

INNOVATIVE AND TRADITIONAL COMPANIES: THE MAIN DEFINITIONS AND COMPARISONS

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Abstract. In the complex business environment companies seek for new forms of successful operations, where innovations become very important success factor for business development. However, innovative activities might affect financial performance of a company in two ways: by increasing expenditure for required investments and by increasing income due to inflows generated by new innovative products. Referring to this context, the article examines financial performance of companies that are classified as innovative in comparison to traditional companies. The research is based on the determined characteristics of innovative companies, such as performance of research and development activities, technology commercialization, organizational flexibility, focus on market needs, specialization, integration of existing knowledge and experiences, ability to reshape industry standards, integration of different innovation aspects, investment into production and commercial processes, investment in employees' training and development, concentration on knowledge sharing, innovative information transfer, emphasis on environmental and social problems, which enabled to select innovative enterprises from the top 300 companies in Lithuania. Various financial ratios (such as return on equity, return on assets, gross, operating and net profit margins and net debt) were analyzed for the two groups of companies and compared to determine whether innovations lead to better financial performance of a company, especially during economical downturn cycle. It was determined that profitability ratios selected for the research are significantly higher in the group of innovative companies as compared to the sample of traditional enterprises.

Keywords: innovations, innovative companies, innovation management, enterprise management, financial performance.

Jel classification: O32, G32, H32, L26, D22

1. Introduction

During the past decades European Union has progressed from the knowledge-based economy to the knowledge-driven economy, which in turn raises new challenges for businesses. Markets are becoming more global with new competitors emerging, product life cycles are shortening, customers are more demanding and the complexity of technology is increasing (European Commission 2004). Furthermore, the recent complex financial situation in EU has also led to the increased attention to innovations and particularly businesses engaged in innovative activities or producing innovative products.

Forward-thinking companies have recognised that innovative activities and broad application of innovations is the most reliable approach when seeking solutions to survive in the face of increasing competition and severe economic situation (European Commission 2004). The same focus has emerged in Lithuania as well. This recent shift can be explained by the fact that innovations are regarded to be of key importance in any business

sector or environment (Adekola *et al.* 2008). However, a majorpart of industry in Lithuania is still more focused on traditional business activities rather than those based on innovations (Ginevičius 2005).

Therefore, the characteristics of innovative companies had to be determined as the basis for selection of innovative companies in Lithuania. Furthermore, innovative Lithuanian companies as opposed to traditional enterprises have emerged as the object of the study. Authors of the study believe that it is crucial to evaluate how the current economical conditions in EU affected the innovative companies in Lithuania, and to compare the financial performance of the selected innovative companies with traditional companies from the top 300 companies in Lithuania.

2. Definition of innovative companies

According to Hauschildtand and Salomo (2007), existing definitions of the term innovation share the following underlying aspects: Innovations are:

“qualitatively new products or processes which markedly differ ... from the preceding status”.

Therefore, invention by itself cannot yet be called an innovation. Rather, an invention needs to be commercially exploited in order to qualify for the status of innovation. Thus, an invention must at least be introduced to market as a new product or be used as a new process in production (Hauschildt *et al.* 2007). It is obvious that inventions can become innovations only when companies see sufficient demand for them on the market.

Innovation activities bring benefits separate companies and the whole economy via the process of modernization of production and service structures, the creation of new and improvements of existing products, an increase of their competitiveness on international scale (Adekola *et al.* 2008).

The traditional understanding of innovation is based upon research, technology development and interaction between firms and other actors (European Commission 2004). However, currently, innovation rather means the introduction of significant technical or technological changes (product or process) or changes in other areas such as commercial, marketing, financial, social, and organizational structures or administration (Medina *et al.* 2005). Administrative and technological innovations are both the types of innovations most frequently discussed in the scientific publications, as both are the easiest to observe and evaluate.

However, for innovation to occur, it is sufficient that the corresponding product, service or process is classified as new (or improved) for the company or business unit being considered, and not necessarily so for the industry, market, or the world (Medina *et al.* 2005). This approach is very important in case of smaller countries, as companies usually do not implement the world wide innovations very rapidly and at the beginning evaluate how the particular innovation is succeeding in the foreign markets.

For a company to be classified as innovative it has to be different from the traditional companies. The latter usually mostly rely on social business environment whereas innovative companies rely on technology (Korsakiene *et al.* 2006). Scientists from various countries have performed researches in this field. Main aspects and characteristics making company, which represents any business sector innovative, can be determined using the following criterias.

