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Reference: Oncioiu, Ionica (2017). The potential role of innovative Indian SMEs in sustainable growth.

This Version is available at:
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Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

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The Potential Role of Innovative Indian SMEs in Sustainable Growth

Ionica Oncioiu¹, Florentina Raluca Bîlcan², Anca Gabriela Petrescu³

Abstract: India has experienced a robust economic growth in the recent years, but with a trajectory which offers both positive and negative lessons on the business innovation faced by many countries in Asia and elsewhere in the developing world. This study sought to test the relationship between innovation, financial performance and economic growth. Data were analyzed using descriptive and inferential statistics on the factors that contribute to assuring the innovation of the processes involved in the financial performance and economic development in the rubber and plastic product sector in India. The results revealed that there is a positive relationship between innovation and economic growth, as well as between innovation and the financial performance of the company. Finally, the conclusion presents implications, limitations and directions for future research regarding the importance of innovation to the firm's performance. A clear lesson from this study is that the future must include promoting Innovative Indian SMEs; in other words, business competitiveness depends on the creativity and innovativeness of its entrepreneurship.

Keywords: innovation; economic development; entrepreneurship; performance

JEL Classification: O31; O44; O53

1. Introduction

The business sector plays an important role in overcoming the social tension brought about by the globalization tendencies connected with the rapid transfer of certain industrial programs to countries with lower wage costs and with a high intensity of global competition. In this context a sustainable environment helps to generate innovations and knowledge, it also changes the knowledge characteristics and ecosystem (Hemsley & Mason, 2013, pp. 138–167)

The global objective of enterprise support should be to enhance the competitiveness of businesses, regions and towns for investors, to promote innovation, to stimulate the demand for research and development results, to foster a spirit of entrepreneurship and to encourage the growth of a knowledge-based economy by means of capacities for the implementation of green technologies and innovated products, including green communication technologies (Ayyagari et al., 2003; Chen, 2005; Choi & Hwang, 2015).

Another different approach of innovation capability is “the ability to create innovations in responding to contextual changes and opportunities without organizational disruption, excessive time and costs, or

¹ Faculty of Banking and Finance, Accountancy and Business Administration, Titu Maiorescu University, Address: Calea Vacaresti Street, No.189, Bucharest 040051, Romania; Corresponding author: nelly_oncioiu@yahoo.com.

² Faculty of Economic Sciences, Valahia University, Address: Carol I Bvd, No. 2, Targoviste 130024, Romania. E-mail: raluca.bilcan@yahoo.com.

³ Faculty of Economic Sciences, Valahia University, Address: Carol I Bvd., No.2, Targoviste 130024, Romania. E-mail: anki.p_2007@yahoo.com.

loss of performance” (Buganza, 2006). The perception of entrepreneurs is that innovation does not only improve the quality of products or process, but also has a positive economic return on the small enterprise (Tan, 2011).

Historically, scholars view entrepreneurs in many ways, but mainly as an innovator who is responsible for the creation of new products, new methods of production and new processes, and who is also capable of identifying new markets (Schumpeter, 1949). In fact, the nature of innovative process that affects enterprises survival and economic growth revolves around the active and inactive functions of the entrepreneur (McPherson, 1996).

Literature review indicates that, in India and in other emerging countries, the subject of innovation reveals that there is a dearth of literature in the developing countries and this creates a major gap in knowledge that has to be filled.¹

In contrast, Heunks (1998) conducted a study on the role of innovation in small and medium sized firms in relation to the firm’s success. Likewise, Litz and Kleysen (2001) observed that innovation is a significant issue, while Hanif and Marnavi (2009) argued that a knowledge-based economy requires the use of innovation measures, in addition to quality initiatives for achieving competitiveness.

From this background, it follows that if entrepreneurs are viewed as innovators, creators and sometimes as developers, it will not be out of place to see them as a vital function in the national and institutional development. It is important therefore to study the impact attached to innovation on entrepreneurial success (Goedhuys & Sleuwaegen, 2010). Also, further studies suggest that innovative entrepreneurship plays a more important role in emerging countries (Paunov, 2013; Butter, 2013; Hao, et al., 2016).

The central theme of the article is to present impact of innovation on the business enterprises’ success in India. The research started from the idea that, at a global level, the action to find a small survival of business enterprises is a fact as important as creating innovation activities. These measures aimed to design a permissive, favorable regulation environment, both legislatively and fiscally, and were meant to provide financial assistance for enterprises’ support and development. They also aimed to improve the competitiveness and stimulate the development of the entrepreneurial culture. These enterprises are nowadays active contributors to the India economic development as a whole.

