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PhD thesis: Risk management in the innovative activities of IT company

Abstract

Enterprises undertake actions not only to ensure incomes for their owners, but also to employ qualified employees and strive for constant development. Hence, the attention should be focused on particular needs of enterprise customers. These needs create the fluctuating structure on the market, therefore it is necessary not only to investigate the demand on the quantitative and qualitative side, but also preferences of purchasers and consumer behaviours related to the purchase. Thus, it is important that the decisions of enterprises are primarily based on information coming from the market. By doing so enterprises are able not only to adjust to the needs of customers, but also create them through introduction of new products and satisfying the needs of customers that have been unknown previously¹.

Currently one can observe a growing importance of innovation in the market economy, which is becoming a foundation for introducing in enterprises an innovation-oriented strategy. This in consequence translates into innovativeness of enterprises, which is understood as: an ability to create and implement innovations, but also their absorption, which is related to an active engagement in innovative processes². Innovations are understood as one of the ways to achieve strategic goals of an enterprise and also an essential element of strategy.

Risk associated with innovations is currently an underestimated quality, which results from the specificity of innovations, which are most frequently treated as obvious phenomena or processes occurring in enterprises. This situation has its roots in the socialist economy where due to their risky nature innovations were not allowed to occur in the national economy of those times, that is outside it either. This is a closed chapter in the history of the Polish economy, yet it remains in the theory due to the area of behaviours and actions of the economic life participants.

¹ J. Lichtarski (red.), *Podstawy nauki o przedsiębiorstwie*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 2005, s.243

² D. Rojek, *Strategie innowacji w przedsiębiorstwie, Zarządzanie innowacjami w przedsiębiorstwie*, Difin S.A., Warszawa 2016, s.11.

In recent years a tremendous growth in the importance of professional information systems can be observed, which are utilised in the decision-making process. Only such a system prepared in a coherent manner and adjusted to the needs of a particular user becomes helpful in the process of making rational decisions. Being an informatic system it provides up-to-date and properly processed information, which results from the needs of the users, leading to highlighting possibilities focused around the set target. This is associated with the undergoing evolution of organisations, therefore a success of an organisation in its environment, adjustment to changes and even taking advantage of them depend largely on the managerial staff³. The main assumption of this thesis is that managerial staff is in charge of making decisions and this in turn provokes actions and decisions again⁴.

While analysing available literature one can notice that most frequently risk investigation was associated with the investment-related processes. Presently, development of literature can be observed, which not only deals with the investment processes, but also project management and other aspects related to functioning of enterprises. This was the reason behind the inspiration and concept of the dissertation regarding the presented subject.

Therefore, the subject of the doctoral dissertation constitutes innovative activity of an innovative enterprise together with risk, which is related to the indicated type of organisation's activity. The premises to consider the subject as important and worth undertaking come from the perspective of utilising in practice the findings of the research work. A modern model, and more precisely selection of factors that consider a majority of variables that generate risk may contribute to a better implementation of new products, new development strategies, new machinery, new materials, suppliers, etc.

The following research methods have been applied to verify the presented in the dissertation hypotheses. The theoretical part is based on the analysis of scientific literature from the domain of the dissertation's subject. The research part is a case study that was conducted in the analysed company, which comprises personal interviews with eEnterprise's employees using prepared questions. Their aim was to demonstrate which of the factors that influence innovations and risk occur in an IT enterprise. In the next stage the research part is based on an analysis of company's documents, so as to verify which of the determined factors (errors) occurring in the sold products and crisis situations while developing software happened in the history of the analysed enterprise.

³ D.W. Miller, M.K. Starr, *Praktyka i teoria decyzji*, Państwowe Wydawnictwo Naukowe, Warszawa 1971 r. s. 22.

⁴ *Ibidem*, s. 22-23.

The analysis of the obtained results contains mostly quantitative methods, which aim to demonstrate the dependence among the investigated qualities and indicate the best combination of variables for the model. A detailed description of the applied methods can be found at the beginning of chapter 4 of the present dissertation.

The dissertation consists of two parts, the first one – theoretical, the second one – empirical. Two first chapters create the first part, the third chapter is an introduction to the last two ones, which constitute the second part of the doctoral dissertation.

The dissertation begins with the chapter in which the concentration was on the issues related to innovation management, in particular modern enterprise management and the role of innovations and managing them in enterprises.

The second chapter presents the notion of risk, how it is created, i.e. decision-making process, primary elements of risk management and ways of measuring it. The chapter ends with defining innovation-related risks.

The next chapter begins with defining networking, which is indissociable from enterprise. Then, position of Poland is indicated compared to other EU countries with regard to introduced innovations. First of all, it is an introduction to the research part as it includes an analysis of the literature on the subject with regard to innovation factors that generate risk.

The next chapter begins the empirical part of the dissertation. This chapter includes a description of research methods that constituted the basis for the analysis and description of the investigated enterprise. In the dissertation the attention was focused on company⁵, which produces and sells software for data archiving and creating backup copies of operating systems. This chapter includes a detailed description of the investigated company. Then, interviews were conducted among the employees of the analysed enterprise, the aim of which is to indicate risk-generating factors.

The fifth chapter includes an analysis of the results of “case study” on the example of the investigated enterprise. It is based on an analysis of the dependence between explanatory variables and the dependent variable, which allows for making decisions on selecting the variables for the model.

A handwritten signature in blue ink, appearing to read 'Monika Pisnuda', is located in the lower right quadrant of the page.

⁵ The Management Board of the analysed company requested not to publish company's name.