Firstly, the company has to be engaged into research and development activities focusing on the market needs or alternatively outsource this function from other companies. The research carried out by Choi and Lee (2008) revealed that R&D and patent intensity contributed to financial

performance of the firms in Korea and China. However, not solely R&D activities make a company innovative. Technology commercialization capabilities are crucial as well (Kim *et al.* 2011). In addition to, companies that work mainly by following the specifications of the client and using subcontracting are also in a good position to achieve the organizational flexibility required for innovation (Medina *et al.* 2005).

However, the R&D activities have to be orientated towards specialization, as successful innovation and financial performance of firms depends not only on the development of new knowledge, but also on specialising their innovative capabilities through integration or reconfiguration of existing knowledge and experiences (Hui *et al.* 2009). Although, Jacobides *et al.* (2006) suggested that an innovative company should try to reshape existing standards and traditions of the industry it is working in, to capture a disproportionate amount of the benefits created by the innovation.

A company has to focus on radical (technical) innovations and to combine them with soft (administrational and management) innovations to achieve overall significant innovation capabilities. Companies with superior innovation capabilities are usually characterized by: the frequent addition of incremental product innovations, their capacity to develop and market radically innovative products, a continuous investment on the production and commercial processes, and for a well focused and significant investment on their employees' training and development (Santa María *et al.* 2011). Additionally, investment to company employees training has to focus on the development of their creativity to foster innovativeness within the company (Maceika 2007).

An innovative company has to concentrate on knowledge sharing and in paralell to facilitate innovation in the current rapidly changing environments, where the traditional ways of creating, sharing and controlling information have also to be shifted and to become much more informal (Medina *et al.* 2005). The research carried out by Hui and Idris (2009) showed that knowledge acquisition, knowledge dissemination and knowledge utilization are significantly reflected in the firm's innovative capabilities.

Emphasis on environmental and social problems has an impact on innovation activities of a company as well, as the concern for the sustainability leads to internal intention of a company to solve the problems by satisfying market needs. Craig and Dibrell (2006) determined that emphasis on the natural environmental had been the driver for innovation and additionally for the firm performance.

Therefore, an innovative company has specific and essential characteristics which distinguish it from traditional companies:

- performance of R&D activities;
- technology commercialization;
- organizational flexibility;
- focus on market needs;
- specialization;
- integration of existing knowledge and experiences;
- ability to reshape industry standards;
- integration of different innovations aspects;
- investment into production and commercial processes;
- investment in employees' training and development;
- concentration on knowledge sharing;
- innovative information transfer;
- emphasis on environmental and social problems.

3. The impact of innovation activities on financial performance

Many researches were carried out to evaluate how different aspects of company activities, like - culture, market orientation, brand management, R&D intensity, R&D expenditures, access to external financing, advertising expenses and etc. – influence its financial performance (Samadi *et al.* 2010; Schneider *et al.* 2010; Peterson *et al.* 2010). Most of these studies revealed positive influence on financial performance of a company, however, the impact of innovation activities on financial metrics of a company were rarely evaluated.

It should be noted that innovation activities have negative impact on financial ratios of a company in the initial phase, as innovative activities usually require financial resources. However, all of the reviewed researches in the field suggest that as soon as innovations are implemented and introduced on the market, they have positive influence on companies' financial performance.

For instance, Paladino (2009) found out that if a company is orientated to the market, it can achieve better innovation capability, and if the company is orientated to the resources, it can achieve better financial performance. However, the balance of resource and market orientations is important, therefore, in case of a company aiming to become financial champion, it needs to alter its focus away from pure resource development to one that integrates a customer and innovation aspects (Paladino 2009).

Asparaa *et al.* (2010) surveyed more than 500 companies and revealed that high strategic emphasis on business model innovation as well as high

emphasis on replication exhibit a higher average value of profitable growth than firms that do not strategically emphasize either of the dimensions.

Cortez and Cudia (2010) evaluated the biggest automotive and electrical companies in Japan, and found out that sustainable actions had a positive impact on financial performance of these companies, as implementation of environmental innovations, despite the investments and expenses made by these companies, resulted in sufficient change in their sales, net income and assets.