Indian Small and Medium Enterprises (SME) contribute 22% to Gross Domestic Product and to survive with large and global enterprises need to adopt innovative approaches in their operations. A special attention was conferred to the following types of business enterprises: companies from the rush and medium technical sectors that have affinities by the nature of their businesses deployed with Internet and the new evolutions of the market; the enterprises that exploit the opportunities offered by the electronic commerce, especially in the services sector – sometimes named cyber-firms; the enterprises integrated in the chains of added value of the big companies which are forced to innovate under the pressure of the main clients (Small and Medium Enterprises Chamber of India, 2016).

In 2014 according to the Indian National Innovation Survey there was 36 sectors that have shares in identified innovative firms totaling 3184. From these around 35.2% of SMEs are found to be innovative

¹ see, e.g. (Davis et al., 1989; Hage, 1999; Biggs & Shah, 2006; Coad & Rao, 2008; George et al., 2012; Foster & Heeks, 2013; Dapice, 2015; Cappa, Del Sette et al., 2016).

and are engaged in different innovation activities. Medium-sized firms are found to be more innovative than small firms but only about 13% of innovative small and medium firms use government funding for innovation (Government of India, Ministry of MSME, 2014). For all that, in 2016 the number of innovative small and medium firms increased at 7% in comparison with 2014 because Indian entrepreneurs focused on creating business models and practiced product quality as a part of their innovation process (World Bank Group, 2016).

The following research questions have been formulated: How can the Indian innovative SMEs take part in the economic growth of the country? Could they be analyzed with the aid of quality indicators (economic and financial indicators) in case of time variance? Who should be responsible for implementing the development challenges based on innovative SMEs in India for a proper business functioning?

This paper is organized into five sections. The first two sections contain the introduction and literature review, which provide an overview of the conceptual framework for the study. The next sections describe the research methodology, with associated findings and provides a discussion of the results. The final section presents the conclusions reached from the study.

2. Literature Review

There are several approaches to “innovation” in the economic literature from Joseph Schumpeter’s definition. Henrik (2007) sees innovation as the successful implementation of a creation and this innovation seems to foster growth, profits and success. In Trott’s (2005) words, innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of new (or improved) products, or the manufacturing process or equipment. He further explained his idea with a simple equation that shows the relationship between the two terms: Innovation = theoretical conception + technical invention + commercial exploitation.

Combining various views, Zaltman, Duncan and Holbek (1973) defined innovation as any idea, practice or material artefact perceived to be new by the relevant unit of adoption. In other words, organisational innovation has been consistently defined as the adoption of an idea or behaviour that is new to the organization (Lin, 2007; Wang, 2012).

The innovation can either be a new product, new technology, new service or new administrative practice (Hage, 1999). Many companies today are innovative, bringing about new ideas and modifying existing ones into their offerings because of the competitive nature of the market. Innovation is however different from invention. Some researchers suggest that while innovations are concerned with the launch or introduction of new products, services and processes, inventions are not necessarily introduced into the market (Riederer, Baier & Graefe, 2005).

Recent studies suggest that there are different kinds of innovations, such as: innovation processes, products/services and strategies, which can vary in degree of newness (incremental to radical), and impact (continuous to discontinuous), which may further have their own unique implementations hassles. If innovation is today’s hot commodity, how can business leaders harvest it? They must create conditions in which innovation can thrive in their companies (Baporikar, 2015).

Apart from the overt focus on innovation and the entrepreneurial success, the studies by Olson and Schwab (2008), Knott (2001), Baer and Frese (2003) merely rely on process innovations while studies of Atuagene Gima (2001) report on product innovations.

On a final note regarding innovation, according to Oman (2008), the newness that innovation portrays in the improvement of products, services or process can be described in two ways, technical innovation and administrative innovation. The technical innovation has to do with technology, products and services. The administrative innovation on the other hand, deals with improved procedures, policies and organizational forms.

But then, Hui and Chuan (2002) point out the possible critical aspects of organizational excellence, as following: establishing a strong vision and mission, forming policies and strategies, commitment to excellence, managing values and ethics, human development, empowerment and innovation, ensuring people's well-being, using new technologies, suppliers and business partnerships, providing customer care, service and satisfaction.

