary economics, entrepreneurs will use what kind of conditions would have been given themselves. Business people who undertake all responsibilities of the business do not want to change their business style. If all conditions would have been determined by the market before, no one will have a desire of changing any method. This will be in a stationary economics. No managerial function level earns and no one encourages to try new entrepreneurial things which will happen. On the contrary, in a dynamic economy, much more business people make themselves courageous in order to try new innovations.

“… Schumpeterian entrepreneurship is conceptualized as leadership during the innovation process, carried out in historically specific institutional settings” (Ebner, 2003, p. 118). As long as he performs the entrepreneurial function (i.e., as long as he recombines the available production factors), he makes pure profits. His profit, however, is not permanent. A swarm of imitators, stimulated by the innovator’s pure profits, copy the innovation in the hope of also making some profit. This imitation process obliterates the novelty of the innovation and ultimately deprives the innovator of pure profits. Those who have taught or are still teaching microeconomics explain this process in terms of “price” and “cost” effects, when people discuss the price-output adjustment process in pure competition. Thus, the process of imitation reduces the innovation to customary business practice, to mere work. Routine work, according to Schumpeter (1939), is no longer an entrepreneurial function. The latter consists of making “new” things and not working among the customary lines of routine. As the innovator’s “new thing” becomes a customary practise, the innovator’s function is not performed any more and the profit slips from the entrepreneur’s grasp. Consequently, the entrepreneur becomes victim of what Schumpeter called the process of “creative destruction”, the former profit-making entrepreneur is reduced to a mere manager, somebody who makes neither loss nor pure profit, but what the micro-textbooks call is only a normal profit (Balabkins, 2003).

So, entrepreneur of established economics is a typology move only according to the motive of profit. This type is not farsighted. He will look at every investment with the motive of profit. Of course, Schumpeter’s entrepreneur’s main goal (1939) is also making profit. But because of his different nature, his inborn internal knowledge will help him foresee the profit makers better. So, an area of investment that is not profitable for established economics entrepreneur can be accepted as profitable by Schumpeter’s entrepreneur (1939).
Another idea of Schumpeter (1939) that makes him original is the separation of invention (finding a new technological information) and innovation (application of a new technology to the area of production).

While the entrepreneur of Schumpeter takes ready inventions and turns them into economic innovations, big companies of today render this unnecessary and started to make inventions in their organizations besides innovations. So, when the concept of initiative and the concept of investment will start to coincide and when this happens, entrepreneur will have no difference from capitalist. (Kızılkaya, 2005, p. 39)

Shortly, it cannot be expected from a new factor to make contribution with the static equilibrium approach in the established economics to an innovation that has not occurred until that day. If there will be a change, it should occur on the basis of present factors. Moreover, sustaining a completely new innovation through present factors depends on a “possibility”.

According to Schumpeter who defended a micro approach rather than macro, economic analysis should be established on firm and household theory in line with neoclassical approach. System that he thinks of the issue of analysis is socioeconomic rather than mechanic. Instead of trying to obtain definite results with a few and specific number of variables, he prefers focusing on results that can occur as a result of the combination of many variables. This is why, despite his methodological individualism, he focuses on processes rather than results, arbitrariness rather than determinism. (Demir, 1995, p. 160)

So, it is possible to say that Schumpeter (1934) shared the same basis with neoclassical economics in terms of firm theory. But Schumpeter’s interdisciplinary (1939) viewpoint, resulting from his interest in various branches of social sciences, separates him from narrow minded firm theory of neoclassical economics. As is known, neoclassical economics has a narrow viewpoint as it defines technology as an external factor. Besides that, as Schumpeter (1939) internalized technology and accepted that production factors and production are a socioeconomic process, he could contribute a broad viewpoint to economic analysis. In other words, as firm theory differs from NIE, especially because of Coase’s influence, it has a thought system that is close to Schumpeter.

There is another point that Schumpeter differed from neoclassical economics in terms of the way that look to the natural sciences: As is known, neoclassical economics uses modeling very often. The reason why neoclassical economics uses modeling and abstraction is that it attempts to turn economics into a science that has specific rules like natural sciences. Although Schumpeter (1939) also wanted economics to have similarities with natural sciences, the significance he gave to historical method results from the significance he gave to social dimension. So, in terms of methodology, Schumpeter (1939) had a higher viewpoint than neoclassical economics. For Schumpeter, the one who will ensure development is not inventor, it is innovator. “Because invention that is not an innovation cannot be the driving force. If an invention does not become an innovation, then it is not important. … inventor gives idea, entrepreneur makes it real” (Schumpeter, 1947, pp. 152-153; Demir, 1995, p. 162).

Because of these, Schumpeter (1939) thought that capitalism is a process that creates and destroys. Development dynamism of capitalism (search for market) is related to creation and destruction process: opening of new domestic or foreign markets; like steel industry in America, transition from handicrafts to intense and developed organizations keeps a continuous revolution and renewing environment alive while all these agents destroy old factors and create new ones. This “creative destruction” creates the basic principle of the development of capitalism and every capitalist entrepreneur will ultimately have to accommodate to this development. About the term of creative destruction, the first person to discuss the significance of technologic
innovation in economic development is Schumpeter. According to Schumpeter’s approach (1939), technological innovation stands for the discontinuous, qualitative, and fundamental change and it means separating from the present technology. According to him, modern capitalism can be developed not by capital owners, but by entrepreneurs that pursue innovation and create savings in this way. This process destroys old structures and savings. This is why capitalist development has a non-equal development dynamic (Eşiyok, 2011).

So, technology that is accepted to be external by neoclassical economics is a discontinuous situation. This situation has been effective in accepting it as an external factor. Technological innovation is a different and it is a fundamental change, which is different from “technology”. This technological innovation aims at changing future and carrying it one step forward and needs “entrepreneurs” who have the required vision. This is why capitalism’s destruction and rebuilding processes will be carried out through entrepreneurs. Besides this, it is not possible to say that the efficiency of capital owners does not decrease during this process.

Put it differently, successful innovative activities are quite hard and so less people can do it in act. Maybe Schumpeter’s evolutionary economics is releated with Darwinian evolutionary in this aspect. As so less people can do successful innovative activities, these kinds of people make capitalist development real. Those kinds of innovators cause innovations system dynamic and evolutionary.

