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Innovativeness and Efficiency of Investments Undertaken by Networking Companies

Abstract. *The aim of this article is to show correlations between the level of innovativeness and effectiveness of investments undertaken by networking companies of different size. One of the most important long-term problems related to the functioning and the development of enterprises in the market economy is the level of investments implemented by economic entities of different size. In order to establish its market position and be able to expand, each company not only needs to be efficient in its current management but must also make good decisions concerning the introduction of product and process innovations. Many companies analyzed in the study were reluctant to innovate for fear of the costs involved. However, an increase in the level of innovation may positively contribute to a higher level of investment on the part of economic entities operating in various structures.*

Keywords: *investments, innovations, company, costs, networking structures*

1. Introduction

The aim of this article is to show correlations between the level of innovativeness and efficiency of investments undertaken by various networking companies. Actions supporting the innovativeness of Polish firms are indispensable in order to ensure a stable and faster development of the country. Thanks to innovation, economic entities invest in research, development and implementation of new solutions. This perspective is related to the classic economic theory, where outlays on innovation are treated as an investment towards productivity growth in various networking structures.

One of the most important long-term problems related to the functioning and the development of companies in the market economy is the level of investments implemented by economic entities of different size. In order to establish its market position and be able to expand, each company not only needs to be efficient in its current management but must also make good decisions concerning the introduction of product and process innovations that will improve its ability to conduct economic activity in networking structures, which is the main thesis of the article.

Many entrepreneurs are convinced that innovations mainly include new technologies which come into being as a result of research. Organizational changes in companies and changes in the way work is conducted are still not sufficiently recognized in this respect. The reason why investments are perceived in this way is mainly to do with the fact that organizational or process innovations are not seen outside the company, constituting the company's internal secret.

Many company owners are also reluctant to innovate because they believe that the process of implementation is costly and entails a low level of investments implemented by these companies, including networking companies. Obviously, the introduction of technological innovations, including product innovations, involves high costs. However, organizational innovations are often cost-free and are more related to the workplace culture in a given company and the introduction of an effective system of employee motivation.

The research method employed by the authors is a combination of comparative analysis and material synthesis. Insights from the theory of innovativeness to determine the level of investment realized by networking companies and using collected data the authors attempt to confirm the hypothesis that an increase in the level of innovativeness is the prerequisite for improving the level of investment implemented by companies in various networking structures. Material synthesis is used to connect all the elements that make up the research problem.

2. The problem of implementing investments in a networking company

According to the *Nowy leksykon ekonomiczny*, investments are “permanent deposits made by economic entities into real and financial property” [Orłowski 1998: 196]. This definition of investment is reflected in the economic literature. Investments are a category of aggregates that are the most variable in the business cycle and most vulnerable to the impact of negative external shocks.

Investment is treated as the basic element of the company's development. The main goal of companies, especially networking companies, is to maximize the wealth of its owners, i.e. maximize the company's value [Rutkowski 2016: 15]. To achieve this goal, economic entities of various sizes, must develop. The de-

velopment of economic entities is defined as “a long-term and dedicated process of changes in quantity and quality, fundamentally transforming the company’s internal structure and the manner in which it functions.” [Gabrusewicz 1992: 182] Therefore, investments undertaken by enterprises should be based on a thorough economic analysis [Gabrusewicz 2014: 16].

The development which is conducive to the company’s main goal, namely general investment growth, is can be achieved mainly by undertaking an investment activity resulting in new investments [Towarnicka 2004: 34, 38]. An investment activity consists mainly in creating new production assets and modernizing existing ones.

Increasing the level of investments, including private ones, is one of the greatest challenges facing Europe as whole and Poland in particular. Investments are the key to increasing and maintaining the pace of economic growth. Conventional wisdom has it that after the financial crisis in the global markets there is a huge capital surplus, which could be used to finance undertakings. In the meantime, Europe has been recently losing its investment standing against the USA and Asia.

