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SCHUMPETER'S VIEW ON INNOVATION AND **ENTREPRENEURSHIP**

KAROL ŚLEDZIK

We are living in a complex and dynamic world in which innovation and entrepreneurship are occupying a decisive role for economic development. According to Joseph Alois Schumpeter "carrying out innovations is the only function which is fundamental in history". He also accented that It is entrepreneurship that "replaces today's Pareto optimum with tomorrow's different new thing". Schumpeter's words that entrepreneurship is innovation have never seemed so appropriate as the nowadays, when modern capitalism is experiencing a serious crisis and lost his strength during last subprime and euro-debt crises. The purpose of this paper is the analysis of the Schumpeter's innovation concept in a context of "first" and "second" Entrepreneurship theory.

Innovation, entrepreneurship, Schumpeter's economy

1. Introduction

Joseph Alois Schumpeter is regarded as one of the greatest economists of the first half of the twentieth century. At that time he took part in the most important economic debates. After his death, he had been (more or less) forgotten for around three decades. In the early 1980s Schumpeterian economics were considered extremely broad after a period when traditional economic approaches were increasingly criticized. Nowadays when economies struggles with banking and debt crises, parallel they are "knowledge based" economies with globalization and increasingly importance of intangible resources.

The concepts of innovation and entrepreneurship are probably Schumpeter's most distinctive contributions to economics[1]. One of the most common themes in Schumpeter's writings was the role of innovation ("new combinations") and entrepreneurship in economic growth. Despite the fact that Schumpeter was among the first who lay out the clear concept of innovation his views on the topic changed over time. In his earlier view (emphasized in The Theory of Economic Development, originally published in 1912[2]), Schumpeter highlighted the function of entrepreneurs who is carrying out new combinations. He viewed the occurrence of discontinuous and "revolutionary" change as the core of "economic development" which breaks the economy out of its static mode ("circular flow") and sets it on a dynamic path of fits and starts. Three decades later, in his Capitalism, Socialism, and Democracy (1942)[3], Schumpeter took the view that dynamic capital-

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ism was executed to fail because the very efficiency of capitalist enterprise would lead to monopolistic structures and the disappearance of the entrepreneur. What is interesting Schumpeter's words have never seemed so appropriate as nowadays, when modern capitalism is experiencing a serious crisis and has lost his strength during last *subprime* and euro-debt crises.

2. Schumpeter's innovation theory

Although since the late 1880s there have been reports of the use of the term "innovation" to mean something unusual, none of first precursors of innovation have been as influential as the Schumpeter. According to him, consumer preferences are already given and do not undergo spontaneously. It means that they cannot be cause of the economic change. Moreover, consumers in the process of economic development play a passive role. In *Theory of economic development* [4] and further work [5],[3], Schumpeter described development as historical process of structural changes, substantially driven by innovation which was divided by him into five types [4]:

- 1. launch of a new product or a new species of already known product;
- 2. application of new methods of production or sales of a product (not yet proven in the industry);
- 3. opening of a new market (the market for which a branch of the industry was not yet represented);
- 4. acquiring of new sources of supply of raw material or semi-finished goods;
- 5. new industry structure such as the creation or destruction of a monopoly position.

Schumpeter argued that anyone seeking profits must innovate. That will cause the different employment of economic system's existing supplies of productive means [4]. Schumpeter believed that innovation is considered as an essential driver of competitiveness [6] and economic dynamics [7]. He also believed that innovation is the center of economic change causing gales of "creative destruction", which is a term created by Schumpeter in *Capitalism, Socialism and Democracy* [3]. According to Schumpeter innovation is a "process of industrial mutation, that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one".

Schumpeter described development as historical process of structural changes, substantially driven by innovation[2],[5],[9]. He divided the innovation process into four dimensions: invention, innovation, diffusion and imitation [8]. Then he puts the dynamic entrepreneur in the middle of his analysis [2]. In Schumpeter's theory, the possibility and activity of the entrepreneurs, drawing upon the discoveries of scientists and inventors, create completely new opportunities for investment, growth and employment. In Schumpeter's analysis, the invention phase or the basic innovation have less of an impact, while the diffusion and imitation process have a much greater influence on the state of an economy. The macroeconomic effects of any basic innovation are hardly noticeable in the first few years (and often even longer). What matters in terms of economic growth, in-

vestment and employment, is not the discovery of basic innovation, but rather the diffusion of basic innovation, which is the period when imitators begin to realize the profitable potential of the new product or process and start to invest heavily in that technology [10].