Whereas, Santa María *et al.* (2011) found out that companies with superior innovative capabilities reached a higher performance, evidenced in a greater level of growth in sales and greater profitability compared to reference competitors. Also Santa María *et al.* (2011) revealed that the relationship between innovation capabilities and competitiveness is moderated by the size of a company, technological level of the sector to which it belongs, and its subcontractor character. Thus, the effect of innovation on competitiveness is of a higher degree among the companies of a bigger size, higher technological level and those which do not show a subcontractor character, compared to those companies of a smaller size, lower technological level and subcontractor character.

However, only few researches analysing the issue have been carried out in Eastern Europe. For example, in case of Lithuania, insight into more than 1000 business companies indicated that competitive business environment serves as the main driving force of development of innovative activities. (Adekola *et al.* 2008). Whereas, Čirjevskis (2009) found out that innovation and new industrial technologies can both serve as drivers of growth for a business entity in a recession time in case of Eastern European countries.

However, so far there have been scarce scientific resources examining development of innovative activities influence on financial performance of the companies. For this reason, authors of the study apply the following methods to further analyse the topic.

4. Methodology

Referring to the characteristics of innovative companies' highlighted in the theoretical part of the study and following the findings of Santa María *et al.* (2011) authors of the study decided to analyse leading Lithuanian companies. Therefore, top 300 enterprises registered in the Register of Legal Entities of the Republic of Lithuania and having highest annual revenue for the period of 2010 were selected as the sample of the research. Vast majority of the Companies from the sample fell to the

categories of large or medium-sized companies according to the SME definition established by the European Union (EC, User guide), as operating revenue of selected companies fluctuated in the range of 21 mEur to 4.343 mEur whereas head-count of majority of enterprises exceeded 50 employees in 2010.

The determination of the authors to analyse biggest Lithuanian companies was mainly driven by the aim to investigate the effect of innovations for already well established companies with longer history on the market. In addition to, decision to analyse bigger companies enabled the researchers to avoid the problem of random values with high variability which one would expect when analysing small and newly set up companies. Overall, decision to investigate large companies contributed to the statistical significance of the research.

Due to the fact that the research focuses on companies performing technical and technological innovations, such business sectors as financial services, construction and trading related activities were excluded from the list of selected companies, as these types of companies most often apply non-technological innovations, which are difficult to observe and numerically evaluate. As a result of this exclusion, 188 companies have been removed from the sample. The remaining companies have been divided into two groups: innovative (26 companies) and traditional (86 enterprises).

The following financial ratios have been analysed for all the 112 companies included in the research:

- gross profit margin (calculated as gross profit divided by revenue of a Company and expressed in percentage) – hereinafter abbreviated as *GPm*;

- operating profit margin (calculated by deducting operational expenses from gross profit and dividing the difference by revenue of a Company and expressed in percentage) – *OPm*;

- net profit margin (net result of activities of a company after deduction profit tax divided by revenue of a company and expressed in percentage) – *NPm*;

- return on assets (net profit of a company as proportion to total assets of that company) – *ROA*;

- return on equity (net profit of a company as proportion to shareholders equity of that company) – *ROE*;

- net debt (calculated as the difference between financial debt of the company and cash and cash equivalents possessed by the company at the end of financial year) as proportion to total assets of the company – *ND/A*.

Profitability ratios (*GPm*, *OPm*, *NPm*, *ROA* and *ROE*) are expected to answer the question, whether innovations lead to higher profits and *ND/A* metric should reveal the differences in indebtedness level of innovative and traditional companies.

After calculating the aforementioned ratios for individual companies, 3 statistical metrics (average, median and standard deviation) were derived for both innovative and traditional companies to determine whether innovations have led to better financial performance in 2010.

The list of selected companies as well as financial statements of the companies have been both obtained from the database administered by the Register of Legal Entities of the Republic of Lithuania (Database of Register).

5. Findings of the study

Already initial grouping of the sample revealed an interesting fact – out of 300 biggest Lithuanian enterprises 26 companies are innovative, which turns into 9 % innovative to all sample enterprises ratio. Further findings of the analysis are presented in the table below. Investigation of differences between the two groups of companies, namely traditional and innovative ones, points out that all five profitability ratios chosen by the authors of the study are on average significantly higher in case of innovative companies as compared to their traditional peers.