By way of example, China has long been considered to be the rising power of the world economy. For over a decade Chinese political leaders and corporate bosses have travelled far and wide from Asia to Africa, the USA and Latin America, investing huge amounts of money in all these regions. A Bloomberg report shows unequivocally that China has invested at least 318 billion USD in the Old Continent in the past ten years. Interestingly enough, the available data point out that Chinese dollar activity in Europe was by about 45% higher than in the United States. China wants to invest everywhere but openness to the Chinese capital varies in different European countries. Germany, France and Italy want a Pan-European control mechanism of Chinese investment inflows, while governments of Greece, Portugal and Cyprus take a dim view of such regulations, giving Chinese investments a green light. In their view it would limit the ability of the countries to attract the much needed capital. Chinese investment undertakings, therefore, revolve around a few key branches. The biggest share in this aggregate portfolio of Chinese investments is taken up by the chemical industry where the Middle Kingdom invested nearly 49 billion USD. Other branches are traditional energy industry, real property and mining industry. Overall, over 670 Chinese firms or entities seated in Hong Kong and strictly related with China have invested in Europe since 2008. Nearly 100 out of them are supported by state owned companies or investment funds which mutually implemented transactions of at least 162 billion USD.¹

¹ <http://forsal.pl/artykuly/1119712,chinskie-inwestycje-w-europie-w-latach-2008-2018-europa-w-rekach-chin.html> [access: 3.09.2018].

The activeness of the Chinese capital was at its highest in 2016. Then China National Chemical Corp., aka ChemChina, reported that it would buy Syngenta AG, the Swiss producer of pesticides, for 46.3 billion USD. The contract was concluded in 2016 but the transaction was completed in 2018. Over half of the investments focuses on the five largest economies of Europe. In Great Britain the Chinese participated in 227 transactions worth \$70 bn. In Germany the Chinese capital was engaged in 225 transactions, whereas in France, Italy and Holland their number was 89, 85 and 82 respectively. The biggest Chinese infrastructure investment in Europe, however, was the purchase of the biggest port in Greece, Piraeus.

Polish companies are also investing more and more. In 2015 investment outlays of Polish firms were higher than the EU average (Poland – 47.4 billion EUR and EU – 43.8 billion EUR). Compared with the previous year Poland's outlays increased by 11%, whereas in EU by 7%. The statistics for Poland are less favorable, however, when one takes into account an average firm. The average Polish firm invested EUR 29,500 and the average European firm as much as EUR 51,800. Moreover, the level of investment implemented by networking companies in the whole of Europe cannot keep up with the level of investment by Chinese companies, whose products glut almost the whole world [Tarnawa & Skowrońska 2017].

Investment levels in the European Union as a whole were pretty low. Last year the biggest investment effort in GNP terms was made by the Czech Republic (25.2%) closely followed by Sweden (24.9% GNP), Estonia (23.7%), Austria (23.5%), Ireland (23.4%) and Belgium (23.3%). Taking into account non-EU countries, generous outlays on fixed assets are made by Switzerland (24.5%) and Norway (23.9%). Poland's result (17.7%) is considerably below the European average. Of little comfort is the fact that even worse results are reported by Italy or Great Britain, not to mention Greece that is slowly getting out of recession.²

To sum up the above considerations, the data released by the European Statistical Office show that in 2017 investments of public and private sector in member countries totaled nearly 3.1 trillion EUR with regard to the total EU Gross National Product of 15.3 trillion EUR. The total 2017 investment amounted to 20.1% of the Gross National Product. By comparison, in 2007, i.e. before the economic crisis, it was at 22.4%, which represents a fall of 2.3 percentage points. Thus, the leading role of the investment giants is taken by Chinese networking companies, glutting the whole world with their mass scale products. Polish companies and even companies from other countries, including the EU countries are lagging behind.

² *Europa słabo inwestuje*, www.obserwatorfinansowy.pl/forma/rotator/oko-na-gospodarke-europa-slabo-inwestuje/ [access: 19.05.2018]; *How much does your country invest?*, <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20180514-1?inheritRedirect=true&redirect=%2Furostat%2Fnews%2Fwhats-new> [access: 14.05.2018].

