

Owner-Manager's Innovativeness and Innovation in Small Firms: A Study in Manufacturing Firms

Masroor Alam, and Suchi Dubey

Abstract—The available literature in innovation and performance are mostly related to big firms and meager resources are available over its relationship in small and medium size firms. This research paper is an attempt to inquire owner-managers innovativeness on business innovation of small firms. Innovativeness constructs which is mostly used in consumer research studies were adopted to measure the owner-managers innovativeness. To find out the relationship among the variable data from 170 small apparel manufacturing firms in the Karachi region of Pakistan is used. The finding showed that the owner managers innovativeness permeates the entire variable in the model and a had significant and positive correlation with innovation.

Keywords—Innovation, Owner's/manger's innovativeness, Pakistan, SMEs, Small firms, Competitive advantage.

I. INTRODUCTION

INNOVATION literature claims that innovation is one of the key factors for firm success and survival [1] [2] [3] and sustainable competitive advantage [4] [5] [6]. A number of studies have investigated the relationship between market orientation and firm performance. According to [6] found the positive relationship between market orientation and business profitability in big firms, whilst [7] documented the empirical evidence of strong positive relationship between market orientation and performance in large firms. Recent studies have also begun to acknowledge the role of innovation in the context of market orientation [8] [9]. Furthermore, studies on the relationship between market orientation and innovation were focused mainly on large firms, and empirical evidence on this relationship on small firms is rarely found in the literature. However, it is doubtful whether this relationship being ascertained for large firms can be generalized to small firms, because innovation in small firms is different from innovation in large firms [10] [11] [12]. In a small firm, the owner/manager's innovativeness may decide to bring about a decision on any innovation activities of the firm [13]. Thus, a gap is created, and this new study would likely contribute to the literature by developing and testing a model of the

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relationship among, owner/manager's innovativeness and innovation in small firms.

II. CONCEPTUAL FRAMEWORK

A. Innovativeness

Innovation for a small business owner implies to learn and adopt innovation in their business activity. This study determines the same innovative mind set or an approach related to innovation in the firm. According to Innovation Diffusion Theory [14], people reciprocate differently to a new idea, practices, or object because of their differences in individual innovativeness, which is a tendency toward adopting an innovation. Many researchers have agreed that innovativeness of an individual is persistent trait that is reflective of that individual underlying nature when exposed to an innovation [15] [16]. As per the literature personal innovativeness plays a very vital and effective role on drawing a perception of individual towards learning or adopting an innovative behavior, this study therefore captures the level of owner's innovativeness in three specific domains, product innovativeness, strategy innovativeness and process innovativeness.

B. Firm Innovation

A recurrent innovation is the secret of long term firm success [17]. It continues to be the claim of current scholars that firms which fail to engage in innovation are putting themselves at great risk [18]. Some argued that due to the heightened level of competition and shortened product life cycles, firm ability to generate innovations may be more important than ever in allowing firms to improve performance and maintain competitive advantage [19].The existing products are vulnerable to changing customer needs and tastes, new technologies, shortened product life cycles, and increased international competition. Therefore it is generally accepted that all firms should innovate regardless of their size or sector in order to compete and survive in the market [20]. It should also be noted that firms and countries that continuously innovate contribute significantly to economic growth [21]. Thus, it is no coincidence that countries (like USA, Japan and some European countries) which demonstrate the highest patent activity or R&D investment intensity are the leaders of the ladder of economic development [22] (Ahmed and Shepherd, 2010).

C. Small and medium-sized enterprises (SMEs)

There is no single official and uniform definition of SMEs that is in use in different organizations in Pakistan. Different departments and organizations define SMEs in accordance with their functional ease rather than market situation. In this study, the definitions of SMEs proposed by the Pakistan's SMEDA has been adopted for the analysis and defined as follows:

Small firms: Firm employing between 10-35 full-time workers and productive assets ranges between Rs2 – 20 million.

Medium firm: Firm employing between 36–99 full-time workers and productive assets ranges between Rs20-40 million.

III. THE RESEARCH MODEL

Based on the objective of this research, a relationship research model was developed, where six variables are related to each other. To examine the effect of any linear relationship of owner's manager innovativeness to firms' innovation; the following hypothesis were developed as follows:

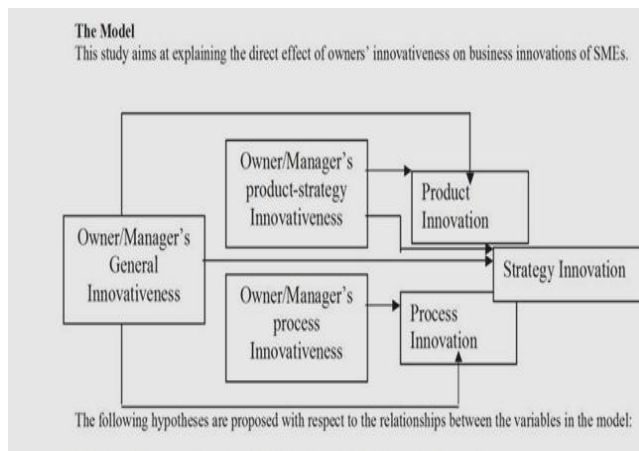


Fig. 1 The Research Model

Hypothesis One: Owner/manager's general innovativeness is correlated with firm's product, strategy and process innovation.

Hypothesis Two: Owner/manager's innovativeness on process, strategy and product domain are correlated with firm's product, strategy and process innovation.

