International Journal of Business and Economics Research
www.drbgrpublications.in

Volume: 2; No: 1; March-2016. pp 111-118. ISSN: 2455-3921

Impact of Innovation Adoption on Business Performance of Safety Match Industry In Virudhunagar District

Dr.R.Shobana Devi[1] and Dr.P.Sundarapandian[2]

[1]Assistant Professor of Commerce (R), V.H.N.S.N College (Autonomous), Virudhunagar, India

[2]Principal, V.H.N.S.N College (Autonomous), Virudhunagar, India

*Corresponding Author Email Id:shobanadevi@vhnsnc.edu.in

Introduction

The world today is witnessing rapid advancement in technology, emergence of new markets, development of new business models and evolution of cohesive organizational structures creating turbulence in the business environment and making competition cut throat. These factors have made it necessary for almost all the firms to engage in innovation continuously to survive and succeed at the market place, irrespective of their size. Empirical evidences reveal that innovation enhances competitive advantage of organizations and improves their business performance.

Realizing the significance of innovation, many are taking efforts to adopt innovations in their respective organizations, but not all of them succeed. These experiences have led many researchers to probe the antecedents and consequences of innovation adoption so that a linkage between the facilitators and performance indicators of innovation can be established. It is indeed worth mentioning that, till today, very little empirical studies that probe this linkage exists in the Indian context.

Innovation, in its generally accepted definition, refers to an idea or behaviour new to the adopting organization. Traditionally, innovation was limited in its scope by referring to only technological innovations that includes product and process innovations. However, the term has wider connotation now to include marketing and administrative innovations also in its purview. A firm may keep several specific objectives before deciding to adopt a particular innovation. As a process, innovation evolves with its initiation, adoption and implementation which can be successfully done only when the innovation is diffused effectively throughout the adopting organization. This requires the presence of several facilitating factors within the organization in the form of effective leadership, climate for innovation, marketing orientation and the like.

At the next level, innovation adoption by itself does not guarantee better business performance. To a large extent, previous research studies have concentrated on the factors affecting innovation adoption by firms. The literature is, still in want of empirical studies that explore the adaption to implementation (can be referred as assimilation) to firm performance linkage. It will be only appropriate to measure the extent to which the adopted innovation is implemented and integrated in the organization's value chain to understand the real innovativeness of firms. Hence, the post adoption activities associated with implementation requires consideration in the linkage. The impact on firm performance invariably portrays the success or failure of innovation adopted by the firm and stands to measure the comparison between the innovating and non innovating firms.

Measuring the impact of innovation is an important issue as business profitability; growth and customer satisfaction depend on innovations. In other words a lack of financial, organizational and cultural structure around innovation exits. The impacts of innovation on business performance range from effect on sales to improved market share to changes in productivity and operational efficiency. The independent contribution of organizational innovation to the superior performance and competitiveness of an organization has been largely neglected up to now.

Safety Matches – Lighting up the world, safely

What started off as a pioneering effort of some entrepreneurs to meet the huge demand for safety matches in India in 1920, has through the decades, evolved to proliferate into innumerable safety matches making units in Virudhunagar district, which have contributed to the country becoming numero uno in their exports, Virudhunagar district evolution as a safety matches manufacturing nerve-centre has interesting antecedents. There was a time when the inhabitants were looking fervently towards the skies, praying for the showers that would facilitate cultivation and also their survival. But the showers never came – and the prayers continue to remain unanswered till date – leaving the farmers with sparse or no source of income to keep their kitchens warm. Parched and scorched stretches of land stands as testimony to the terrain, weathering years and years of dryness and deprivation. So, with farming out of bounds, there was the need for an alternative.

Table 1
India's Safety Matches Export (in lakhs)

Financial Year	Safety Matches Export	India's of Total Export	% of Share	% of Growth
2011-12	36,820.65	146,595,939.96	0.0251	
2012-13	48,820.35	163,431,828.96	0.0299	32.59
2013-14	56,369.11	190,501,108.86	0.0296	15.46
2014-15	51,741.03	189,634,841.76	0.0273	-8.21
2015-16	40,349.64	126,992,978.08		

Source: Ministry of Commerce

With the certainty with which a lit matchstick burns out, the future of the Rs 1,500 crore matchbox industry is slowly, but surely fading away. Industry revenues have declined 25 per cent in the last few years and about 8,000 units have shut down in the last decade. For the 1,500 to 2,000 units that remain — 90 per cent of which are concentrated in a few districts of Tamil Nadu — it is just a wait before the flame eventually burns out.

