



## Research Article

# PERCEPTION ON INNOVATION AMONG THE MEMBER AND NON-MEMBER ENTREPRENEURS OF TECHNOLOGY BUSINESS INCUBATOR (TBI) IN COIMBATORE, TAMIL NADU

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**Abstract:** Innovation was used in many different ways that varies systematically with the level of analysis employed. It was the organization's way of implementing new ideas or turning out the creative concepts of its members into realities. The study was conducted among the member and non-member entrepreneurs of Technology Business Incubator (TBI), Coimbatore, Tamil Nadu. Convenience sampling technique was adopted to collect data from the 120 (60 member and 60 non-member) sample respondents. Email survey was conducted to collect data from the 60 member entrepreneurs of TBI whereas direct survey was used to collect data from 60 non-member entrepreneurs of TBI. The tools of analysis used in this study were percentage analysis and Rank Based Quotient (RBQ). The results showed that most of the member entrepreneurs were middle aged and literate. They perceived innovation was important to capture the market (65.33 RBQ) and to earn profit (44.33 RBQ). It could be suggested that conducting awareness programs on innovation would help entrepreneurs to improve their adoptability and firm performance.

**Keywords:** Innovation, Perception, Adoptability, Entrepreneurs, Technology Business Incubator

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## Introduction

Entrepreneurs play a crucial role in transitions of organization or firm, as they experiment with new ideas, concepts and innovations and they can turn the potential of new knowledge, networks and markets into concrete actions to exploit new business opportunities Hekkert *et al* (2007) [1]. However, innovation strategy involves developing clear innovation strategy, setting appropriate innovation target, allocation of resources, risk policy formulation, strategic initiatives for new product/service, and strategic initiatives for incremental and radical innovation [2]. Innovation focused companies select suppliers after examining their own managerial and technical capabilities before giving desired outcomes. They encourage suppliers to enhance their technology and innovation capabilities by spending more on R&D, widening their range of expertise, developing independent technological competence, and working with multiple buyers to gain a diversity of knowledge and skills.

## Technology Business Incubator (TBI)

Technology Business Incubator (TBI) was an organizational setup that helps for the survival of the start-ups by nurturing the technology based and knowledge driven companies. The main objective of the technology business incubators is to produce successful business ventures that create jobs and wealth in the region, along with encouraging an attitude of innovation in the country as a whole. Incubators did this by providing an integrated package of work space, shared office services, access to specialized equipment along with value added services like fund raising, legal services, business planning, and technical assistance and networking support. Technology Business Incubator had evolved from the convergence of two global movements, namely the recognition that small and medium enterprises (SMEs) were the instruments of economic growth and the accelerated pace of technological changes.

Technology Business Incubator was a site where business founders and those external to it, embedded within the entrepreneurial endeavor and interact Marlow and McAdam (2015).

## Objectives of study

The specific objectives of the study are:

To analyze the demographic profile of the sample respondents.

To assess the perception of innovation capability between member and non-member entrepreneurs of TBI

## Materials and Methods

The study was conducted among member and non-member entrepreneurs of TBI, Tamil Nadu. The study was based on the primary data collected through a well-structured mailed questionnaire. Details on demographic characteristics, awareness and perception of the sample respondents towards innovation capability were included in the questionnaire. For the study, 120 entrepreneurs (60 member and 60 non-member TBI entrepreneurs) were selected by convenient sampling method. The analytical tools used in the study were percentage analysis and rank based quotient. In rank-based quotient, the respondents were asked to assign rank to the statements from 1-5 based on their perception on various aspects of innovation.