3. The role of innovativeness in shaping investment made by a networking company

One cannot speak of investment ventures guaranteeing the development of a networking company apart from innovation introduction processes. Investment activity should be correlated with innovation activity. While pursuing these two activities, companies choose products or services which are considered to be innovative with the goal of introducing them in the market. These two spheres of activities are closely related.

Therefore, investments belong to business cycle aggregates that are the most variable and most vulnerable to negative external shocks. In the recession stage investments drop, whereas in the recovery stage they grow.

As is commonly known, every positive change either improves quality or makes it possible to create a new product or service. Joseph A. Schumpeter's definition of innovation emphasizes new combinations of production factors. In his view, innovation means the introduction of new products or new method of production, the opening of a new market, the acquisition of new resources or a re-organization of economic processes [Frank 1998: 505-516]. Peter F. Drucker holds the view that innovation is a specific tool used by entrepreneurs, where changes are an opportunity to undertake a new economic activity or provide new services [Rutigliano 1986: 38-42]. In his view, innovation does not have to be technical or material. Yet another definition of innovation can be found in the Operational Programme "Innovative Economy,"³ where innovation is defined as the introduction of a new solution into the practice of a company or introduction of an improved solution compared with the product (good or service), process, delivery chain, marketing or organization [Le Phi Ho et al. 2018: 154-163].

Thus, innovation has become a key to success. In the field of modern economy, there are terms such as knowledge-based economy or information society. Innovation is commonly defined as any change in the company made in order to obtain a new product, a new service or new quality. This change can either be radical, giving rise to a completely new product, or partial, leading to a product improvement. Innovation can be evaluated with reference to a company, including a networking company or a country, world, which entails different requirements for regarding a given change as a novelty. That is why the definition of innovation is very wide. Innovative phenomena are dynamic. Originally, the concept of innovation was only applied to products or processes; nowadays, it is also possible to talk of organizational innovations. Any attempts at drawing a distinction between

³ www.poig.2007-2013.gov.pl/dzialaniapromocyjne/strony/najnowsze wydawnictwa.aspx [access: 4.09.2018].

technologies that are innovative and those that are not can be said to contradict the very idea of innovation. Innovation is change.⁴

The precise classification of innovations is therefore quite troublesome. However, providers of projects financed from the European Funds (or within the framework of Operational Programme, IG or Regional Operational Programme) have to determine the level, and degree of impact of a new solution. It is often necessary to seek the help of experts to assess and classify an innovation to be implemented based on their best knowledge and available publications.

What is common to all the definitions of innovation is the fact that they describe innovation as an activity of companies in the field of introducing novelties (new solutions) into diverse spheres of their activity. Entrepreneurs acting in various networking structures attempt to introduce new technological and organizational solutions. However, the process of implementing innovations requires proper investments.

4. The assessment of innovativeness of networking companies

Managers of a networking company are responsible for equipping the company with mechanisms and procedures which will make it sensitive to external and internal changes. These mechanisms should be capable of picking up signals, verifying them or analyzing their utility for the company. Next, they should make it possible to transform the signals into a concept of a product or a service or a concept of an organizational change. Every concept should be analyzed and represented in various versions of its implementation that take into account necessary resources, implementation time or benefits for the firm. At the end, each concept that has been thoroughly analyzed should be implemented as an innovation. A large number of innovative products or services introduced to global markets are characterized by a higher level of innovativeness.

According to the latest Eurostat data, there is evidence of a slowdown in innovativeness in the European Union. Data from January 2017 reveal that the number of innovative companies had been declining in most European countries. In 2014 this number was at its lowest compared to the period 2008-2012. Only six countries had a stable base of innovative companies that was growing. These were Belgium (62.2%), Ireland (61%), Great Britain (60.2%), Austria (59.5%), France (56.4%) and Lithuania 43.3%). Countries with a low range of fluctuations in the level of innovativeness included Luxembourg (65.1%), Finland (55.3%) or Hol-

⁴ www.pi.gov.pl/Firma/chapter_95851.asp [access: 4.09.2018].

land (55.3%). The period 2008-2014 saw the greatest number of countries with a decreasing number of innovative companies.⁵

Switzerland is the European leader both in terms of the general share of innovative firms and as regards innovativeness within the small enterprise sector (75.3%). As far as medium-sized firms are concerned, it is Iceland that leads the field (59.2%). Germany has the biggest share of innovative large enterprises (67%). Poland is found at the very bottom (21%) of this ranking. As regards innovativeness of small and medium-sized companies, Poland is only ahead of Romania (15.7% and 35%); but has a better standing in the sector of large enterprises, which were found to be more innovative than firms in Estonia, Hungary, Slovakia and Romania [Łapiński et al. 2017: 39].