Objectives

To measure the impact of innovation adoption in terms of SMEs' business performance reflected in financial as well as market performance.

Sampling Design

The survey envisaged the application of convenient sampling technique. A sample of 150 Safety Match Factory Owners was selected from the universe for this study. Care was taken to give approximately equal representation to all the respondents in all places of the study.

Review of Literature

Gunday et al (2014) investigated the innovation -performance linkage among 184 manufacturing firms in Turkey. The study revealed that innovations performed in manufacturing firms had positive and significant impact on innovative performance. Organizational or administrative innovations had more impact on innovative capabilities as it had the greatest regression coeffient with innovative performance. Product innovations also were observed as a critical driver for innovative performance. Overall, the innovation strategy was found to be an important driver of firm performance.

Weng et al (2014) studied the determinants of product innovations and its effect on hospital performance in Taiwan. The cross sectional study of 217 hospitals using structural

equation modelling revealed that hospital scale affected technological innovation positively and that technological innovations positively influenced ambulatory, emergency and in-patient performance. While market factors didn't have a direct impact on technological innovation, organizational factors such as hospital scale, ownership and teaching status were found to be critical factors affecting innovation.

Gebreeyesus and Mohnen (2013) examined the impact of network embeddedness on absorptive capacity and innovation performance in the footwear cluster of Ethiopia. The study revealed that business interactions with buyers, suppliers and other producers were the major channels through which knowledge flow into the cluster. Te econometric analysis revealed that there is a positive and strong effect of local network position and absorptive capacity on innovation performance.

Relationship between Innovation Adoption and Business Performance

Innovation contributes in several ways. Research evidence shows that there exists a strong correlation between performance and innovations. Innovation offers cutting edge to firms at the market place. One of the major reasons for relatively small firms to survive in the highly competitive global markets is the complexity and precision with which they manufacture products which are too difficult to imitate. According to Kemp et al (2003), innovation should finally result in improved performance by the firms adopting them in comparison with those not adopting them. Loof et al (2001) found a significant relationship between innovation input and innovative output in a survey conducted at Sweden. Favre et al (2002) concluded that there is a positive impact of innovations on profits. These empirical findings suggest us to conclude that innovation adoption will significantly predict business performance outcomes which can be measured in terms of market as well as financial performance. Hence the hypotheses can be framed as follows:

H_0: Innovation adoption will not have impact on the business performance of the firms

H_1: Innovation adoption will have positive impact on the business performance of the firms

Case Summaries of 'Business Performance' Variables

The impact of any innovative practice needs to be measured to understand whether the practice delivers value to the adopters. Here, the business performance is measured in terms of financial and market related performance. There are a total of 11 variables measuring the construct 'business performance' of which 5 variables measure 'financial

performance' and 6 variables measure 'market performance'. The responses are captured on a 5 point scale that measures the respondents' business performance against comparative competitors in the knitwear cluster. While the score 1 in the scale refers to the condition of being an 'under performer', the score 5 refers to the ability of being a 'top performer'.

The mean scores of all the 11 variables are above the mid value three indicating an overall moderate to high performance among the respondents, except for the variable 'turnover growth' (2.94). The standard deviations are below 1 indicating low spread of data points about the mean. The values of skewness are in the acceptable range, except for the variable 'overall reputation' (-1.149). The values of kurtosis are mostly in the acceptable range, except for the variable 'profit growth' (2.951). 'Turn over growth (1.537), 'productivity growth' (2.188), 'deliver promises' (1.518) and 'overall reputation' (1.569). However they are three and hence are within acceptable range of normality.

Table 2
Case summaries of the construct 'business performance'

Variable	N	Mean	SD	Skewness	Kurtosis
Profit growth	384	3.03	.604	-.511	2.951
Turnover growth	384	2.94	.679	-.829	1.537
Productivity growth	384	3.16	.658	-.902	2.188
Operational efficiency	384	3.21	.598	-.108	-.428
ROI	384	3.27	.694	-.189	-.481
Market share	384	3.09	.689	-.120	-.311
New clients	384	3.32	.864	-.546	-.262
Repeat business	384	3.52	.905	-.957	-.531
Deliver promises	384	3.51	.840	-.845	1.518
Customer satisfaction	384	3.84	.804	-.585	-.118
Overall reputation	384	3.74	.924	-1.149	1.569

Source: Primary Data

Table 3
Factor structure matrix of loading and cross loading of the construct 'Business Performance'