## Percentage Analysis

The percentage analysis was carried out to analyze the general characteristics like age, gender, educational status, year of establishment and annual turnover. The response given by the entrepreneurs were expressed in percentage by using the formula,

$$\text{Percentage analysis} = (\text{Number of respondents}) / (\text{Total sample size}) \times 100$$

Table-1 Distribution of respondents based on their socioeconomic characteristics (N=60)

SN	Variables	Member		Non-member	
		No. of Percentage	Respondents to total	No. of Percentage	Respondents to total
1	Age (years)				
	Less than 25	2	3.33	0	0.00
	Between 25-35	38	63.33	25	41.66
	Between 36-40	15	25.00	20	33.33
	More than 40	5	8.33	15	25.00
2	Gender				
	Male	42	70.00	51	85.00
	Female	18	30.00	9	15.00
3	Education				
	Primary	0	0.00	7	11.66
	Secondary	5	8.33	15	25.00
	Higher Secondary	9	15.00	20	33.33
	Degree	46	76.66	19	31.66

Table-2 Innovation adoptability of the entrepreneurs

Innovation adoptability of entrepreneurs	Member		Non-member	
	No. of Percentage	Respondents to total	No. of Percentage	Respondents to total
Do you have any idea of innovation				
i. Yes	47	78.33	19	31.66
ii. No	13	21.66	41	68.33
Does the firm undergo any innovation				
i. Yes	42	70.00	12	20.00
ii. No	18	30.00	48	80.00
Do you think innovation is very much important				
i. Yes	58	96.66	49	81.66
ii. No	2	3.33	11	18.33
Do you need any institutional assistance for making innovation				
i. Yes	53	88.33	48	80.00
ii. No	7	11.66	12	20.00
If you adopt innovation which of the following would you choose				
i. Product	24	40.00	19	31.66
ii. Process	5	8.33	4	6.66
iii. Technology	11	18.33	7	11.66
iv. Market	20	33.33	30	50.00

### Rank Based Quotient (RBQ)

To find out the perception of entrepreneurs about innovation "rank based quotient" (RBQ) was used (Sabarathnam, 1988). The ranks given by the respondents were converted into RBQ by using the formula,

$$RBQ = \left[ \sum F_i (n+1-i) / N n \right] \times 100$$

Where, RBQ= Rank Based Quotient

$F_i$  = Frequency of the attributes for the  $i^{th}$  rank of the factor

$N$  = Number of entrepreneurs contacted

$n$  = the maximum number of ranks given for various factors

$I$  = Rank of the attributes

The factor with highest RBQ score was considered as the most important factor influencing the member and non-member TBI entrepreneurs towards making innovation.

## Results and Discussions

### Socio-economic profile of the respondents

Percentage analysis was used to categorize the socio-economic characteristics of respondents and it was presented in [Table-1]. The result furnished in the [Table-1] showed that 63.33 percent of the member entrepreneurs and 41.66 percent of non-member entrepreneurs belonged to the age group of 26-35 years, followed by 25.00 percent of member entrepreneurs and 33.33 percent of non-member entrepreneurs were in the age group of 36-40 years and 8.33 percent of member entrepreneurs and 25 percent of non-member entrepreneurs were in the age group of above 40 years respectively. A meager of 3.33 percent of member entrepreneurs and none of the non-member entrepreneurs were found in the age group of below 25 years. It could be concluded that majority of the sample entrepreneurs were middle-aged (25-35), there was a wide scope to increase their innovation capability and firm performance. Studying on the gender revealed that 70.00 percent of the member respondents and 85 percent of non-member

respondents were male, and only 30.00 percent of member and 15 percent of non-member entrepreneurs were female. It could be inferred that majority of the entrepreneurs were male. Analysis on the educational status showed that 76.66 percent of member entrepreneurs and 31.66 percent of non-member entrepreneurs were degree holders, followed by 15 percent of the member entrepreneurs and 33.33 percent of non-member entrepreneurs had higher secondary education, 8.33 percent of member and 25 percent of non-members had secondary education. Only 11.66 percent of the non-member respondents had completed primary education. As the majority of the respondents were educated between higher secondary and college; the respondents must be given necessary training to improve their innovation capability.