More generally, Brem and Voigt (2007) consider better access to such external resources to be a vital policy instrument to support the innovative capacity of the business sector, especially to achieve entrepreneur knowledge development and an inclination to innovation.

Moreover, innovation management is the beginning, development and, as the case may be, implementation of technical and socio-technical initiatives of management business. In addition, several studies (Hauschildt, 2011; Pittaway, et al., 2011; Adegoke et al., 2012; Nybakk & Jenssen, 2012) show that innovation management comprises the decisions about innovation and the innovation processes.

3. Research Methodology, Data and Results

The analysis presented in this paper is based on the elements of mathematical statistics which are currently used to evaluate the quality of innovation products (Hardle, 2007; Ifrim, 2016), but the novelty it brings resides in the introduction and use of four other economic and performance indicators related to the variations of cost and time for rubber and plastic product sector. They are used alongside the classical indicators and provide a reliable model for assessing the innovation process of Innovative Indian SMEs. The data was segregated by small and medium firms (fewer than 500 employees) are considered to reflect upon the current state of innovation among SMEs in India.

The relevant literature on different success factors towards organization innovation capability is reviewed in order to enable development of the research conceptual model and hypothesis. (Othman et al., 2016; Dumitru, 2001; Popescu & Panait, 2003; Craiu, 1999).

An overview on organization innovation capability in India can be shaped by conducting a qualitative study that could bring together the defining profile of innovation among SMEs in India.

The questionnaire was applied directly or through e-mail on 200 SMEs in India of the rubber and plastic product sector, the response rate was 82,5%. (There were 165 completed questionnaires out of 200 submitted).

Responses were collected using questionnaires processed using the Scientific Package for Social Sciences (SPSS) 17.0., and the making of the database structure was achieved by defining variables in Variable View. It is also important to note that all completed questionnaires were checked in terms of background completeness and usefulness of data and using the statistical program previously mentioned, data analysis was materialized through frequency tables and histograms for each item, and the centralization of all items.

In addition to the related tables and histograms, data analysis led to an emphasis of statistical indicators for this study, namely: the mean, median, mode, standard deviation/standard error, variance, amplitude of variance, minimum, maximum, the sum of all observations, the coefficient of asymmetry Skewness, the coefficient of vaulting Kurtosis and the calculation of quartiles.

The intention behind applying the hypothesis is that of analysing the innovation processes in order to establish the correlations between the input and the output variations. Based on this, it will be possible to identify the actions to be undertaken in order for the innovation to reach its objectives without extra costs.

The evaluation of the main economic and financial indicators starts at the initial moment based on the data only relevant for small and medium-sized firms (fewer than 500 employees) from the rubber and plastic product sector (the highest innovative SME potentiality) which are considered to reflect upon the current state of innovation among SMEs in India.

Table 1 shows the marginal and conditional frequencies for each innovation type of the rubber and plastic product sector. These frequencies are similar to the correlation analysis for qualitative data (although the frequencies are not symmetric). Table 1 includes a description of the variables used in the study based on the average innovation costs.

Table 1. Sample Statistics (rubber and plastic product sector firms)

Conditioning Sample: 382 SMEs (Millions)	No. firms 2015	Product Innovators			Process Innovators	
		Improvement	New for the firm but not for the market	New for the market	Improvement	Break-through
<i>Innovation costs</i>						
– Median	17	18	18	22	19	24
– Average	118	123	108	171	152	240
<i>Less than 5 years old products in total innovation costs:</i>	18.3	16.4	17.4	14.4	16.8	13.6
	14.6	14.8	15.7	15.1	14.8	15.5
	6.4	7.2	6.6	1.5	7.2	9.6
	– less than 10%	1.3	1.5	1.2	1.7	1.4
– between 10 and 30%						
– between 30 and 70%						
– more than 70%						

Source: Authors' calculation based on Indian National Innovation Survey. Figures are indicative

In order to achieve the research objectives the following hypotheses were considered:

H.1: The main reason underlying the innovation type of the rubber and plastic product sector choice is economic.

H.2: The main source of finance product innovators is represented by government funds.

H.3: The main difficulty faced by current state of innovation among SMEs in India is competition.

The main indicators (average, mean, module, standard deviation, variant, amplitude of the variant, minimum, maximum, sum of all the observations, skewness coefficient, kurtosis coefficient, quartiles) specific for the first hypothesis, highlight the fact that calculated for the 165 recordings, all valid, the skewness coefficients 0.729, which indicates the fact that the distributions asymmetric to the right, and the kurtosis coefficient has the value of -1.825.