Items	Financial performance	Market performance
Financial performance		
Profit growth	**0.6688**	0.332
Turnover growth	**0.64**	0.3266
Productivity growth	**0.6857**	0.4949
Operational efficiency	**0.778**	0.6669
ROI	**0.6878**	0.4537
Market performance		
Market share	0.3673	**0.7071**
New clients	0.4513	**0.7659**
Repeat business	0.6171	**0.8625**
Deliver promises	0.6304	**0.7776**
Customer satisfaction	0.6269	**0.7779**
Overall reputation	0.6901	**0.7162**

Source: Primary Data

Table 3 shows the factor loadings of items with respect to the construct ‘business performance’ under CFA. All the items loaded significantly on the construct thereby ensuring adequate construct validity and unidimensionality. With these analyses, adequate reliability and validity of the data has been ensured. Data is purified to the maximum extent by dropping of items with less reliability and cross loading patterns. Further, the purified data is put for inferential statistical procedures in order to tests the hypotheses framed in the beginning of the study.

Regression Results of Relationship between 'Innovation Adoption' and 'Business Performance'

The first part of the hypothesized model revolves around the impact of several variables on ten extent of innovations adopted by the respondent firms. The second part discusses the casual relationship between innovations adopted by the firms and the business performance. The objectives are to understand whether 'innovation adoption' has impact on the 'business performance', and if so how significant those influence are,

Table 4

Regression results of casual paths between 'innovation adoption' and 'business performance'

Relationship among constructs	B	T	Remarks
Innovation adoption – Turnover	0.142	2.846	Significant
Innovation adoption - Business Performance	0.632	22.021	Significant
Innovation adoption - Financial Performance	0.523	12.600	Significant
Innovation adoption - Market Performance	0.637	16.747	Significant
Technological Innovation adoption - Business Performance	0.597	17.637	Significant
Technological Innovation adoption - Financial Performance	0.498	14.381	Significant
Technological Innovation adoption - Market Performance	0.601	17.247	Significant
Administrative Innovation adoption - Business Performance	0.623	18.448	Significant
Administrative Innovation adoption - Financial Performance	0.538	15.985	Significant
Administrative Innovation adoption - Market Performance	0.620	17.105	Significant
Marketing Innovation adoption - Business Performance	0.547	19.817	Significant
Marketing Innovation adoption - Financial Performance	0.456	11.883	Significant
Marketing Innovation adoption - Market Performance	0.542	15.276	Significant

Source: Primary Data

The result show that 'innovation adoption' has substantive positive influence on the 'business performance' of the firms. 'Innovation adoption' has significant influence on the 'turnover' achieved by the responding firms (B=0.142). 'Innovation adoption' has more

significant influence on the 'market performance' (B=0.637) than on 'financial performance' (B= 0.523). Whether the company adopts technical, administrative or marketing innovations, the impact of each of the three are more felt on market performance of the firms. The relationships are all statistically significant (1>1.96).

H1	H_0	Innovation adoption will not have impact on the business performance of the firms	Rejected
	H_1	Innovation adoption will have impact on the business performance of the firms	Accepted

Based upon the results of the regression analyses, the null hypothesis is rejected. The results show a significant positive impact on innovation adoption on the financial and market performance of the firms.

Conclusion

SMEs play a very important role in the economic development of nations. Due to this reason, innovation in the context of SMEs is an interesting area of research. Innovation helps organizations in creating competitive advantage in the marketplace that will provide them with superior financial performance. However, some scholars have opined that while innovation has the potential to create the opportunity for increased performance, the act of innovation can be very costly and risky and may lead to decreased financial performance. According to Van de Ven (1986), innovation demands substantial costs and may create resource constraints for small firms. Although SMEs have considerable financial and other resource limitations, they are often successful innovators. The introduction of innovative products, services, processes etc, according to the requirements of niches they serve, provides the SMEs with additional opportunity to stand out from competition.

The present research has empirically proved that innovation adoption positively influences business performance. This positive causal relationship has been established between various types of innovations adopted by the firms and business performance measured in terms of financial and market performance. Match manufacturers indicating a propensity to import and installing modern technologies augurs further consolidation of this industry, contrary to doomsayers' dampeners that the flame, in the near future, would be doused by alternative products.

Reference

1. www.commerce.nic.in
2. www.acumen-insights.com
3. http: epublications.bond.edu.au/business_pubs/86
4. Piatier A (1984) Barriers to innovation. London: Frances Pinter.