Neoclassic economics’ approach to technology is about production function. Technological change is ascending of production function from its present situation. Namely, there is a situation that cannot be explained with new input increases. So, the basic problem here is separating shifts in production function (with the effect of technological development) from improvements in production function (from the effect of capital stock). … “Standard neoclassical economics theory defines technology with is effect on production function: Obtaining more products with the same amount of production factors (capital and labor); this can be called as the change in production technology and it can be shown by increasing of production function to one level up”. (Eşiyok, 2011, pp. 75-76)

One of the most important handicaps of neoclassical theory is that it defines technology-capital relation as a dual effect. Development in capital stock is the most important motor of technological progress. Capital stock has a driving force in developing new technological progress, because if the thing that ensures obtaining more products with the same amount of capital and labor is technological progress, then either a change in human capital of labor factor or the amount of capital factor triggers this change. According to Schumpeter (1939), technological change, which also helps capital increase, is ensured by innovators, not by capital owners. Although a “new” invention ensures technological change, namely although a production technique besides a common production technique, there cannot be a technological progress free from absolute capital; because even though innovator can find capital which he can use in production, sometimes this is not enough for him to enter market. In such a situation, he may have to make agreement with one or more capital owners in the market. So, it is possible to say that there is a technological development which is in the service of capital owner.

As it has stated before, Schumpeter was against Walras’s general equilibrium. So, this situation pushed Schumpeter to use untraditional form of equilibrium analysis. Schumpeter’s basic analytical scheme in the following way:

... Let us consider the case of long-term economic evolution for which we can describe Schumpeter’s basic analytical scheme in the following way:

(1) Initial equilibrium: We start from an economic system in which evolution has come to a halt so that it is based on solid routine behaviour. This system is assumed to have found an equilibrium that allows the economic agents to operate
year after year in their accustomed ways.

(2) Economic innovation: The initial equilibrium breaks down when a minority of innovators renew some of the routines. Under capitalist conditions, a strong credit system helped these innovators—the Schumpeterian entrepreneurs who establish new firms.

(3) Creative destruction and renewed equilibrium. After a competitive struggle among agents is related to old and new routines, a renewed and well-established routine system emerges.

(4) Long-term economic evolution: The renewed equilibrium forms the basis for another phase of disturbing innovative activity. The long-term economic evolution of the routinised equilibria and innovative rebellions against these equilibria. (Andersen, 2009, pp. 11-12)

Also, some terms developed by Schumpeter himself can be seen in followings. These terms must be considered while understanding the relationship between Schumpeter and technology. Because they are the key factors in order to understand how the capitalist system works:

Innovation: We simply define innovation as the setting up of a new production function (Cycles, 87; Cycles Abr., 62).

Entrepreneur: For actions which consist in carrying out innovations we reserve the term “entreprise”; the individuals who carry them out we call Entrepreneurs (Cycles, 102; Cycles Abr., 77).

Profit: an entrepreneur who… carries out an innovation… (receives) entrepreneur’s profit or simply profit (Cycles, 104-5; Cycles Abr., 79).

Credit: It is essentially the creation of purchasing power for the purpose of transferring it to the entrepreneur (Development, 107).

Capital: It is that sum of means of payment which is available at any moment for transference to entrepreneurs (Development, 122; emphasis removed).

Business cycles: Innovations would suffice to produce alternating prosperities and depressions (Cycles, 223; Cycles Abr., 115).

Economic evolution: The changes in the economic process brought about by innovation, together with all their effects, and the response to them by the economic system, we shall designate by the term “economic evolution” (Cycles, 86; Cycles Abr., 61).

Capitalism: It is that form of private property economy in which innovations are carried out by borrowed money, which in general, thought not by logical necessity, implies credit creation (Cycles, 223; Cycles Abr., 179-80).

Capitalist evolution: It is economic evolution as conditioning, and being conditioned by, the institutional pattern of bourgeois society (Cycles, 304; Cycles Abr., 202). (Andersen, 2009, pp. 13-14)

On the opposite side, differences between Walras’s and Schumpeter’s equilibrium are derived from the natural jumps by the mediation of innovation.

Given his emerging vision of economic dynamics, it is not difficult to detect how Schumpeter developed his criticism of the sketches of dynamical process that are found in Walras’ elements. The driver of this sketchy dynamics of the economic system is an agent that is presently best denoted the Walrasian entrepreneur, of the W-entrepreneur. This W-entrepreneur has a paradoxical role in Walras’s essentially static system. On one hand, the W-entrepreneurs bring the elements of the system together into a coherent whole through an equilibrating process that is motivated by profit opportunities. On the other hand, the holders of the role of W-entrepreneurship have no income, when the system has moved to equilibrium. These two characteristics of the Walrasian system become clear as soon as its basic structure is considered… It is obvious that W-entrepreneurs are at the centre of Walras’s model World: Their function is to combine the elements and thereby create an integrated economic system. The individual W-entrepreneur hires the necessary factors of production at given conditions of payment and he initiates a process of production in which one of the employed workers functions as a manager. When the goods have been produced, he sells them at the market price that is prevailing at that time… Walra’s equilibrium thus has an apparently paradoxical characteristic: His W-entrepreneurs that are driven by the profit motive obtains no profit whatsoever. Hence, he must conclude that, in equilibrium, the W-entrepreneur has to obtain their incomes by functioning as landowners, workers, or capitalists. Schumpeter thought that this entrepreneur is only a fiction that is created because of the limitations of economic statics. (Andersen, 2009, pp. 60-61)
It can be definitively said that entrepreneurship has a key element in both Walras and Schumpeter. However, the treatment of entrepreneurship differs from each other by the mediation statics economics and dynamic economics. In W-entrepreneurs, it has given conditions of payment. W-entrepreneur hires factors of production which are determined formerly. She/he is determined by the conditions the market serves her/him. Also, W-entrepreneur is frustrated with one more quite important circumstance: The market price prevails before she/he enters in it. Thus the system is static. That is why S-entrepreneur created by Schumpeter is a much more attractive person than W-entrepreneur. Because, S-entrepreneur makes her/his entrepreneurship in a dynamic economics. The main difference between W-entrepreneur and S-entrepreneur is that the first one accepts what kind of conditions can be served by economics is highly acceptable by her/his, however, the second one does not accept what kind of matter can be served by the market. S-entrepreneur creates her/his market’s conditions by her/his own.

One of the most important deficits of neoclassical economics is that it accepts equilibrium as single. In other words, this equilibrium is a mechanism that will ultimately balance any kind of instability. Profit carries out the role of driving power in this equilibrium. Besides that, in mainstream economics, profit is a reward to the person that undertakes the risk. But Schumpeter’s creative destruction theory clarifies this point.

According to Schumpeter (1934), evolutionary statics and evolutionary dynamics treat four great problems of capitalism. Those are:

1. the problem of the definition of the capitalistic economy;
2. the problem of entrepreneurial profit;
3. the problem of the interest on capital;
4. the problem of endogenous business cycles and crises in the capitalist economy (Andersen, 2009).