### Assessing the innovation adoptability of the entrepreneurs

Innovation adoptability would help to understand the importance of creating value for the customers to remain competitive in the market. The data collected regarding innovation adoptability of the entrepreneurs were analyzed and presented in [Table-2].

From [Table-2] it could be inferred that 78.33 percent of member entrepreneurs and 31.66 percent of non-member entrepreneurs had idea on innovation whereas 21.66 percent of member entrepreneurs and 68.33 percent of non-member entrepreneurs had no idea on innovation. Majority (70 percent) of member entrepreneurs and 20 percent of non-member entrepreneurs had undergone innovation in their firms whereas 18 percent of member entrepreneurs and 48 percent of non-member entrepreneur firms had not undergone any innovation in their firms. It could be concluded that TBI member entrepreneurs had more innovation adoptability than non-member entrepreneurs.

Analyzing on the importance of innovation revealed that 96.66 percent of member entrepreneurs and 81.66 percent of non-member entrepreneurs considered innovation was very much important for a successful business venture.

Analyzing the need of institutional assistance for making innovation showed that 88.33 percent of member entrepreneurs and 80 percent of non-member entrepreneurs were in need of assistance to undergo innovation.

It could also be concluded from the [Table-2] that 40 percent of member entrepreneurs and 31.66 percent of non-member entrepreneurs would go for product innovation followed by 33.33 percent and 50 percent of member and non-member entrepreneurs respectively would go for market innovation. Around 18 percent of member entrepreneurs and 12 percent of non-member entrepreneurs selected technology innovation and 8.33 percent and 6.66 percent of member and non-member entrepreneurs would go for process innovation. It could be concluded that most of the respondents would like go for product and market innovation.

### Analyzing the perception of entrepreneurs towards making innovation

The respondents were asked to assign ranks to the factors like capturing market, earning profit, competing with competitors, satisfying the customers and efficient utilization of the resources and its RBQ score is presented in [Table-3].

Table-3 Entrepreneurs perception of innovation

SN	Attributes	Member		Non-member	
		RBQ	Rank	RBQ	Rank
1	To capture the market	65.33	I	41.33	II
2	To earn profit	49.66	V	44.33	I
3	To compete with competitors	57.66	II	33.33	III
4	To satisfy the customers	57.33	III	32.66	IV
5	To use the resources efficiently	53.33	IV	27.33	V

It could be inferred from [Table-3] that incase of member entrepreneurs the calculated RBQ values ranged from 65.33 to 49.66 and for non-member entrepreneurs the values ranged by 44.33 to 27.33. The highest RBQ value assigned by member entrepreneurs was to capture market share (65.33) and non-member entrepreneurs was to earn profit (44.33) followed by competing with competitors was ranked second by member entrepreneurs (57.66) and to capture market (41.33) by non-member entrepreneurs, than third rank was assigned to satisfying customers (57.33) by member entrepreneurs and to compete with competitors (33.33) by non-member entrepreneurs followed by efficient utilization of resources (53.33) and satisfying the customers (32.66) was ranked fourth by member and non-member entrepreneurs and earning profit (49.66) by member entrepreneurs and efficient utilization of resources (27.33) by non-member entrepreneurs was ranked fifth. Further it could be concluded that member entrepreneurs perceive innovation was important to capture market and non-member entrepreneurs perceive innovation was important to earn profit.

### Conclusion

From the study, it could be concluded that many of the entrepreneurs were middle aged, male and educated. Since innovation adoptability and perception on innovation was comparatively low for non-member entrepreneurs, awareness programs may be organized for developing the innovation capability of non-member entrepreneurs in turn their firm performance and firm profit.

**Application of research:** To analyze the entrepreneurs' innovation adoptability and their perception on innovation and what can be done to improve their awareness on innovation.

**Research Category:** Agribusiness Development

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**Cultivar / Variety / Breed name:** Nil

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