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The Risk Involved in Implementation of Innovations in the Real Estate Market

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The Risk Involved in Implementation of Innovations in the Real Estate Market

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Keywords: *risk; investment risk; innovations; risk management*

Abstract

Research background: In this paper a short overview of the types of innovations and their innovative forms of investing in the real estate market, such as reverse mortgage, flipping, building for rent, system condo and crowdfunding was presented.

Purpose of the article: The aim of the paper is to present risk factors in innovative activities in the real estate market and evaluation of their activity in this market. The study proposed the hypothesis that a specific level of development in the real estate market corresponds to a certain level of investment risk reflected by the rate of return.

Methodology/methods: The questionnaire survey in the local real estate market participants (investors, employees in enterprises that provide services for the real estate market, external appraisers, real estate brokers and counsellors) was conducted for the purposes of evaluation of risk factors in the investment innovative activities.

Findings: Analysis of the results of questionnaire survey supported the following thesis:

- as an effect of a strong inflow of capital and disturbed balance between demand and supply, return rates represent the reaction to the previous market behaviours,
- decline in the rates of return points to the increase in the investment risk in the real estate market.

It was found that the particularly high contribution to the risk level is from market risk, which is little transparent in Poland and is characterized by high variability of the conditions of operation

Introduction

In the contemporary economy, innovative activity represents a prerequisite for improved competitiveness of enterprises and effective meeting the needs of recipients of products and services. Therefore innovativeness can be considered as a key success driver that determines competitive advantage of enterprises in the market (Świtalski, 2005; Pudło, 2012; Hult *et al.*, 2004; Calanton *et al.*, 2002; Jin *et al.*, 2004; Ropor *et al.*, 2006).

The characteristic feature of the innovative processes is a relatively high risk level (Jonek-Kowalska, 2011), which is often viewed as one of its basic barriers. A high level of the innovative risk is generated by substantial expenditure on research and development and high degree of failure involved in implementation.

The aim of this study is to present risk factors in investment innovative operations in the real estate market and to evaluate their impact on this market.

The main motivation for the analysis of these problems is a widespread aversion to risk among the participants of the real estate market, which, similarly to the necessity to incur substantial expenditures and uncertainty of the final result connected with implementation of the innovations in the real estate market, represents one of the major barriers to adopt the risk.

The study proposed the thesis that a specific level of development of the real estate market corresponds to a certain level of the investment risk.

As a result of the processes of intensive globalization of the economy, accelerated economic growth, the main barrier and key problem is evaluation of the risk of innovative activity in the whole economy.

Research Methodology

The data used to achieve the study aim and support the adopted thesis were derived from the results of the survey conducted among the entities operating in the local real estate market.

The questionnaire was dedicated to developers and entities operating in the real estate market in 16 enterprises that employ up to 50 employees, with the headquarters located in Częstochowa and operating in

the local market. The respondents expressed their opinions about innovative activities in their own enterprises and evaluated risks involved in innovativeness. The study sample size was 50 people.

The study also used the results of the survey ordered by PARP (PARP, 2013), part of the data were derived from the survey conducted within the project "Support..."¹ (GUS, 2007-2013). The survey was conducted in a group of microenterprises, according to the methodology of innovative studies described in the Oslo Manual (OECD/Eurostat, 2008).

Furthermore, the conclusions concerning key actions to ensure further effective development of the Polish economy and their new directions were developed based on the results of the survey conducted by McKinsey (McKensey *et al.*, 2015) dedicated to leaders of the biggest enterprises in Poland. The methodology adopted in the study allows for presentation of innovative solutions and evaluation of the risk of innovation implementation in the real estate market.

Short overview of innovations. Innovations in the real estate market

One of the characteristic features of modern business is innovativeness, considered as a key determinant of progress of societies.

Innovations and services can occur in each economy sectors and the sector of public services such as health protection or education. However, the indications contained in this manual concern only the innovations in the sector of enterprises. This concerns the production sector, raw material industry and services sector.

Oslo manual involves four types of innovations: product innovations, process innovations, organizational innovations and marketing innovations. Therefore, innovation means implementation of a new or substantially improved product, a new or substantially improved process, a new marketing and organizational method. It seems that this division concerns innovations in the sector of enterprises, concerning only the production sector, raw material industry and the sector of services.

According to the National Cohesion Strategy (Narodowa..., 2007-2013, 2014-2020), and according to Brzeziński (Brzeziński, 2001) and Prystom (Prystom, 2012) and depending on the activity conducted by the business entities in the real estate market, the innovation groups can be characterized as:

- technological innovations,
- process and organizational innovations,
- marketing innovations,
- financial innovations.