Schumpeter (1934) problematized capitalism into these problems. Every great economist who is contemplating how capitalism works or what kinds of treatments have it, Schumpeter (1934) did find the answer in capitalism’s own course. Opposition to left-sided opinion, Schumpeter (1934), who was an elite and liberal scientist, criticized capitalism coming from its own hard core. He saw that if capitalism does not change of its paradigm, it will collapse sooner or later.

When the author looked at the other triple order that ensures creative destruction, he saw that there is the process obtaining a market and continuing production in that market. These cause creative destruction and a new technological order, because capitalism does not own its existence only to technological developments, it also owns it to the regulation of these developments organizationally.

For Schumpeter, banking system is a mediator that creates credit for the renewal of monetary system and broadens the elbow room of entrepreneur. Entrepreneur that can find credit will not be ordinary anymore and will be able to attend creative destruction process. The present problems of stationary economics are increasing hedonist and myopic attitudes of people, decrease in the value of human beings because of the process of globalism. These significant problems of today caused Schumpeter to take a completely different viewpoint about capitalism. (Kızılkaya, 2010, pp. 2-3)

The first difference between the understanding of neoclassical economics and Schumpeter is the human typology. As neoclassical economics is based on the marginalist economics, human beings are rational-hedonist and homo-economicus, namely display behaviors that are valid in all of the time and places. Schumpeter’s human beings display creative behavioral aspects (Kızılkaya, 2010). Schumpeter’s viewpoint (1934) about human beings presents an example mankind typology to NIE which does not have an attitude different from neoclassical economics; because Schumpeter’s human beings do not behave the same every time everywhere.
This type can destroy the present situation and create a new one when necessary. This is why, capitalism’s the assumption of “entrepreneurial spirit” can vary from one country to another. Economies where real creation is possible, new dimensions and economic profits can occur and can carry out real entrepreneurship by creative destruction. Beyond all these, contrary to the claim of neoclassical economics and NIE, hedonist-rational human typology cannot behave rationally. When every place and time is not the same, Schumpeter’s human (entrepreneur) typology differs and in this way, the ones who can adopt the real creative destruction typology will be able to behave rationally. In other words, they will be able to tip the scales in their favor.

Shortly, in terms of Schumpeter, in a capitalist economy, technological progress occurs through creative destruction. Capitalism, which is—according to him—a dynamic economy, will only be sustainable through technology. Otherwise, capitalism has no chance to continue according to the course of present order (Gürkan, 2007).

The Relationship Between Ronald Coase’s “Transaction Costs” and Schumpeter’s Entrepreneur

Ronald Coase was not originally an economist. He was well educated in law. But, some scientists have for coordination owe their famous developing phenomena from a different department. Coase is one of these scientists. His notion “transaction cost” gives an important light to economics.

Transaction cost economics is the paradigm founded by Ronald Coase... More specifically, it recognizes that there are different ways of organizing transactions (or different “modes of governance” for transactions), that these differ in costs, and that the costs are likely to differ in systematic ways depending on observable characteristics of the transactions in question. Much progress has been made in strengthening the operational content of models in this paradigm, that is, in rebutting the charge that transaction costs can explain anything (Winter, 1988, p. 172)

There must be a connection between Schumpeter’s ideology with NIE. Because, NIE was arised against OIE’s ideas. One can find this connection between “creative destruction” and Coase’s firm theory (1937). Typically, two concepts show that how capitalism is releated to growth. So, the second stand is to investigate these two concepts’ relation.

One of the most criticized aspects of mainstream firm theory is that it degrades firm into a technological black box, although it accepts that it is the most important decision-making unit on the side of demand in economy. In addition to this, it gives chance to mention a firm that is hypothetical. (Pirgan Matur, 2007, p. 289)

In order to understand how technology is important in terms of economics, the role of a firm undertakes in economics should be better comprehended. Because economics is seperated into two-way parts as consumers and producers. Consumer is a consumer of technology too. So, consumer does not have the power to affect directly on economics in terms of technology. Yet, producer is the producer of this technology and also is determiner of it. In that case, the importance of technology for a firm is very understandable. The relation between firm and technology can be understood by scrutinizing among the relations of “transaction costs-firm”.

So, the first point to be looked when the place of technology in NIE is to be analyzed and when the comparison of this with Schumpeter’s concept of technology (1939) is to be made and Coase’s concept of “transaction costs” (1937).

In traditional economics theory, source allocation is directly defined by price mechanism and this is the same for production factors. Based on this, Coase (1937) asked the question: If price movements really organize production, then
are production organizations really necessary? Coases (1937) agreed that production can be arranged in the market through price mechanism, but according to him, such a contract cannot be carried out with zero cost and requires undertaking of some transaction costs. The duality of costs between market mechanism and firm (trade-off) determines the way of organizing production (Adaman, 2001). According to Coase, separative aspect of firm is to overcome the price mechanism which dominates market transactions (Coase, 1937, pp. 18-33). As contracts are made according to every change in the market and short-terms contracts are replaced by long-term contracts, the number of contracts and accordingly contract costs may seriously decrease. But as executive efficiency decreases in parallel with the increase in the scale and uncertainties increase in parallel with the extended contract time, there is an upper limit for a firm’s development. When carrying out a transaction in the firm is more expensive than carrying out the same transaction in the market, there is no financial importance or benefit of continuing the development of that firm. So, scale of firm in Coase’s conceptualization is determined (1937). So, price mechanism and entrepreneurship are accepted as different options for organizing production. It is obvious that Coase (1937) thought that production outside the firm is a valid scale for his analyses. Although it is possible to make the simple production on individual basis outside firm, this kind of a production process can be typical for societies existed before capitalism… It is not possible to make a production over a specific level of complexity outside firm. If it is not possible to produce these products in a firm, then there will be no market for them. Formation of a product’s market depends on its production in firm, so, if a firm does not exist, then a market does not exist. Basic function of market is to bring production and consumption units together while the basic function of firm is to combine production inputs and transform them into product. Firm and market are not two different options of organizing production, because the basic functions of these two organizations are different from one another. (Pirgan Matur, 2007, pp. 289-290)

Shortly, firm decreases the burden to the costs caused by the price mechanism. Put it differently, firm decreases costs through long-term agreements. So, there can be a connection with the viewpoint of NIE and the viewpoint of Schumpeter (1939) about technology; this connection can be established by using Coase’s firm theory (1937). Firm is an instrument that decreases costs in the market through agreements, thus increases productivity and production. Although it is not exactly the same, it has a role like an “entrepreneur” as it carries out the role of helping price mechanism function well. As is mentioned, Schumpeter’s entrepreneur (1934) is effective in terms of administrative efficiency besides being in the market in terms of technicality; Coase’s firm theory (1937) has a similar administrative sustainability dimension. Firm ensures administrative efficiency by decreasing transaction costs. But this has a limit. From a different perspective, Coase’s firm theory (1937) corresponds to Schumpeter’s concept (1939) of “creative destruction”, which he saw as a significant part of a dynamic economy. Creative destruction destroys the previous production styles through technology and creates a brand new production type. Coase’s firm theory (1937) does the same.