It is worth noting that according to Schumpeter invention is not the cause: discovery and execution are "two entirely different things" [5]. "The pure new idea is not adequate by itself to lead to implementation It must be taken up by a strong character (entrepreneur) and implemented through his influence" [2]. It is not the power of ideas but the power that gets things done. Schumpeter says that "creative destruction" is "the essence of capitalism" [3]. A stationary economy, reactive, repetitive and routine, is a circular flow that admits of no surprises or shocks, "an unchanging economic process which flows on at constant rates in time and merely reproduces itself" [5]. Whereas a stationary feudal economy would still be a feudal economy, and a stationary socialist economy would still be a socialist economy, stationary capitalism is a contradiction in terms [9]. Schumpeter writes that: "... capitalist reality is first and last a process of change" [3] where change is the essence. Absent creative destruction, what remains would be perpetual imitation and thus not the essence of capitalism at all. According to Schumpeter, innovations are essential to explaining economic growth, and the "entrepreneur" is the central innovator. As Schumpeter described in The Theory of Economic Development the entrepreneur's main function is to allocate existing resources to "new uses and new combinations". One of Schumpeter's most lasting contributions was his insistence that entrepreneurship is at once a unique factor of production and the rare social input that makes economic history evolve.

In other words innovation is the "creative destruction" that develops the economy while the entrepreneur performs the function of the change creator. In Schumpeter's work entrepreneur is: "Carrying out innovations is the only function which is fundamental in history" [5]. Typical characteristics of entrepreneurs are: intelligence, alertness, energy and determination. Entrepreneurship is innovation and the actualization of innovation. In this point it has to be clearly marked that entrepreneurship cannot be confused with the four complementary functions of invention: risk-taking, error-correction and administration (which in Schumpeter's economics of evolution are separate), distinctive and nonentrepreneurial in nature. In Schumpeter's work on entrepreneurship we can select two phases: an "early phase" - "First" Entrepreneurship theory, and "late phase" - "Second" Entrepreneurship theory.

3. Schumpeter's "First" Entrepreneurship theory

Before the neoclassical era entrepreneur was considered as the central figure, the turning point of economic development. Richard Cantillon (in 1755) called the entrepreneur an "undertaker", a person that does not retreat from engaging in risky business ventures. He buys and produces goods for a certain price to sell it later on at a yet unknown price. His disposition to face risks makes him an entrepreneur. François Quesnay (in 1888) added the importance of capital which renders possible any entrepreneurial action in the first place. In 1845 Jean-Baptiste Say developed the most comprehensive concept of entrepreneurship at that time. The entrepreneur uses the ideas of a *philosopher*, that is new knowledge, which has not yet been applied in the economy to produce a new product. To do this the entrepreneur employs workers, capital and natural resources to actualize the new knowledge into a tradable good [14]. The Authors of a combination of new production or innovation are the "leaders-new people." These innovations may be used only by the administrators of the means of production. What is important the administrators of the means of production, in addition to companies manufacturing, are those units which took bank loan for the purchase of these measures about to comply with the new combination [5]. This units Schumpeter called "entrepreneurs".

The vision of the entrepreneur in Schumpeter's theory is different from the others, (the concept presented in the literature that time) such as: John Bates Clark, Frank William Taussig, Eugen Boehm-Bawerk, Friedrich von Wieser, Leon Walras and Alfred Marshall. They referred to the recognition of entrepreneurs by Adam Smith, and above all, Richard Cantillon, (who first used the term "entrepreneur") and Jean Baptiste Say, who was recognized as the one who introduced the character of "entrepreneur" to economic theory. In all these theoretical concepts entrepreneur was simply the organizer and manager of production or trade. Most often it was the employer and the owner of a capital. Schumpeter's "entrepreneur" definition has functional character and concerns only functions and activities related to innovation. At the same time the entrepreneur may be a person who is not the owner of a capital. In the context of the contemporary debate on entrepreneurship and economic development of capitalism, Schumpeter's "entrepreneur" concept gives banks (and banking system) the possibility of implanting innovations in the economy.

Schumpeter in his early work presents the following entrepreneurship definition: "The function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on" [3]. The entrepreneur is a pioneer who is able to "act with confidence beyond the range of familiar beacons" [3]. "His characteristic task – theoretically as well as historically – consists precisely in breaking up old, and creating new, tradition" [2]. As R.L. Allen rightly pointed it would be better if Schumpeter, instead of using the concept of an entrepreneur in his theory, used the concept of an "innovator". It would shut down (lasting until today) confusion associated with different semantic meaning of commonly used word. Anyway "Schumpeter's entrepreneur" become a permanent part on the contemporary economic theory.