As a new innovative form of investment in the real estate market, which consists in maximization of profits while minimizing risk leading to the achievement of measurable benefits from the investors is flipping (Zakręt, 2010, pp. 49-60).

In general, flipping means a bargain purchase of assets and its immediate re-sale at a profit. The rate of return depends on the choice of concrete real estate and evaluation of the effectiveness of a specific investment. In this case, the value added, termed the economic profit, is based on the principle of obtaining the rate of return on the whole capital invested, with its value exceeding its cost.

Reverse mortgage, dedicated to retired people, is another innovative form of investing in the real estate market. It consists in allowing individual customers to utilize their assets with substantial value and replacing them into the streams of payments that allow for improving their income situation (Styś & Łyszczak, 2013, pp. 112-122).

According to Buszko (Buszko, 2011, p. 445), reverse mortgage is an instrument which has a potential to exist in the Polish market and represents the desired solution. The survey on the opinions of the recipients of innovations in financial services with the example of the reverse mortgage indicated the innovativeness of this instrument². However, the services does not show opportunities for being popular. Therefore, this innovation in financial services should be created by entrepreneurs since they create markets by stimulating the demand and changes.

¹ The report was prepared within the 4th stage of the works, according to the Detailed Description of the Procurement (Szczegółowy Opis Przedmiotu Zamówienia, SOPZ). The survey concerned the topics of the Cohesion Policy in the financial perspective of 2014- 2020: *Research studies, technological development and innovations and improving the competitiveness of micro-small and medium-sized enterprises and the sector of agriculture, fisheries and aquaculture.*

² The survey conducted among the participants of the Third Age University program (Styś, & Łyszczak, 2013, pp. 118-121).

The innovations include institution of rent, which, in the form of the private and public market (Social Construction Society) is more and more involved in helping Poles improve their housing situation.

In Poland, a new phenomenon in the market of investment innovations is development of the market of condo hotels and aparthotels. Condohotels operate in the same way as conventional hotels, with the only difference being that the owners of the rooms are individuals. They rent the rooms to hotel operators who are responsible for the whole organization and marketing. The room owners obtain in advance the rent or profits.

The professional investors have more and more ideas concerning the investment companies and crowdfunding, as a practice of financing a project or initiative by adding a great number of small amounts of money from a substantial number of people, typically using the Internet. Real estate crowdfunding and the solutions offered cause that the investments and multiplication of the free capital can be available to average investor (Róziecki, 2016).

The synthetic overview of innovations presented in this study, especially in the real estate sector, supports the notion that the innovations are considered to be the driver of the progress of societies (Ropor *et al.*, 2006).

Risk of innovation implementation in the real estate market according to investors

Innovations are expected to produce demanded changes. However, implementation of new solutions involves high costs which are often difficult to cope with for enterprises. Furthermore, the risk of failure is also difficult in the case of implementation of innovations. Therefore, not all entrepreneurs decide to implement innovative solutions. However, investments in the real estate market are considered as one of the safest forms of using capitals³.

The risk of innovative activities connected with implementation of innovations (Damodaran, 2009) is defined as a likelihood of threats and effects. Therefore, making investment decisions is based on the relationship between the risk and rate of return. The rate of return on the investments in real estate depends on the differences between sales prices and purchasing prices (rate of return).

Rate of return on the real estate market are changed through high capital-intensity, low market transparency and liquidity of the real estate and high costs of transaction. High rates of return in Poland in the real estate market following 2000 were claimed to have been caused by accepting a high investment risk. However, Kucharska-Stasiak (Kucharska-Stasiak, 2006) demonstrated that the decline in the rate of return in the Polish market to the level typical of developed markets suggests the increase in the investment risk rather than its decline.

Therefore, risk identification consists in awareness of the events that can have a negative effect on the investment project i.e. determination of the potential sources of risk. This inspired preparation of the classification of factors and sources of risk in the innovation process (Keizer *et al.*, 2002).

Detailed analysis of the classification of risk sources points clearly to the fact that the most important component of the analysis of innovation risk is not to start innovative activity but awareness that giving up the activity in the longer perspective can lead to lost competitiveness in the enterprise.

The examinations conducted in 2016 in the enterprises that invest in the local market in Poland, compared with the findings presented by PARP, also obtained in the Project⁴ "Wsparcie" and the survey by McKinsey with respect to the data contained in the European Commission 2016 (European...2016), allowed for presentation of the risk factors in the investment innovation activity in the real estate market, evaluation of their activity in this market and supported the hypothesis that a specific level of the development of the real estate market corresponds to a specific level of the investment risk in this market.