The followings are two good examples to understand “Coase theorem”:

Suppose that an individual opens a bar in a residential neighbourhood. The operation is quite noisat night and disturbs the residents. The residents decide to take action in court against the owner of the bar so that he has to stop his operations. Suppose that the court agrees with the residents and declares the bar owner liable for the noise he causes. If the latter wants to keep on making noise or invest in a new building that would reduce the noise. The bar owner will be willing to pay an amount no greater than the value of his operation him. Suppose now that the court disagrees with the residents and declares that the bar owner is not liable for the noise he creates. The residents will have to pay compensation to the bar owner so that he will reduce the noise. They will be willing to pay an amount no greater than the value of the noise to them; in such a case, the owner of the bar would be willing to reduce the noise. No matter what the court’s decision is, the final amount of noise or the money invested in reducing it will be the same (Coase). That is what is stated by the Coase theorem. According to this theorem, in a market with no transaction costs, the allocation of resources between two bargaining individuals will be the same, efficient, and should be independent of the initial definition of property rights. (Jacques, 1992, p. 1316)

For example, two people can enjoy watching a movie at a theater (provided they do not make noise or block each other’s view) at the same time without one person’s enjoyment interfering with another’s. In contrast, two people cannot
both enjoy drinking the same soda without one person’s consumption reducing the amount of soda left for the other. Nonexclusive in consumption means that once a good is supplied to one person, others can consume it free of charge. For example, if one person reduces air emissions to derive value from cleaner air, another person can enjoy the value from the same cleaner air without having to pay for it. (Anderson & Parker, 2013, p. 261)

As it can be seen in these two examples, there is no change between transaction costs and the allocation of resources in the market. So, transaction costs help a firm exist in the market without any hesitation. Looking at another aspect, a firm exists in market, because it bears transaction costs. If a firm bears transaction costs, it must create something new in the market. Especially, if this firm has an innovative idea, transaction costs help it to get much easier benefit from the allocation of resources. Because, the other actors in the market do not want to endure the kinds of responsibilities a firm undertakes in the market and they withdraw the production, the other actors in the economy pay off the amount of production. That is the reason of a firm having transaction costs.

The relationship between transaction costs and creative destruction rises at this point. The more firm arises in the market, the more creative destruction occurs.

The lifeline of some philosophers steers to their world of mind as irrevocably and completes entirely through an idea. In other words, the lifestyle of some philosophers is determined by their faith also. Coase and Schumpeter are very similar to each other, while decades can count several philosophers of similar nature. If Schumpeter’s mother would not get married for the second time with a military officer from an elitist strata, maybe Schumpeter might not be a member of an elitist strata and also Coase, … observed in his first lecture that his contribution to the theory of the firm did not appear to him to be in any sense foreordained, but rather was the result of a conjunction of circumstances in his life that resulted in his exposure to a particular set of influences and facts… If we ask, “What does economics have to say about the role of the business firm in a market economy”, the response will be silence followed by an excited babble of significantly conflicting answers—an interesting babble, but a babble nonetheless. (Winter, 1988, p. 163)

The relationship among technology-economics is as important and interesting as the relation among firm-economics that is remarkable, because it is the most important essence of capitalism. Firms are partial to sustaining the capitalist dynamics and adjusting the speed of economics. Also, the effect of firm-entrepreneur also shows to another point. The entrepreneur who undertakes the regulating mechanism of capitalist system makes it either by herself/himself or by the mediation of a firm. According to Winter (1988), the orthodox view of microeconomics is debatable. The important reason of this situation is caused by the textbook, … the textbook chapters variously titled “Theory of the Firm”, “Production and Cost”, “Competitive Supply”, “Monopoly”, and so forth…. Firms are characterized by the technological transformations of which they are capable-formally, by production sets or production functions. Like consumers, firms are unitary actors and are economically rational; more specifically, they maximize profit or present value. They deal in markets for homogeneous commodities; in almost all cases these appear to be contemporaneous spot markets for inputs and outputs. Contractual arrangements and other institutional supports for the functioning of the business firm are, one infers, assumed to be sufficiently close to being flawless and costless so as to justify the virtually total absence of discussion of these topics (Look for “contract” in the index; you will probably find “contract curve”). The discussion focuses on how firms, guided by market forces, make the production decisions that form a part of the answer to the overall social resource allocation problem. It is about inputs and outputs and how they relate to the given technology, to each other, and to market forces… And in general equilibrium theory, its outline stands out even more starkly than in intermediate price theory. Standard treatments of the modern theory present firms as production sets with profit motives attached. The profit motive may be rationalized as reflecting the stockholders’ (unanimous) interests under the prevailing assumptions of complete markets,
atomistic competition, and perfect contracts. No such rationalization is provided for the firms per se. Like consumers, they are logical primitives of the theoretical system. (Winter, 1988, pp. 164-165)

In this case, market forces divide as consumers and firms into it. All market forces have a same target in a different view. But, the view will be mainly focused on the firms’ side. In traditional economics, theory firms have a given technology which has already been existed before in the market. The problem here is if technology is a given phenomenon and accepted almost the same all firms in the market, how will they gain pure profits? If firms are accepted by homogeneous commodities, their goods will not have any differences among them. On the contrary, this situation can be seen rare in the market. There are lots of firms and there are lots of commodities, but they all gain profits. So, how could it happen then?

If traditional mainstream theory accepts, no firms will not gain pure profits. However, in the real market conditions, some firms can gain pure profits, the others do not. The solution points here whether the firm is an innovator firm or an imitator firm or not. The innovator firm which creates a new technology brings it into the market. Although, its commodities are as homogeneous as the others, they are not actually the same. Because, the technology which is not involved in the other firms’ product exists only in this innovator firm’s product. Furthermore, if the technology innovator firm makes some contractual arrangement in the market, it will have flawless plan which will be nearly insurmountable until a new technological firm comes to the market. Also, transaction cost is also a considerably relationship among Schumpeter’s entrepreneurs. As is known, “the entrepreneur” is one of the participants of the resource allocation. So, if transaction cost is releated to discussion focuses on how firms are guided by the market forces, the entrepreneur is also guidance to the firms, because, the entrepreneur actually does main thing. This is called innovation: They are creating a new idea or a new method or a new product, then turns them into a substantial product, and sells in the market. If firm’s main motive to be in the market is guided, the market powers cannot do the things to do, an entrepreneur will get along with a firm or the entrepreneur will establish her/his own firm. By all means, the entrepreneur will benefit from the transaction cost in the market.

