

EMERGENCE OF GREEN ENTREPRENEURSHIP IN KERALA; A SOLUTION FOR SUSTAINABLE GROWTH AND DEVELOPMENT

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Abstract

In recent days, the consumption of which leads to a change in the consumer's behaviour, reducing the negative effect on the environment. The effect of green entrepreneurship is to introduce innovative ecological solutions to problems connected with production and consumption of products and services. The study analyses the emergence of green entrepreneurs on the basis of variables like green innovation, green production and green marketing. The preference of customers towards green product also an important factor which help to the emergence of green entrepreneurs. The study is useful to the green entrepreneurs who wish to start a new venture with eco friendly product, as it reveals the existing green entrepreneurs practices on innovation, production and marketing. The structured equation model was adopted here to know the fitness of constructs and the contribution of each factor of emergence of green entrepreneurs. The questionnaire survey method also has been used to collect the data from 100 green entrepreneurs across Thiruvananthapuram. For the purpose of collecting data the study area is divided into 14 constituencies. From these 14 constituencies the researcher selected 3 constituencies namely Nedumangadu, Nemom and Neyyattinkara. For selecting the sample easier the researcher identified the total Local self-government segments from each of these constituencies. From all these areas identified 30 shops from Nedumanadu, 40 shops from Nemom and 30 from Neyyattinkara. The results reveal that all constructs like green innovation, green production and green marketing are the major contributing to determine the emergence of green entrepreneurs. Out of this green production is the dominant factor in the emergence of green entrepreneurs'. Green entrepreneurship Develop a new business models which, when applied to use, might lead to a sustainable economic development.

Introduction

The relationship between business and the environment is not new. There was an upsurge of interests in environmental degradation during the 1960s, in Western Europe and North America because of the incidents of heavy smog in London caused by business activities. At that time, people became more aware of the negative environmental consequences of business activities. Business response to the environmental concerns was antagonistic, with little care about the cost of business activities to the environment (Utting, 2000).

According to **Purushottam N Vaidya and Dr. D.V. Honagannavar**, Green entrepreneurship as a system which transforms the socially- and environmentally-engaged business by means of significant innovations. Green entrepreneurs create a shift in peoples' mindsets towards greener thinking and increased demand for green products and services, boosting the dual effect of employment and environmental gains. Green entrepreneurs are adopting some changes in doing business. Pollution reduction, clean production processes and resource efficiency are the main drivers of change. There are possible openings in the field of green business such as, food, heating, transportation, building, fashion, cleaning, consulting etc. to increase the awareness of green entrepreneurship.

Various countries are now started adopting green practices such as green marketing, green supply chain and waste management, which is a favorable atmosphere for such green entrepreneurs. The emergence of green entrepreneurs also encourages young graduates to come and start a business. Green entrepreneurs can make profit through the market as well as social recognition. Environmental knowledge also changes the mind of the consumer which can feel in their purchase intentions towards green products. There are different factors that are composed in green entrepreneurs. They are environment, social objectives, innovation, technology, sustainability. Government in India support the development of entrepreneurship. (Sharma NK and Kushwaha GS, 2016). The emerging green market scenario the role of green entrepreneurs lies in solving environmental problems while boosting competition and increasing the welfare of society on the whole. The main components of green entrepreneurship are environmental quality, social welfare, innovation, sustainability, technological advancement and economic development. The green entrepreneurial activities are shaped by the economic, social and environmental objectives which further lead to sustainable development (Haldar, S. ,2019). There is a great interest to protect the environment among consumers around the world; and the behaviour of consumers is moving towards environmentally-friendly or green products. Green entrepreneurship has the ability to focus on the evolution of the concept of production, operation, and innovation for the production of new product to be used to facilitate sustainable