In the questionnaire survey conducted in 2016, the investors were asked about innovative activities in their enterprises and they evaluated the risk or implementation of innovations in the real estate market from the standpoint of the local market.

³ This opinion results, among other things, from the fact that fluctuations in the real estate market are not as dynamic as in the case of other investments in the real estate market. Observation of the real estate market reveals that the investment effects in this segment of the economy are noticeable only over the longer period of time.

⁴ The report was prepared within the 4th stage of the works, according to the Detailed Description of the Procurement (Szczegółowy Opis Przedmiotu Zamówienia, SOPZ). The survey concerned the topics of the Cohesion Policy in the financial perspective of 2014-2020: *Research studies, technological development and innovations and improving the competitiveness of micro-small and medium-sized enterprises and the sector of agriculture, fisheries and aquaculture.*

The analysis of the results of the questionnaire survey showed that small and micro enterprises prefer a closed model of innovation⁵. The investors claimed that the open model occurs in the incidental and one-time forms.

With regard to the evaluation of the risk of innovation activity, the respondents claimed that the risk is not measured by them⁶.

The risk involved in innovation was evaluated by the respondents as medium. However, they realized that abandoning of innovation activities has to lead to deteriorated competitiveness in both local and global markets (Sitek, 2016).

The results of the questionnaire survey ordered by PARP in 2013 showed, that a key activity determined strategy adopted for the years 2014-2020 is to develop the instrument of support to promote unlimited investment activities in enterprises.

The analysis of the results of the surveys in the Project "Wsparcie" concerned microenterprises and, more specifically, indices of innovative activities. Its time periods were 2007-2013 and 2014-2020. The following observations were made for the microenterprises:

- the advantage of construction innovations (technical, technological and process innovations) over innovations connected with the services to the real estate market,
- advantage of the construction sector in the share of revenues on sales of real estate over services for the real estate market,
- advantage of the share of microenterprises cooperating with other entities in terms of innovation activities compared to the construction sector,
- public support for innovative activities is more effective in the construction sector compared to the activities connected with services for the real estate market.

The survey by McKinsey demonstrated that one of the key tasks is investments in business innovativeness.

The most recent report of the European Innovation Scoreboard 2016 also demonstrated an increase in innovativeness index. Statistical analysis demonstrated that one of the strengths of Poland is human resources and investments of the enterprises for whom innovativeness represents a key activity to ensure a fast development of Polish economy.

The most important risk factors in innovative activities presented by Butryn (Butryn, 2006) include the risk concerning product and brand positioning, market life cycle, its acceptance by consumers, risk in terms of competition, control and prices i.e. acceptance of new product. However, the most important risk in innovative activities is market risk since technical, technological and organizational successes of innovative activity are connected with the innovative success of the product in the market.

Conclusions

Analysis of the innovative activity and risk involved with this activity was based on the results of the survey concerning the local real estate market in micro- and small enterprises, The study demonstrated that:

- with respect to the innovative activity in the sector of real estate, the innovative services dominate substantially over the investment activities in the construction sector, thus representing the value added,
- in the services in the real estate market, innovations concern in particular marketing, with marketing surveys concerning meeting the customer needs as one of the aspects of combating competition,
- analysis of the barriers of perception of innovations by enterprises in Poland demonstrated low demand for innovative products and services as the major barrier,
- noticeable differences in perception and using the programs of public and private support were not found among investors in the real estate market. In both cases, the key problem of using them indicated by stakeholders was administrative problems in finding the resources. The value added in this case is the necessity to remove this barrier.
- the previously proposed thesis that the increase in the investment risk is reflected by the reduction in the rates of return was supported. This suggests the value added in the results of this study,

⁵ The closed model of innovation means that the innovative activity is performed independently.

⁶ 64% of the respondents found that they did not measure risk using dedicated tools such as statistical measures (e.g. standard deviation, variance or covariance). Risk measurement used in these enterprises is intuitive or it results from experience and knowledge of the local market or the lack of adequate knowledge and skills.

In conclusion, the risk of the market, which is little transparent and characterized by large variability of conditions, has a substantial effect on the level of risk of innovative activities in the real estate market.