However, the entrepreneur is the only one who indeed carries out new combinations. Furthermore, person who has organized his company is immediately losing entrepreneur function and begins to lead his company in accordance with a "Schumpeter's circular motion". That is why there are no people who are lifelong entrepreneurs, and also there are no businessman who even for a while was not an entrepreneur. According to Schumpeter,

it is not necessarily an entrepreneur who receives profit, but surely it is created entirely thanks to him. Profit goes to the "capitalist" (the owner of the company), as well as the rent goes to the hands of the owners of the land. Entrepreneur does not even have guarantee that it will remain entrepreneur in future. Everything depends only on his talent and the will to act. Besides that Schumpeter finds for entrepreneur three more motives to act, there are:

- the desire to create "own kingdom." Modern man, through his successes in industry or trade, can get a sense of power and independence similar to the situation of the European medieval lord;
- the desire for gain. Entrepreneur can realize his wish to fight, to compete, to showing his superiority over others, winning for the sake of winning. Comparing to the sport, in economic life, there are "financial racing" but there is "financial boxing" too;
- the joy of creation, to achieve something, or just exercise the energy and ingeniousness.

4. Schumpeter's "Second" Entrepreneurship theory

In the late thirties, Schumpeter began to move away from his earlier theory of entrepreneurship, then ultimately at the end of the thirties he presented new theory, which is completely different [12]. Indeed, it can be seen for example in: Capitalism, socialism and democracy (1942). In presented theory of the development of capitalism, Schumpeter put a much smaller emphasis on the entrepreneur as defined in the Theory of economic development from 1911 (and reformulated edition in 1926). What more can be seen that in the Business Cycles (1939), Schumpeter put much greater emphasis on innovation in the strict sense, than on the entrepreneurship. The new (second) Entrepreneurship theory has been outlined by Schumpeter in four articles: The Creative Response in Economic History (1947), Theoretical Problems of economic Growth (1947), Economic Theory and Entrepreneurial History (1949) and The Historical Approach to the Analysis of Business Cycles (1949)[13]. The second theory is primarily a less "individualistic". Schumpeter says explicitly, that entrepreneur does not have to be one person (which is a radical departure from his earlier recognition entrepreneur as an outstanding individualist). Schumpeter even states that the country itself, or its agenda, can act as an entrepreneur. The evolution of Schumpeter's Entrepreneurship theory was caused by his direct personal observation of American economic life.

In the new theory, Schumpeter does not make the entrepreneur right axis to all other concepts. Relationship between the entrepreneur and banker was considered differently too. Under the influence of the American experience, Schumpeter has abandon unilateral inclusion formed on the basis of observations in Central Europe in the early twentieth century. The idyllic vision of the banker as the most important authority of the capitalist economy, the banker who was a representative of society authorized to provide financial sanction to innovative activities of entrepreneur, is replaced by the realistic image of modern impersonal prudent bank, embarrassing flexibility to innovator seeking to control the enterprise [13].

New Schumpeter's theory, as described in his last articles, was then widely ignored. One reason for this reaction was the fact, that in these texts Schumpeter started (to the displeasure of American economists) clearly presented thesis of the need to approach from the theoretical economics to economic history. Moreover, in his recent speeches, Schumpeter also claimed that the use of mathematical models in the study of the business cycles is rather barren cognitive, and among the three methods of cycle research: theoretical, statistical and historical, definitely the last one is the most valuable. These statements shocked contemporary American economists (such as Paul Samuelson), who at that time were fully convinced that the development of economic science is completely linked to the continued expansion in the use of mathematical methods. These words of the economist who co-founded the first in the world econometric society and for almost half of his life emphasized the need to use mathematical methods seemed to be astonishing. What is important Schumpeter categorically rejected the other extreme which is reduction of the economy to the abstract mathematical models, with total disregard for the institutional analysis and empirical studies, and history. In one of the articles published in the last years of his life, Schumpeter said bitterly that "due to human weakness (i.e. convenience) economists are inclined to be regarded as non-existent all the phenomena of nature which is not quantitative, and sometimes even all those that are immeasurable.

5. Conclusions

The increasing complication of modern economies causes the necessity a higher rate of economic interaction. Today's knowledge-based economies are dependent by a dynamic technological progress. The generation of innovation no longer depends on individual personalities but involves the cooperation of many different actors. This requires cognitive capabilities that increase the diffusion and thus the understanding of innovation leading to entrepreneurship. The Schumpeter's innovation and etrepreneur concept is universal and still evolving in principles of Neo-Schumpeterian economics. Schumpeter's words have never seemed so appropriate as nowadays, when modern capitalism is experiencing a serious crisis and has lost his strength during last *subprime* and euro-debt crises In the conclusions we might ask: whether there nowadays countries should be the entrepreneurs (who currently implanted innovation in the economic system) and whether there performing of those "nowadays entrepreneurs" would be the best solution in the post-crisis action?

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