The study carried out highlights that most of the finance product innovators is represented by government funds (76.3%), and, at the opposite pole, only 3.9% of the subjects considered that selling a personal asset or using a loan from friends are optimal ways of obtaining the capital needed to start the product innovators.

The difficulties encountered during the implementation of innovative processes allowed the delimitation of the following categories: lack of leadership experience, lack of accounting knowledge, lack/ high cost of capital, lack/ high cost of qualified personnel, bureaucracy, socio-cultural influences, yet the subjects had the possibility to also mention other categories if they have considered that the previously enumerated variants do not correspond to their situation.

The research found that the three hypotheses of the study were confirmed (Table 1 – 6), contributing to the scientific funding of the portrait of the potential of an innovative capacity SMEs in India.

Table. 1. Calculation table for the testing of the first hypothesis

	N	Mean	Std. Deviation	Std. Error Mean
The main reason underlying the innovation type of the rubber and plastic product sector choice is economic	165	3.4773	1.75468	.196545

Source: Authors' adaptation based on the data obtained following the research undertaken

Table 2. Testing of the first hypothesis

	Test Value = 0.44					
	t	df	Sig. (2-tailed)	Mean Differece	95% Confidence Interval of the Difference	
					Lower	Upper
The main reason underlying the innovation type of the rubber and plastic product sector choice is economic	21.501	163	.000	2.81727	2.42775	3.20685

Source: Authors' adaptation based on the data obtained following the research undertaken

Table 3. Calculation table for the testing of the second hypothesis

	N	Mean	Std. Deviation	Std. Error Mean
The main source of finance product innovators is represented by government funds	165	2.56365	1.832565	.174735

Source: Authors adaptation based on the data obtained following the research undertaken

Table 4. Testing of the second hypothesis

	Test Value = 0.73					
	t	df	Sig. (2-tailed)	Mean Differece	95% Confidence Interval of the Difference	
					Lower	Upper
The main source of finance product innovators is represented by government funds	9.6075	163	.000	1.46863	1.1223	1.8152

Source: Authors' adaptation based on the data obtained following the research undertaken

Table 5. Calculation table for the testing of the third hypothesis

	N	Mean	Std. Deviation	Std. Error Mean
Difficulties encountered	165	8.2773	2.6549	.25631

Source: Authors' adaptation based on the data obtained following the research undertaken

Table 6. Testing of the third hypothesis

	Test Value = 0.5					
	t	df	Sig. (2-tailed)	Mean Differece	95% Confidence Interval of the Difference	
					Lower	Upper
Difficulties encountered	32,775	163	.000	7.5272	7.0255	8.0295

Source: Authors' adaptation based on the data obtained following the research undertaken

The study wanted to identify relevant aspects of innovation in specific business practices and focused its attention both on the main traits of product innovators and process innovators, the key needed in this area and also on the obstacles encountered, their perceptions regarding source of finance and how they want their business to evolve in the future.

4. Conclusions

Nowadays, most small enterprises from India focus on the environmental dimension of sustainable innovation by improving their green products. Intensity of SME innovations in India has a long way to go to attain the “quality of innovations” observed in developed countries. This research work examined the perspective of innovation on the entrepreneurial success in business enterprises in India. The study has proven that innovation has a significant and positive relationship with corporate image for long term. Therefore, based on the ideas mentioned above, we can conclude that engaging in innovative activities will achieve bumper success in many entrepreneurial ventures. To sum up, in many cases, small companies have found that what is good for the environment is not necessarily bad for business. In fact, it may lead to a competitive advantage because of better general management, optimization of production processes, reductions in resource consumption, and the like. Experiences from India initiatives also show that a considerable number of Small enterprises are increasingly interested in implementing cleaner production to improve their economic and environmental performance. However, there are a few limitations of this study: firstly, due to the lack of resources and time constraints, the study has collected data from a smaller number of product/service firms, but in the future, a larger sample size can further validate the accuracy of results. Secondly, the indicators refer to a specific type of business, generally local limited liability companies operating in the largest business city. This study provides essential insights into excellence operational innovation. The results and conclusions must be put into the context of the potential limitations and directions for future research. In brief, this study was conducted with the small enterprises sector only in one of the emerging markets. Also, the clarification of the connection between innovation to other strategic variables and ultimately growth remains available for further researches.

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