References

- Brzeziński, M. (2001). *Zarządzanie innowacjami technicznymi i organizacyjnymi*, Warszawa: Difin Press.
- Buszko, M. (2011). Uwarunkowania funkcjonowania i rozwoju odwróconego kredytu hipotecznego (reverse mortgage) w Polsce. In A. Gospodarowicz (Ed.) *Finanse – nowe wyzwania teorii i praktyki*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu Press.
- Butryn, W. (2006). Zarządzanie ryzykiem w działalności innowacyjnej. Retrieved from <http://imik.wip.pw.edu.pl/innowacje28/strona10.html> (02.02.2016).
- Calantone, R.J., & Cavusgil, S.T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, vol. 31(6).
- Damodaran, A. (2009). *Ryzyko strategiczne*, Warszawa: Wydawnictwo Akademickie i Profesjonalne Press.
- European Commission 2016, European Innovation Scoreboard 2016. Retrieved from http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_pl (07.12.2016)
- GUS. (2007-2013). Centrum badań i Edukacji Statystycznej GUS, Raport Końcowy. Badanie innowacji w mikroprzedsiębiorstwach. Retrieved from http://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultstronaopisowa/5804/1/1/raport_badanie_innowacji_w_mikroprzedsiębiorstwach.pdf. (05.02.2017)
- Hult, G.T.M., Hurley, R.F., Knight, G.A. (2004). Innovativeness: Its antecedents and impact on business performance, *Industrial Marketing Management*, vol. 33(5).
- Jin, Z., & Hewitt-Dundas, N., & Thompson, N.J. (2004). Innovativeness and performance: evidence from manufacturing sectors, *Journal of Strategic Marketing*, no. 12.
- Jonek-Kowalska, I. (2011). Źródła ryzyka w procesie wprowadzania innowacji technologicznych, *Zarządzanie i Edukacja*, nr 80.
- Keizer J., & Halman, J., & Song, M. (2002). From experience: applying the risk diagnosing methodology, *The Journal of Product Innovation Management* 3/2002.
- Kucharska-Stasiak, E. (2006). Ryzyko inwestowania na rynku nieruchomości, *Studia i Materiały Towarzystwa Naukowego Nieruchomości*, Vol. 14(1).
- McKinsey & Company, (2015). Raport: Polska 2025. Nowy motor wzrostu w Europie. Retrieved from <http://mckinsey.pl/publikacje/raport-polska-2025-nowy-motor-wzrostu-w-europie-2/> (02.02.2016)
- Narodowa Strategia Spójności, (2007-2013, 2014-2020). Retrieved from https://www.google.pl/?gws_rd=ssl#q=narodowa+strategia+sp%C3%B3jno%C5%9Bci&*&spf=673 (02.02.2016).
- OECD/Eurostat. (2008). Podręcznik Oslo: Zasady gromadzenia i interpretacji danych dotyczących innowacyjności, Retrieved from <http://www.uwm.edu.pl/ciitt/wp-content/uploads/2013/10/Podrecznik-OSLO-MANUAL1.pdf> (12.10.2015)
- PARP, (2013). Raport końcowy. Ocena zapotrzebowania przedsiębiorstw na wsparcie działalności badawczo – rozwojowej. Retrieved from https://badania.parp.gov.pl/images/badania/ocena_zapotrzebowania_na_wsparcie_BR_RK.pdf (07.12.2016)
- Prystrom, J. (2012). *Innowacje w procesie rozwoju gospodarczego. Istota i uwarunkowania*. Warszawa: Difin Press.
- Pudło, P. (2012). Charakterystyka barier rozwoju działalności innowacyjnej w ujęciu kapitału intelektualnego – wyniki badań. *Nierówności Społeczne a Wzrost Gospodarczy*, z. 25.
- Ropor, Stephen, Hewitt-Dundas, Nola. (2006). International innovation comparison : insight or illusion? *Environment and Planning C-Government and Policy*,
- Róziecki P. (2016), Real estate crowdfunding – Polska i świat. Retrieved from <http://estatenews.pl/real-estate-crowdfunding-polska-i-swiat>. (03.01.2017)
- Sitek M. (2016). Investment projects management for development of real estate market in Poland, In 1st International Conference Contemporary Issues in Theory and Practice of Management, 21-22.04.2016, Częstochowa: Wydawnictwo Wydziału Zarządzania Politechniki Częstochowskiej Press.
- Styś, A., & Łyszczak, P. (2013). Postrzeganie innowacji przez konsumentów usług finansowych *Konsumpcja i Rozwój* Nr 1/2013
- Świtalski, W. (2005). *Innowacje i konkurencyjność*. Warszawa: Uniwersytet Warszawski Press.
- Zakręt, A. (2010). Flipping houses–innowacyjna forma inwestowania na rynku nieruchomości. *Prace i Materiały Wydziału Zarządzania Uniwersytetu Gdańskiego*, z. 1(1).