“Coase’s first lecture revealed a surprising aversion toward mathematics” (Rosen, 1988, p. 49). Schumpeter and Coase have significant conflicts on one point, nevertheless they both have gained critical notions which have been debating even today by the mediation of propounding theories: the tendency to mathematics. Mathematics is a condition where its inexistance is unacceptable for Schumpeter. For Schumpeter (1939), economics can only be understandable with mathematics; otherwise condition causes the economics degenerative. Dealing with the resource allocation, Coase (1937) has an opponent idea. Due to the fact that Coase was educated in law, he believed that economics must be understood with the resource allocation, especially with the kind of a role a firm undertakes in economics.

Although, both Schumpeter and Coase had opposite opinions about using mathematics, in their workings they did not use mathematics. The main difference between using mathematics was that Schumpeter (1939) thought mathematics is a tool of understanding the happenings. On the contrary, Coase (1992) had an aversion to use mathematics. In here, the academic origins where they come from have a great importance.

In this case, market forces divide as consumers and firms into it. All market forces have a same target in a different view. But, the view will be mainly focused on the firms’ side. In traditional economics theory, firms have a given technology which has already been existed before in the market. The problem here is if technology is a given phenomenon and accepted almost the same all firms in the market, how will they gain
pure profits? If firms are accepted by homogeneous commodities, their goods will not have any difference among them. On the contrary, this situation can be seen rare in the market. There are lots of firms and there are lots of commodities, but they all gain profits.

Schumpeter’s “creative destruction” does this innovation, thanks to the entrepreneur. Coase’s “firm” ensures formation of a new production type by decreasing transaction costs in the market. In this way, Coase’s theory of company works like a “creative destruction” example and creates a dynamic economy.

Transactions costs are the costs incurred in defining, negotiating, and enforcing institutional arrangements. Coase (1960) in his later article showed that only in the absence of these costs will the allocation of resources be Pareto efficient. When transaction costs are positive, the assignment of property rights represents an additional constraint in the economic agent’s budget constraint. Coase’s contribution was to point out that with positive transaction costs, the equilibrium outcome will differ from the neoclassical optimal outcome, if the transaction costs give rise to property rights which are unassigned. (Smyth, 1998, p. 363)

Transaction costs play an important role in determining the optimum level of the company. The positive transaction costs ensure for the company to an active determinant in the market by providing a more comfortable of determining the outcome balance. The reduction of the risk the company has undertaken through transaction costs and leads the company to act like an entrepreneur in terms of NIE. The chance that the company creates innovation on the market through the concept of transaction costs suggested by Coase (1937) in NIE is as high as the chance that Schumpeter’s entrepreneur (1939) has in order to create innovation by means of credits even if there is no capital. Because it will help to determine the optimal output level of the company through transaction costs contracts, pricing, and so on. Thus, the company will be able to contribute to the creative destruction process innovation to pursue just such an entrepreneur.

As an evolutionary theory, Schumpeter’s entrepreneurial theory (1934) is coincided by transaction cost economics by the mediation of tending to be behaviour rather hypothecial sets of alternatives. As is discussed, behaviour is a very important motive when an entrepreneur starts an innovative attraction.

What is the relationship between this evolutionary view and the transaction cost approach to the same issues? This is quite a complicated question, with many levels and facets. At a very basic level, it is not clear whether transaction cost economics aspires to a historico-evolutionary mode of explanation or, instead, to something more like the timeless, abstract deduction from presumed “data” that characterizes general equilibrium theory. The frequent use of historical evidence in the transaction cost paradigm is consistent with the former, and not the latter, interpretation of its explanatory program. On this interpretation, transaction cost economics is fully compatible with evolutionary thinking. Transaction costs shape economic organization over time, because organizational innovations occur that permit previously experienced transactional difficulties to be circumvented. Firms make such innovations prosper and grow at the expense of their rivals, except perhaps those that are quick to imitate the innovation. (Winter, 1988, pp. 176-177)

Coase did not define the empirical content of transactions costs in *The Nature of the Firm* nor tell how to recognize them when seeing them. Much progress has been made since then, especially by Becker (1967) and by Williamson (1975), in identifying transactions costs with firm-specific human and nonhuman capital. Shared investment costs require sharing later returns and can lead to ex post contract enforcement problems due to inefficient, opprotunistic behavior. (Rosen, 1988, p. 51)

But, the most important part what Coase (1937) did is that he asked the most interesting and the most unique question which has been never asked in the economics: What do firms do in the real economic life? His major contribution to economics lies down in this point. Forwhy, mainstream economics accepts the firm as a statue which has always been existed and will always exist. Until Coase (1937) asked why firms exist in the market, no one has contrived of their real work in the market. Firms bring production factor together and turn them a real
product. Why firms, why not another formation could do same duty? Because firms bear "transaction costs". They have risks in order to produce a good and if they succeed the production well, they will get profit and they throw away their risks sourced by transaction costs. So, one can ask the risk taken by an entrepreneur and a firm same. It is quite hard to say both are totally same, however, they are very similar, because an entrepreneur includes the market by the mediation of a new product, a new idea, or a new production method. She/he undertakes all risks which are not taken by any others. So, it is a similar feature sharing by a firm in terms of entrepreneur. The difference between an entrepreneur and a firm by the mediation of taking risks and doing works is that the former has a chance to circuit her/his riks to a firm. It is dependable for an entrepreneur to turn her/his idea or product a firm. This kind of circulation causes the entrepreneur’s risks to decrease. However, of course when turning a brilliant idea or a product as a firm market, the entrepreneur takes extra risks. Nevertheless, if turning a firm process completes successfully, the transaction costs she/he will get increase. Increasing the transaction cost makes her/him much more profits. In other words, if an entrepreneur’s enterprise ends a successfully firm process, this kind of process may be the first one which enters the market, it will gain profits.

As is known, NIE also refers to a break from the OIE. Therefore, the biggest difference between the view of OIE and NIE towards the institutions is historical-deductive method. The historical-deductive view is mainly used by OIE. The NIE does not require it too much. The importance of the historical-deductive method of the institutions is to look at all economic agents as a whole considering historical occurrences. However, institutions are not considered as a whole in NIE. Although this case may be the subject of criticism in terms of NIE to change into neoclassical economics sometimes and have problems to explain economic issues, this singular perspective can occasionally afford to offer a different angle. Especially, NIE’s view of firm’s theory is consistent with Schumpeter’s entrepreneurs through this unique perspective.

… Given the new perspectives on institutions, there was no need to engage in the kind of massive historical-deductive studies that were central to the old institutionalism. In any event, under the NIE approach, the institutional framework became the object of research and attention was devoted to considering the implications of given institutional arrangements for economic behaviour. In this respect, the focus was on “made orders” (or “constructed organisations”) as opposed to “spontaneous orders” (spontaneous social organisations). (Furuboth & Richter, 2008, p. 16)

The importance, which Schumpeter (1939) attributed to the concept of “creative destruction”, is related to termination of the current situation and the launch of a new situation through “destruction” process. Such a formation intertwined with the history of capitalism.