IV. RESEARCH METHODOLOGY

Data were collected through a field survey method and questionnaires were self-administered to the owners/managers of textile manufacturing SMEs at four main industrial areas in Karachi, Pakistan. According to the official statistics, there were approximately 4000 textile firms operating in Pakistan, and about 25 percent or 1000 firms were located in the district of Karachi. According to [23], for a population of 1000 the sample size should be 278 firms. A random sampling method was adopted, and each owner/manager of the 278 firms was given a set of questionnaires. A total of 196 completed questionnaires were received, and out of these only 170 usable

responses were selected for data analysis based on the selected criteria of the firm size and type.

The items in the questionnaire were developed and adapted from the following; innovativeness (15 items) from [24] [25]. General innovativeness instrument and domain specific innovativeness of owners and managers were developed on the basis of [26] [27]. On the basis of original scale items of [28] three (3) items construct was developed for each market; product, process, and strategy domain, to capture the attitude of owner/ managers on each domain of innovativeness. The three items used for general innovativeness were based on [29] innovativeness measure. Factor analysis was conducted to examine the correlation structure among the 15 items, and that if items variables are consolidated into unique and independent five factors; general innovativeness, product innovativeness, process innovativeness, strategy innovativeness and market innovativeness. This study measured the owner/manager's innovativeness, using the 5-point Likert type scale ranging from (1) Strongly Disagree to (5) strongly Agree.

The measure of innovativeness utilized here is a factor scale variables derived from the fifteen (15) items, where all the factors of innovativeness; general innovativeness, product innovativeness, process innovativeness, strategy innovativeness and market innovativeness, were desirable to achieve. The factor analysis however, did not result in the five factors of innovativeness but only in three factors; general innovativeness, product-strategy innovativeness and process innovativeness. The loaded items of the three factors were computed as average summated score for the correspondence factor for the data analysis purpose.

To measure firm innovation, a pool of items was included based on a scale proposed by [30]. These authors synthesized the innovation construct by using 24 items, distributed in four sub-scales, namely; innovation in products, innovation in processes, innovation in strategy, and innovation in markets. All items were measured on five point scale ranging from Great Extent (5) to Not at All (1). Factor analysis was conducted to examine the correlation structure among the 24 variables, and that if these variables are consolidated into unique and independent four desirable innovation factors; product innovation, strategy innovation, process innovation and market innovation.

The factor analysis however, did not produce four factors of innovation but resulted in only three factors; product innovation, strategy innovation and process innovation. The loaded items in each factor were computed as average summated score for the correspondence factor for the data analysis purpose. The Cronbach's Coefficient Alpha for the items are all above the acceptable level of 0.6 for this type of study [31].

To test the relationship hypothesis among the variables, Pearson correlation Matrix was adopted by using SPSS 16.00

V. RESULTS AND ANALYSIS

TABLE I
GENERAL INNOVATIVENESS - INNOVATIONS

	PRODUCT INNOVATION	PROCESS INNOVATION	STRATEGY INNOVATION	GENERAL-INN
PRODUCT INNOVATION	1	.554**	.564**	.578**
PROCESS INNOVATION	.554**	1	.730**	.438**
STRATEGY INNOVATION	.564**	.730**	1	.465**
GENERAL-INN	.578**	.438**	.465**	1

** Correlation is significant at the 0.01 level (2-tailed)

Analysis of the data resulted from the Pearson correlation analysis (Table I), indicates that owner/manager's general innovativeness has significant association with product innovation (PRODUCT INNOVATION), strategy innovation (STRATEGY INNOVATION), and process innovation (PROCESS INNOVATION). The association is highly moderate and positive which indicates that in the SME sector, this general innovativeness has relatively stronger relationship with the three types of innovation in the firm. This result further indicates that the association is highly significant and the relationship is positive.

The correlation analysis also reveals that despite the significantly high association at 0.000 levels between general innovativeness and the three components of innovation, the strength of the association is also found to be very high between general innovativeness and product innovation (R=.578). However the strength is moderately high between general innovativeness and the process innovation (R=.438) and the strategy innovation (R=.465). Therefore hypothesis two (a) is supported.

This result of the test can be further interpreted that owner/managers with their higher level of general innovativeness are significantly associated with product, process and strategy innovation and the association is also high. This indicates that the owner/manager's general

innovativeness may influence and effect positively to the three types of innovations. Thus, indicating it may increase the overall innovation of the firm.

TABLE II
DOMAIN SPECIFIC INNOVATIVENESS-INNOVATIONS

	PRODUCT-STRT-INN	PROCESS-INN
PRODUCT INNOVATION	.434**	.531**
STRATEGY INNOVATION	.563**	.559**
PROCESS INNOVATION	.450**	.480**

** Correlation is significant at the 0.01 level (2-tailed)

Analysis of the data resulted from the Pearson correlation analysis (Table II), indicates that hypothesis 2 product-strategy innovativeness (PRODUCT-STRT-INN) is significantly associated positively with product innovation and strategy innovation. This result also confirmed with one of the recent studies on domain specific innovativeness in product domain and its positive relationship with product innovation [32]. The result indicates that owner/manager's innovativeness in product and strategy domain would support the adoption of product innovations as well as strategy innovation required to innovate new products in the firm. The correlation analysis also revealed that owner/manager's product-strategy innovativeness has strong positive relationship between product innovation (R=.434) and also with strategy innovation (R=.563). This further implies that greater level of owner/manager's innovativeness in product and strategy domain may result in higher level of product and strategy innovations in the firms.

Analysis of hypothesis 2 results also reveals that process innovativeness (PROCESS-INN) is positively correlated with process innovation, and the strength of association is also moderately high (R=.480) and significant at the 0.01 level. This indicates that the association is highly significant and the relationship is also positive. Therefore a hypothesis 2 is also supported.

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