As was mentioned in a report *The Global Innovation Index*: additionally, “growth is reaching a novel and more sustained momentum. Laying the foundation for innovation-driven economic development is ever more paramount. Related policies that will sustain innovation investments can help transform the cyclical economic upswing into longer-term growth. Proactive innovation policies are also a powerful antidote to uncertainty, they boost the confidence, so encouraging future investments of economic actors” [Dutta, Lanvin & Wunsch-Vincent 2017: XXIII].

In terms of innovation and economic development understood more broadly, Asia is definitely a more and more important engine of innovation in the 21st century, complementing existing innovation efforts in high-income economies, mostly in Northern America and Europe. The different elements of a potentially strong networked innovation powerhouse are coming together in Asia. For a start, and despite enduring economic setbacks, Japan has continued to be a driving force of global innovation since the late 1970s. Later, in the 1980s, the so-called Asian Tigers emerged, with Hong Kong (China), Singapore, the Republic of Korea, and to some extent Malaysia developing their innovation agendas quite rapidly. In conjunction with Japan, these Asian countries developed top economies in the region. In the 1990s, the rise of other South East Asian countries such as Thailand was also forecast by economic and innovation experts, complementing the large established players. The economic spurt of these countries was temporarily stopped short by the Asian financial crisis, but has since continued unabated. In addition, thanks to its steadily persevering innovation agenda, China also vigorously entered the picture while making strides in terms of innovation activities and results [Dutta, Lanvin & Wunsch-Vincent 2017: XXVI].

Moving forward, a novel dynamic of innovation development is in place today, potentially producing a new line-up of up-and-coming Asian countries. New

⁵ https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=sdg_09_40&plugin=1 [access: 4.09.2018].

Asian Tigers such as Indonesia, the Philippines, and Viet Nam are emerging too, and they increasingly join not only Asian high-tech value chains but also other activities such as ICT offshoring. These and other countries in Asia are also active in improving their innovation performance. Although Singapore is still uncontested as number 1 among the smaller or emerging Asian economies, countries such as Viet Nam, the Philippines, and Thailand are rapidly catching up. Among them, Viet Nam tops education expenditure in the region and does very well in ICT use, gross capital formation, and Foreign Direct Investment net inflows. Malaysia has the best cluster development and ICT use, the Philippines leads ICT services exports, Thailand tops the quality of publications and trademarks, and Cambodia only recently got engaged in innovation activities but its FDI inflows are already high [Dutta, Lanvin & Wunsch-Vincent 2017: XXVI].

“A potentially stronger Pan-Asian innovation network is seeing the light of day as China, Japan, and the Republic of Korea increasingly conduct some of their manufacturing activities, including those in technology-intensive sectors in neighboring Asian countries, leading to regional production and innovation networks. However, these intra-regional production activities still mostly concern low-skill and low-wage assembly operations with Chinese, Japanese, or Korean firms choosing to manufacture in, for example, Viet Nam, to benefit from excellent framework conditions and lower wages. Few collaborative R&D projects exist between the Asian leading nations, their top innovation clusters, or these smaller newcomers today, at either the firm or the country level. The newly emerging Asian economies such as Malaysia, the Philippines, and Viet Nam, still experience low R&D and low resident patenting levels. As a result, the potential of intra-regional innovation networks in Asia is far from fully utilized. There is development in Central and Southern Asia too, with interesting developments in countries such as the Islamic Republic of Iran, Kazakhstan, and Bangladesh. But, first and foremost, India’s current and imminent development, and its contribution to the region and the global innovation landscape, is vital these days” [Dutta, Lanvin & Wunsch-Vincent 2017: XXVI].