development through reorganization of the industry and the use of technological facilities. The green production, green design, green supply chain constitutes green entrepreneurs and through that sustainable development is possible. It was found that green product, green design, green supply chain, and green production have a positive and significant impact on green entrepreneurship and sustainable development. The emergence of the green market has a positive impact on sustainable development and green entrepreneurship. Paying attention to the emergence of the green market and the willingness of people to preserve the environment requires the existence of entrepreneurs who aim to maintain natural resources. For achieving sustainable development requires some changes in structures like political, economic, social, and cultural systems. Green design begins with planning and includes all materials and material selection, the production structure, the production process, the packaging, the shipping method, and the way in which the product is used. All of these processes create more opportunities in green entrepreneurship. (Lotfi, M.et, al 2018). Green business activity includes wind energy, bio-fuel, eco-tourism, waste recycling, water recycling, energy efficient devices, e-administration etc. The awareness about corporate social responsibility and the dangers of global warming and climate change are the factors which have concern over environment and aiming to become green entrepreneurs. (Dr.P.Paramashivaiah et. al, 2013) Green entrepreneurs face the challenge of lack of awareness of green products, processes and services. Starting up a business in the service sector was easier than in manufacturing, because in manufacturing need a greater understanding of process and production methods, along with the cost and reliability of transport (Gunawan, J., & Fraser, K. 2016)) Environmental consciousness and awareness amongst millennials builds positive attitude towards green entrepreneurship. It attempts to provide directions and viable solutions to prevent further ecological degradation through green entrepreneurship. Attention of the newer generation and government and public institutions are playing a positive role in encouraging environmental concerns. Green Business can enjoy the benefit of cost reduction, higher profit, enhanced brand perception etc. Green business can also create green job. Thus environment sustainability can be achieved, it will leads to better reputation of the firm. Increasing awareness for environment-friendly and green products amongst consumers motivates the green entrepreneurs. And also growing awareness and demand for organic products, availability of low- cost technological solutions to green ventures are the motivating factor for green entrepreneurs. Increasing pesticides, pollution in everyday consumable products have shifted consumer preference towards natural ingredients and manufacturing. Green ventures are provided adequate government support and subsidies. The overall awareness about environment and the adverse impact of human actions in environment degradation is the serious concern for undertaking green business. Green businesses like waste recycling, textiles, manufacturing, handicrafts, housing and construction were rated as other important sectors for potential green entrepreneurship. These sectors will create more job opportunities, generating income, economic growth and leading the transition towards a green economy. Entrepreneurial climate, employment in green profession, presence of specialised universities, cooperation with NGO, local certified schemes, and knowledge about green business will increase the opportunities of green business. Green entrepreneurship is the most sustainable solution to the rising imbalance of nature and rapid destruction of natural resources (Mathur, S., & Tandon, N. (2016)).

This paper is going to look on the factors that affect the emergence of green entrepreneurs and identifying the major contribution factors in green entrepreneurs' emergence. There are a lot of study related to the perception and attitude of customers towards green products and green entrepreneurship etc. But the different reasons for emergence of green entrepreneurs are limited. Thus the scopes of this study in wide and useful to the manufactures, government and policy makers etc. This study is very relevant in present era where the health and safety are the serious concern for customers. As the study reveals the major contributing factor in emergence of green entrepreneurs, this is very helpful for the potential green manufactures to redesign the product with new production, innovation and marketing.

Methodology

The present study is a descriptive cum exploratory in nature and is based on primary data. The primary data for this study was collected through the distribution of self-administered questionnaires to potential respondents across Thiruvananthapuram district. The target respondents of this study were the green entrepreneurs in the study area. For evaluating the emergence of entrepreneurs here used three variables like green innovation, green production and green marketing. The customer preference is also a factor to which determine the emergence of green entrepreneurs. The measurement of the questionnaire items in this study used a 5-point Likert scales ranging from strongly disagree to strongly agree. To ensure the validity of the scale used in the survey, the items were adapted from the relevant research and existing literature to fit the theme and context of this study.

Sampling and data collection

The questionnaire targeted the entrepreneurs across Thiruvananthapuram. The researcher assumed the expected population standard deviation to be 4.3. Using t-distribution to estimate sample size, an intra-class coefficient (ICC) of 0.2 and a cluster size of 10, the study would require a sample size of 100 to estimate a mean with 95% confidence and a precision of 1.5. Thus selected 10 clusters, each of 10 sizes. For this study, the researcher selected 10 entrepreneurs from each of these 10 clusters and selected the total of 100 entrepreneurs at 95% confidence level and 5% error margin. Since multistage sampling method was adopted in the study. In multistage sampling large clusters of population are divided into smaller clusters in several stages in order to make primary data more manageable. Thus the study area was divided into 14 constituencies. From these 14 constituencies the researcher selected 3 constituencies namely Nedumangadu, Nemom and Neyyattinkara. For selecting the sample easier the researcher identified the total Local self-government segments from each of these constituencies. From all these areas identified 30 shops from Nedumanadu, 40 shops from Nemom and 30 from Neyyattinkara. These numbers of shops including some homogeneous stratas like Food Product,

Flour and Oil Milling, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products. Thus, 100 green entrepreneurs were selected who include all these homogeneous strata.