Destruction is a common practice encountered in every era. Every era proceeds to a clear distinction between forms of destruction linked to creative practices and forms that seem to have neither specific cause nor target. In the modern era, however, this distinction between what is considered to be good, productive destruction and what is not has become even clearer, for the distinction is exceptionally vital to capitalism, which claims for itself a very special type of destruction, preceded by the word “creative”. To understand and identify the different conceptions of destruction and the relatively recent concept of “creative destruction”—and to describe the ways in which the latter shrugs off destructions that are not considered to be linked with creation—has acquired ceasing urgency (economic crises like ours, which are themselves states of urgency, have always). (Kalfa, 2014, p. 581)

… Research is planned and conducted by governments, universities, endowed institutions, and private individuals; innumerable opportunities for profitable innovations in industry have resulted. Furthermore, individual firms have invested heavily in scientific manpower and equipment to carry out continuing programs of research and enquiry… The following types of innovations result from the deliberate inventive effort of industrial research: (1) change in product: change of quality, performance, or structure; improvement of product control; (2) change in production process: cost-reduction in production; improvement in process control; (3) change in application or use of product or process: new products utilizing
existing output; new markets; (4) new products or processes; (5) utilization of by-products; disposal of wastes; and (6) technical services to customers. (Shaw Solo, 1951, pp. 418-419)

It is understood that “creative destruction” is not an end, albeit it is a future of entrepreneurial function. The more creative destruction happens, the entrepreneurs bring to light. At first, genius idea will come to the market. This new brand product will produce combining with entrepreneurs’ great combination skills. This is the dynamic process of Schumpeter’s “creative destruction”. Ever then, in the stationary economics, an entrepreneur is not able to predict what kind of conditions will appear when she/he comes to the market. After joining in a dynamic process, she/he will earn pure profits. One another difference between in the stationary economics and the dynamics economics is earning pure profits. Earning pure profits in the dynamics economics is considered more possible than in the stationary economics. In the early beginning, imitation process will create new entrepreneurs, but after reducing pure profits and chaining in a normal profit.

Creating new entrepreneurs is a sole feature of capitalism. The basic point in order to understand why Schumpeter’s “creative destruction” (1934) is the key element will be helpful to understand its evolution mind. There are entrepreneurs in the stationary economics of course, however those kinds of entrepreneurs will earn normal profits. Notwithstanding, in the dynamic or evolution economics, entrepreneurs will earn pure profits until imitators come to the market. As the process recontinues on this matter, capitalism will renew itself. So far as Schumpeter’s process (1934) is a “creative destruction” for entrepreneurs, it will not be a destruction for the capitalism. Although Schumpeter (1939) claimed that it will collapse capitalism, if this is an evolutionary process and so it is, it will renew capitalism into normal profits and continue.

As is known, he was one of the prominent academicians in Harvard, Schumpeter is still a towerin figure among other 20th century economists. He owed his great reputation on three counts:

(a) the originality of his thought;
(b) his perceived independence of the 20th century political axis from left to right;
(c) the perceived contradictions and paradoxes of his teachings (Reinert, 2003).

The two canons contrasted as ideal types submitted standard canon and the other canon seperates market mechanism opposite sites. On one hand, the market is used by as a mechanism for setting prices; on the other hand, the market is used by as an arena for rivalry and as a mechanism selecting between different products and different solutions (Reinert, 2003). Looking at the market from different point of means, the firm will be seen by different minds. As is known very well, the market has two sides. On one side, there are firms; on the other side, there are consumers. How a firm would be seen by two ideas? What does a firm work for? Questions determine where a firm locates in the market. This location is directly releated with Coase’s “transaction costs” term (1937). Put it differently, transaction costs are releated with the firm’s existence in the market. In mainstream economics, the firm exists in it naturally because of the market existence. However, in transaction costs, the firm exists, because it undertakes responsibilities which are not to be taken any other evolution in the market. In written regular textbooks, there are a lot of different products and solutions, but there is no sign what a firm really to do in the market. In an evolutionary economics, firms have different products and different solutions. Those arising from evolutionary features of the Coase (1937) are coincidence with how Schumpeter (1939) saw innovation process.

As it is discussed before, economics has rival characteristics people who have a desire innovating new things which will increase and as many people will do the same thing, there will be lots of products. According to
consumers, they will have a choice to select different kinds of products. For firms only those kinds of firms which bring innovative products will survive in the market. The market will give a permission, only if a firm has innovative mind. So, the firms which undertake “transaction costs” as an innovative mind will survive in the market. In other words, in a dynamic economics firms, innovating can only have “transaction costs”.

The term of diffusion of technology separates into two parts. The first one is voluntary and the second one is involuntary spread of technology. Technology transfer is described as the voluntary dissemination. But the involuntary dissemination is labelled imitation. According to the definition given by Nasbeth and Ray (1974), imitation is the process by which an envious firm attempts to duplicate an imperfectly observed success. The first important point is to distinguish between diffusion and the adoption of technology. In the analysis of adoption, one considers the decisions taken by agents to incorporate a new technology into their activities. A typical measure of adoption would be the proportion of eligible firms in an industry which use a given technology. By contrast, in the analysis of diffusion, one is concerned with measuring the changing economic significance of a technology with the passage of time. In a sense, the analysis of diffusion is closely related to the analysis of technological substitution in which the displacement of one technology by another is the focus of attention. (Korres, Lionaki, & Polichronopoulos, 2003, p. 293)

In this sense, firms can be divided as eligible firms and imitator firms. Once as Schumpeter (1939) said there is a person or a firm in the market who/which has a new idea or a new invention will provide this new invention into the market. Especially, if this new invention would be served by a firm, this can be called as an eligible firm. Then, there will be some new agents that come into the scene. They have a great desire to adopt this kind of new technology to their activities. As long as the firms will increase including a new technology into their activities, these kinds of imitator firms will continue to come to the market. Insofar a new technology invents all imitator firms which will imitate the eligible firm’s new technology.

So, one can mind what kind of relationship between eligible/imitator firms and transaction cost do they have? As it is discussed, transaction costs are related whether a firm comes and undertakes the production costs. So, if both eligible firm and imitator firm come to the market and undertake the cost of production, they will both have transaction costs, so how can be separated them into each other by the mediation of transaction costs? Or in other words, it can be asked, what kind of differences is between an eligible firm and an imitator firm by the mediation of transaction costs?