As was mentioned by Jagran Josh “for some years, India has consistently outperformed on innovation relative to its GDP per capita.”⁶ And “recently it has made important strides in innovation input and output performance.”⁷ “India is

⁶ *Current Affairs September 2018 eBook: by Jagran Josh*, https://books.google.pl/books?id=_6NtDwAAQBAJ&pg=PA159&dq=For+some+years,+India+has+consistently+outperformed+on+innovation+relative+to+its+GDP+per+capita&hl=pl&sa=X&ved=0ahUKEwjZ3L3Fxo3fAhVnp-4sKHa9_BBoQ6AEILDAA#v=onepage&q=For%20some%20years%2C%20India%20has%20consistently%20outperformed%20on%20innovation%20relative%20to%20its%20GDP%20per%20capita&f=false [access: 7.11.2018].

⁷ <https://m.dailyhunt.in/news/india/english/business+world-epaper-bizworld/india+ranked+to+exporter+of+ict+services+un+report-newsid-69040812> [access: 7.11.2018].

now in the top half of the GII rankings. The continual improvement of India in terms of investment, tertiary education, the quality of its publications and universities, its ICT services exports, and its innovation clusters deserves mention.”⁸ It is to be hoped that “India will continue on this trajectory, with innovation investments leading to more and more dynamic R&D – intensive firms that are active in patenting, high-technology production and exports. If India then increasingly connects its innovation system to the innovative countries in the East mentioned above, as well as to standing innovation powerhouses in the West, it will make a true difference in Asia’s regional role in innovation, and to global innovation more generally.”⁹ “This is a promising prospect. The emergence of innovative new Asian Tigers, an innovative India, and better innovation networks in the region are likely to be among the most encouraging developments for worldwide innovation in the next few decades.”¹⁰

To sum up, economies of Asian countries exemplify the fact that the investment level of networking companies increases thanks to innovation. The level of innovativeness of economic entities is a major determinant and a driving force of many various-sized companies on the European and world markets.

5. Conclusion

The above considerations make it clear that there is low effectiveness of investments undertaken by networking companies whose registered seats are in various parts of Europe, especially in Poland. The conclusion is corroborated by the data on investment outlays of these economic entities.

Too few managers pay enough attention to the economic efficiency of investment projects. By failing to analyse their outlays from this point of view, they take too many risky decisions when choosing investments and end up implementing only undertakings of low profitability or those that are outdated, which in the future can result in bankruptcy. Networking companies should introduce more new ideas in their products and services. Innovative solutions in their offerings could contribute to increasing their level of investments.

⁸ www.thehindu.com/news/national/india-ranked-top-exporter-of-ict-services-un-report/article19086441.ece [access: 7.11.2018].

⁹ www.thehindu.com/news/national/india-ranked-top-exporter-of-ict-services-un-report/article19086441.ece [access: 7.11.2018]

¹⁰ www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017-intro6.pdf [access: 7.11.2018].

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Innowacyjność a efektywność inwestycji podejmowanych przez przedsiębiorstwa sieciowe

Streszczenie. *Celem artykułu jest ukazanie zależności między poziomem innowacyjności a efektywnością inwestycji podejmowanych przez różnej wielkości przedsiębiorstwa sieciowe. Jednym z najważniejszych długofalowych problemów w funkcjonowaniu, a zarazem rozwoju przedsiębiorstw w gospodarce rynkowej jest poziom inwestycji realizowanych przez różnej wielkości jednostki gospodarcze. Głównym warunkiem zapewnienia pozycji i ekspansji firmy na rynku jest sprawność bieżącego zarządzania oraz podejmowanie optymalnych decyzji w zakresie wprowadzania innowacji produktowych bądź procesowych. Obawy przed ich wprowadzaniem budzą koszty ponoszone przez badane podmioty gospodarcze. Zwiększenie poziomu innowacji może jednak pozytywnie wpłynąć na zwiększenie poziomu inwestycji realizowanych przez jednostki gospodarcze działające w różnych strukturach.*

Słowa kluczowe: *inwestycje, innowacje, przedsiębiorstwo, koszty, struktury sieciowe*