It should be noted that the highest differences are observed in gross profitability ratio, which is on average 10.9 % higher in the group of innovative companies. Meanwhile, the other two direct profitability measures – operating profit margin and net profit margin are on average 2,7 % higher compared to traditional companies. Such differences (although still confirming the common pattern of innovative companies being more profitable in comparison to traditional enterprises) can result from the structure of profit-loss statement of innovative companies: technology and innovation driven companies apply high-end technology enabling effective production methods and thus resulting in smaller costs of goods sold.

Table 1. Financial ratios of Innovative and Traditional companies

	GPm, %	OPm, %	NPm, %	ROA, %	ROE, %	ND/A, %
Innovative						
Average	31.27%	8.51%	6.76%	8.39%	16.61%	2.37%
Median	18.32%	6.88%	5.04%	6.32%	15.73%	0.23%
St. Dev.	0.30	0.09	0.09	0.09	0.16	0.18
Traditional						
Average	20.4%	5.8%	4.1%	5.8%	13.7%	6.4%
Median	15.3%	4.2%	2.7%	4.2%	9.7%	2.0%
St. Dev.	0.12	0.08	0.10	0.09	0.24	0.10
Difference: innovative vs. traditional						
Average	10.90%	2.72%	2.68%	2.58%	2.86%	-3.99%
Median	2.99%	2.67%	2.35%	2.14%	6.01%	-1.80%
St. Dev.	0.18	0.01	0.00	0.00	-0.07	0.07

Usually, such companies have less direct labour costs, but on the other hand due to highly skilled professionals hired to control sophisticated production process and emphasis (higher expenses as well) on commercial and marketing activities have greater operational expenses, which are only deducted after calculating gross profit and are only accounted in the operating profit. For this reason, innovative companies have much higher gross profit margin, but the difference to traditional companies becomes smaller when investigating operating and net profit margins.

The same pattern of innovative companies having on average significantly higher profits is observed when non-direct profitability measures (e.g. ROA and ROE) are analysed. Both ratios reveal the innovative companies being respectively 2.6 % and 2.9 % more profitable as compared to traditional enterprises.

Net debt ratio to total assets – the only non-profitability ratio analysed in the study confirms the already observed trend that innovative Lithuanian companies are in better financial position when comparing them to traditional peers: net debt to total assets (ND/A) ratio is on average 4 % lower in case of innovative companies and thus reflects lower indebtedness level of innovative companies in Lithuania.

Finally, a measure of standard deviation has been calculated to measure variability of the selected ratios of both of the groups of the companies. However, with the exception of gross profitability of innovative companies no major differences of variability in both of the groups were recorded, which thus reveals a practical implication that higher profitability in case of innovative companies is not associated with higher risk (e.g. broader fluctuations). Even contrary, the lower level of fluctuation of ROE ratio in case of innovative companies (together with higher ROE profitability) suggests that innovations not only enable greater profit generation of a company but also result in less risky and more profitable operations.

6. Conclusions

According to the scientific literature, it was determined that an innovative company differs from a traditional company by following characteristics: performance of research and development activities; technology commercialization; organizational flexibility; focus on market needs; specialization; integration of existing knowledge and experiences; ability to reshape industry standards; integration of different innovations aspects; investment into production and commercial processes; investment in employees' training and development; concentration on knowledge sharing; innovative information transfer; emphasis on environmental and social problems.

Results of the study revealed that 9 % out of 300 biggest Lithuanian enterprises are innovative. Further findings of the analysis point out that profitability ratios selected for the research are significantly higher in the group of innovative companies as compared to the sample of traditional enterprises.

Innovative companies have much higher gross profit margin, but the difference to traditional companies becomes smaller when investigating operating and net profit margins: gross profitability ratio is on average 10.9 % higher in the group of innovative companies, whereas operating profit and net profit margins are both on average 2.7 % higher compared to traditional companies. The difference can be explained by the structure of profit-loss statement of innovative companies, which usually have lower costs of goods sold.

Findings of the study show that Lithuanian innovative companies have lower indebtedness level in comparison to traditional peers. Furthermore, there have been no significant systematic differences in variability of financial results of innovative companies observed as compared to traditional companies which suggests that based on the sample of top 300 Lithuanian companies inno-

vations foster more profitable operations without an increase in risk.

Conclusions of the study confirm the suggestion of previous scientific publications which argued that innovation activities bring benefits to companies and the whole economy via the process of modernization of production and service structures. More specifically, authors of the study have found evidence that financial performance of a company is positively affected by innovative activities.

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