DATA ANALYSIS AND DISCUSSIONS

The analysis is based on the emergence of green entrepreneurs in Kerala. There are four main constructs used to analyse the emergence such as green innovation, green marketing and green production/manufacturing. The SEM analysis has been done using SPSS AMOS software.

Model testing

Confirmatory Factor Analysis is the most common method of confirming the consistency of data in the constructs. Confirmatory Factor Analysis is a multivariate statistical procedure that is used to test how well the measured variables represent the constructs.

The construct factors, items and corresponding codes used for the confirmatory factor analysis are shown in table 1.

Construct	Factors	Code
Green Innovation	Environmental rules and regulations	GI 1
	Time	GI 2
	Availability of recent production technique	GI 3
	Affordability of cost	GI 4
Green production	Awareness about new product design.	GP1
	Less Wastage production	GP 2
	Affordability of advanced production technique	GP 3
	Use of green sourcing options	GP 4
Green Marketing	Green advertising campaigns	GM1
	Affordability of promotional cost	GM 2
	Recycled packaging	GM 3
	Awareness about green labelling	GM 4
Customer Preference	Recycled materials	CP1
	Use natural resource	CP 2
	Protect customers health	CP 3
	Rules and regulations of the government.	CP 4
Emergence of Green Entrepreneurs	Favourable government rules	EGE1
	Availability of green raw material suppliers	EGE 2
	Increasing demand for green product	EGE 3
	financial support for green business	EGE 4
	Favourable infrastructural facilities of Kerala	EGE 5

Model	Chi-square	CMIN/DF	P-Value	GFI	AGFI	CFI	RMSEA
Study model	303.18	1.694	.058	.984	.935	.932	.063
Recommended value		Acceptable fit [1-4]	Greater than 0.05	Greater than 0.9	Greater than 0.9	Greater than 0.9	Less than 0.08

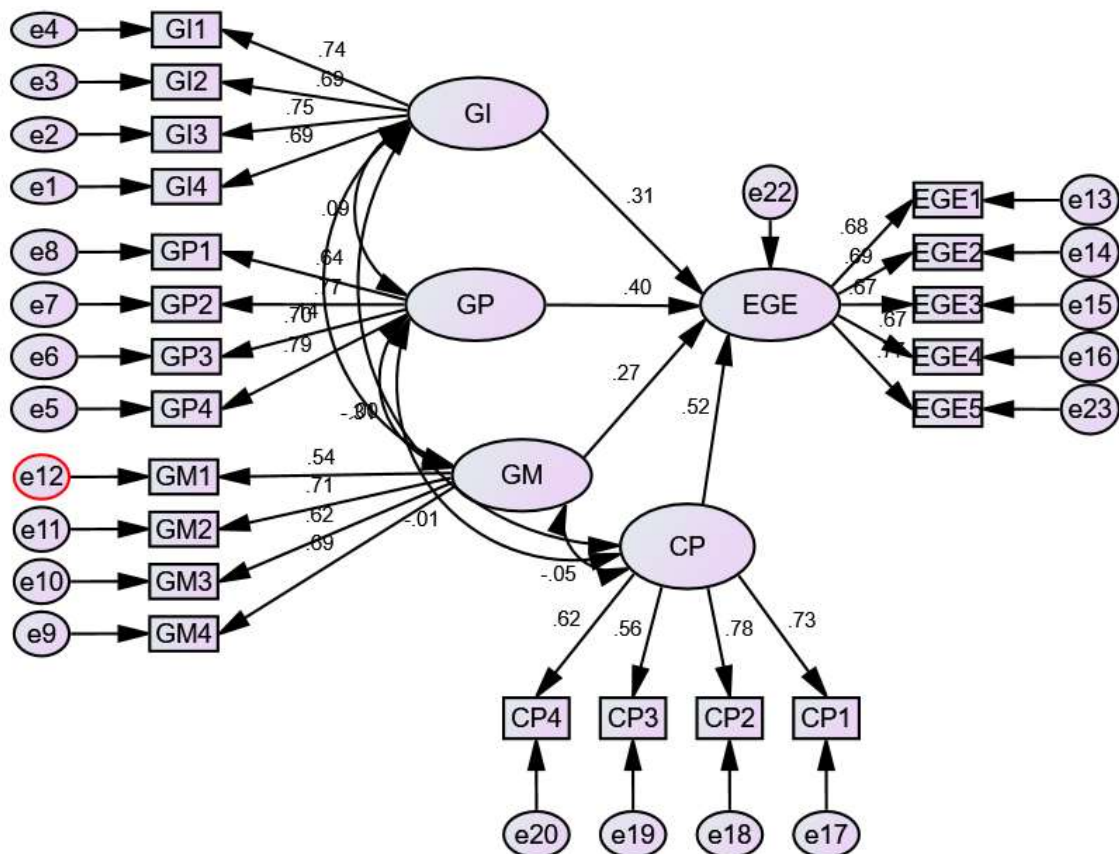
The estimated values of GFI, AGFI, and CFI denote a good level of model fit. The measurement model developed in the research shows a reasonably good fit with the data and matches the threshold values suggested in the literature. Therefore it can be considered for further analysis to develop structural equation models.