As a leader of a new technology, an eligible firm will have much more transaction costs. Because its technology is new and they have risky conditions that is because they are involved in the market. However, as new technology diffuses, their transaction costs will decrease and eligible firm will convey its risks to the imitator firms which start to gain only normal profits as shines and then go off stars. In other aspect, eligible firms are the leader of the creative destruction process and the imitator ones are only the soldiers of continuation of a given technology.

In that case, patterns related about Schumpeterian tradition (2003) are divided into two blocks: creative destruction pattern and creative accumulation pattern.

According to Schumpeterian tradition, this paper starts from the recognition that there are two main patterns of innovations: the first one is the creative destruction pattern where innovations introduced by firms that did not innovate before and fundamental role played by entrepreneurs with new ideas and the firms in innovative activities and in methods of production and also the second one is a creative accumulation pattern where innovations introduced by firms that innovated before with the large established forms and the accumulated stock of knowledge with the presence of relevant barriers to entry small firms. As a consequence, on cumulative pattern, the current knowledge and the innovation activities form the base that building blocks on the future innovations. (Korres et al., 2003, p. 294)
As is discussed before, Schumpeter has a powerful connection with German historical school. One of the most important members’ of German Historical School, Schmoller, served a general analysis of the cultural development of peoples, nations, and thus at last of humankind as a whole.

Schumpeter’s theory of economic development distinguishes between economic growth and development. Economic growth denotes the slow, gradual, and cumulative change of an economics system, resulting from factors, such as population growth which is said to originate from sources that are exogenous to the economic system. Economic development results from discontinuous internal changes by economic innovations that originate from within the economic system, pinpointing major industrial disruptions which fuel business cycle fluctuations (Schumpeter, 1939, p. 83n) ... Schumpeter’s approach to economic evolution was based on “eneric” entrepreneurial agents that act as the decisive evolutionary force from within the economic system, that is as the carriers of a specific mechanism of change. (Ebner, 2003, pp. 127-128)

Since Schumpeter’s theory is called an evolutionary theory, it has important deal with methodological holism.

Transaction cost economics maintains that the microanalytics matters in three basic respects:
(1) behavioral assumptions;
(2) dimensionalizing transactions;
(3) process features… (Ebner, 2003, pp. 127-128).

As discussed at length elsewhere, transaction cost economics employs two critical behavioral assumptions. The first is a cognitive assumption: Human agents are assumed to be “intendedly rational, but only limitedly so”, which is commonly referred to as bounded rationality… Inasmuch, however, as boundedly rational agents are attempting effectively to cope, irrationality (except, perhaps, for certain pathological cases) is not contemplated. Satisficing, moreover, is merely one manifestation of bounded rationality. It appeals to psychology and works out of an aspiration level mechanics… The second behavioral assumption is that human agents are given to opportunism, which is a deep condition of self-interest seeking that contemplates guile. Promises to behave responsibly that are unsupported by credible commitments will not, therefore, be reliably discharged. (Williamson, 1988, pp. 67-68)

Eventhough, behavioral assumptions are related with human behavior, it has a considerable connection between firms’ attitude. At first, a very important question must be asked whether there is a connection between bounded rationality and firms. The answer is “yes”, but indirectly. If people act “intendedly rational, but only limited so”, they will choose fastidious about their consumptions. If their consumptions tend to choose technological goods/services, the first innovator firm will get lucky then. Satisfying will be obtained both psychology and mechanics. Then, a firm which has a great intend to change consumers’s mind with its technological invention must react to use two in a row which are psychology and mechanics. Insomuch, a firm comes to the market as an invention firm, it must use its all charmy effects having with new invention technology and must influence the consumers with it. So, this firm will use its transaction cost, which is also called why a firm does in the market if market goes well on its own, will lead its rule in the market by the mediation of bounded rationality feature of the consumers.

The second path of the relationship between innovation process and transaction cost economics is seen in “opportunism”. The opportunism notion can be seen directly related with the imitator firms. As discussed, the imitator firms come to the market after a new technological invention has been served by a leader firm. How does a leader innovator firm come to the market and gain pure profits? Because it can influence the customers; the imitator firm/firms comes/come to the market to benefit from this pure profits. Luckily, all imitator firms have not fair chance, because only the first firms can have an advantage to gain the pure profits. The rest of them will connect the normal profits. Thereby, the imitator firm has a great connection with opportunism by the mediation of
innovation process. Put it differently, only imitator firms have a role in order to be taken opportunism in innovation process.

Of course, Coase (1937) was the first person who asked “what does a firm do in the market”, but there is another aspect to understand it. In other words, transaction costs divide it into two ways. The other side of transaction costs has been developed by Williamson (1988). Nevertheless, the topic is mainly related with Schumpeter-Coase mind, Williamson’s approach will not be discussed entirely in this article. This Williamsonian approach is highly related with opportunism. In his approach, firm does not exist as opportunist incentives in the market. Sometimes “… contractual issues do not everywhere and always hinge on (Williamsonian) opportunism and that contracts can have functions beyond those merely of incentive alignment to prevent wrongdoing” (Love, 2005, p. 382).

Innovation is indispensable for the motive as can be seen in this change. This innovation can be provided by the renewal or replacement of factors of production in the products or raw materials. For instance, making the structure of cleaning materials used 50-60 years ago is more suitable to wash the baby clothes. Introducing an existing product to production process by renewal will reduce manufacturing costs.

Business cycles are recurrent fluctuations in the rate at which innovations are introduced into the economy, in the intensity with which entrepreneurs exercise their sui generis function of overcoming obstacles to new combinations. The reason for this discontinuity in the rate of innovations and in the intensity of entrepreneurial endeavor, of the bunching of innovations at one time and their comparative scarcity at others, lies in the distribution of entrepreneurial ability. This ability to dare, to initiate, and to overcome obstacles to innovations is, like many other abilities, distributed along a curve which suggests that there are few individuals endowed with such ability to any great degree and many who are equipped only to initiate and follow the pioneering efforts the few. (Kuznets, 1940, p. 259)

There is surely a good position of autobiographic experience in Schumpeter’s portrait of those bourgeois scions becoming renegades to their own class-memories of pleasant hours spent in dialogue with dispeptic Viennese coffee house intellectuals and earnest students and instructors in the vicinity of the Harvard Yard. (Kisch, 2001, p. 152)

The concepts, such as entrepreneurs, business cycles, and so on which occupy an important place in the system of thought developed by Schumpeter stem from the influence of his academic development of the elitist environment. This environment influenced him from an early age but also fed his admiration for capitalism.

Economically speaking, capitalism, as seen by Schumpeter, has been a phenomenal success. It necessarily works for the improvement of the working classes. The innovative force of the entrepreneur inevitably improves material well-being to the point where poverty by prevailing standards no longer exists. The capitalist process experiences periodic depressions only because the uneven occurrence of innovations causes maladjustments, while obsolete elements of the industrial organism are eliminated before it reaches a new equilibrium at a higher level of real income for society. Without detailing his elaborate theory of the cycle, it can be said that these periodic fluctuations are of decreasing severity and are subject to alleviating devices, such as unemployment compensation. Depressions, therefore, are a symptom of progress. (O’Donnell, 1973, p. 206)

In other words, business cycles suggested by Schumpeter (1934) are a rare opportunity for entrepreneurs. The business cycle seen as a normal cycle of capitalism is regarded as a drug that could eliminate the throes of poverty created by capitalism, because a higher state of equilibrium can be achieved through new products/services launched by entrepreneurs who create innovation. The increase in people’s income will go hand in hand with increasing the amount of output.

With specific regard to the Turkey market, both the introduction of many new products entering the market to Turkish consumers and opening a new market in terms of producing these products is an example of the third case.
... The entrepreneur purchases new ideas and that the link between increased knowledge and new production functions is a commercial transaction. There is, however, no discussion of the market in which these new ideas are sold or of their supply and price. (Shaw Solo, 1951, p. 423)

Coase (1992) himself has stated that his contribution to economics literature is useful to the theory of price or microeconomics. According to Coase (1992), the main effort in the literature of economics since the publication of *The Wealth of Nations* is to fill the space left blank by Adam Smith.

The given factors are technology and the tastes of consumers, and individuals, who follow their own interest, are governed in their choices by a system of prices. Economists have uncovered the conditions necessary if Adam Smith’s results are to be achieved and where, in the real world, such conditions do not appear to be found, they have proposed changes which are designed to bring them about. It is what one finds in the textbooks. (Coase, 1992, p. 713)

The way a firm is described by neoclassical economics is explained by Coase,

The firm in mainstream economic theory has often been described as a ‘black box.’ And so it is. This is very extraordinary given that most resources in a modern economic system are employed within firms, with how these resources are used dependent on administrative decisions and not directly on the operation of a market. Consequently, the efficiency of the economic system depends to a very considerable extent on how these organizations conduct their affairs, particularly, of course, the modern corporation. Even more surprising, given their interest in the pricing system, is the neglect of the market or more specifically the institutional arrangements which govern the process of exchange. As these institutional arrangements determine to a large extent what is produced, what we have is a very incomplete theory. (Coase, 1992, p. 714)

The question why firms do exist on the market has started at 1932. He solved the problem asking questions about pricing mechanism:

It was to realize that there were costs of using the pricing mechanism. What the prices are have to be discovered. There are negotiations to be undertaken, contracts have to be drawn up, inspections have to be made, arrangements have to be made to settle disputes, and so on. These costs have come to be known as transaction costs. Their existence implies that methods of coordination alternative to the market, which are themselves costly and in various ways imperfect, may nonetheless be preferable to relying on the pricing mechanism, the only method of coordination normally analyzed by economists. (Coase, 1992, p. 715)

If one can understand how NIE looks to technology, it may find why NIE has a wide range of aspects from economics to anthropology etc.

The NIE is an interdisciplinary enterprise combining economics, law, organization theory, political science, sociology, and anthropology to understand the institutions of social, political, and commercial life. It borrows liberally from various social-science disciplines, but its primary language is economics. Its goal is to explain what institutions are, how they arise, what purposes they serve, how they change, and how—if at all—they should be reformed. (Klein, 1999, p. 456)

The connection between NIE and technology is highly powerful, because NIE is an interdisciplinary enterprise. Since NIE is an interdisciplinary thought, technology must break in it in most subjects. Because technology is related to law, organization theory, etc. as well as it is related to economics.

The main problem of orthodox economics called as neoclassical economics is not capable to understand what is going on in real world and in theory comparatively. In inscription, equilibrium does not suite well in real life cordially. Therefore, Coase’s theory (1937) helps to enlighten minds about how a firm works in the market.

NIE differs from mainstream neoclassical economics, however, in insisting that policy analysis be guided by what Coase (1964) called “comparative institutional analysis”. Orthodox welfare analysis typically compares real-world
outcomes with the hypothetical benchmark of perfectly competitive general equilibrium. It is unsurprising, then, that actual market outcomes will come up short... the decision to organize transactions within the firm as opposed to on the open market—the “make or buy decision”—depends on the relative costs of internal and external exchange. The market mechanism entails certain costs: discovering the relevant prices, negotiating and enforcing contracts, and so on. Within the firm, the entrepreneur can reduce these “transaction costs” by coordinating these activities himself. (Klein, 1999, pp. 457-464)

In this context, similar with the opinion of Schumpeter (1934), link with technology in terms of NIE is established by the entrepreneurs. This is enabled by Coase’s concept (1937) of “transaction costs”. Companies are acting as a mediator to reduce operations in the market. At this point, it can be argued that the “company” having a key role in Schumpeter’s “entrepreneurs” concept (1934) and Coase’s “transaction costs” concept (1937) assume roles that could create coordination with each other under capitalism. Namely, entrepreneur is the person who assumes “creative destruction” with the development of technological conditions. He assumed all risk of demolishing an existing mode of production and creating a new one. He made a profit in return for the effort. According to Schumpeter (1934), the entrepreneur is the driving force of capitalism. A similar link can be established between NIE and capitalism by means of company. As the company reduces transaction costs through contracts, pricing, and so on, it serves the “creative destruction” process for the functioning of capitalism like an entrepreneur. In short, “entrepreneur” according to Schumpeter’s theory or “transaction costs” according to NIE undertakes functions that will give direction to the “creative destruction” effect of capitalism.

Conclusions

How does capitalist system work? It is both the easiest and the most difficult question has ever asked. That capital accumulation serves capitalism is the easiest answer. However, the difficult answer is much more complex. Although, one philosopher gives the best answer in order to understand the system: This philosopher is Joseph Alois Schumpeter.

Technology creates “innovations” and these innovations are created by “entrepreneur”. Entrepreneur is not the same person with capitalist. Yet, it is not necessary that the entrepreneur and the capitalist should not be the person. Banking system gives great support to entrepreneur to make an innovation. An every innovation creates a new technology which is caused by “creative destruction”. Every “creative destruction” gives an opportunity to collapse the old capitalist system and it will rebuild new system again.

NIE has a power like Schumpeter’s “entrepreneur” (1934). It is the firm which has a different responsibility what humans or market is not able to do. Firm makes production and firm undertakes what another unit cannot do the production. “Transaction costs” are the helpful key for firms in order to reduce the agreements’ responsibilities. This concept “transaction costs” has ever been voiced by Coase (1937).

Shortly, it can be said that Schumpeter’s entrepreneur (1934) and Coase’s firm theory (1937) are very similar concepts. They both use technology and make a chance to “creative destruction” in order to development capitalism.

References