Structural Equation Model

The suggested structural path model and the hypotheses proposed in this study were tested by applying Structural Equation Modeling (SEM) with Maximum Likelihood Method. The SEM analysis was done using the software AMOS Version 24. The results show that the constructs viz, Green Innovation, Green Production, Green Marketing and Customer Preference of Green products have a positive influence on the Emergence of Green Entrepreneurs. The Figure 2 illustrates the analysis outcome of Structural Equation Modeling.

From this model we can interpret when Green Innovation, Green Production, Green Marketing and Customer preference of green products are goes up by 1 per cent each then Emergence of Green Entrepreneur goes up by 0.31 per cent, 0.40 per cent, 0.27 per

cent and 0.52 percent respectively. Hence, it can be concluded that the Green Innovation, Green Production, Green Marketing and Customer preference of green products contribute towards the Emergence of Green Entrepreneurs.



Results and Discussion

From the three constructs that contribute to the emergence of green entrepreneurs such as green innovation, green marketing and green production, green production seems a dominant factor and the second important factor is green innovation and the lastly green marketing.

Without production we can't even imagine a business enterprise. Of course in green business also the important factor is green production or manufacturing. By maximising resource use and reducing waste and pollution, GM covers the entire product life cycle from conception to disposal in a benign, harmless manner that has no or minimal negative impact on the environment. Reduce, reuse, recycle, and remanufacture (the 4Rs) is steadily becoming accepted and used as a global growth and sustainability strategy. For starting a new business with green practices firstly the entrepreneur should know the production techniques and method. Sustainable manufacturing started to focus on waste reduction in production. Thus it becomes a prominent factor for green entrepreneurs.

As always proved, innovation is the key to survival. Here also in the competitive world the entrepreneurs can only withstand with the new varieties of green product. Firms develop or adapt inventions to diagnose, monitor, minimise, or prevent environmental concerns, which is known as eco-innovation. Managing eco-innovation is becoming an increasingly critical challenge for businesses as consumer awareness grows, government restrictions tighten, and sustainable growth becomes a financially viable option. For some businesses, this means merely replacing dangerous substances, conserving energy, managing trash, or lowering emissions, while for others, it means developing and implementing pollution control, waste management, and green energy technology. Eco-innovation stimulates economic growth and development. Thus it becomes an important construct on emergence of green entrepreneurs.

Green marketing is the promotion of products that are thought to be safe for the environment. Green marketing refers to the process of creating and promoting products and services that meet the needs of customers for quality, dependability, and ease of access without harming the environment. If entrepreneurs have a wide range of green products, they must also advertise them. The significance of green marketing follows. Green marketing is the marketing of environmentally friendly products that includes functions such as product modification, packaging and production process modification, and advertising techniques, labelling, and

increasing compliance marketing awareness across industries. Thus entrepreneurs who wish to start a new venture with green practices should fully aware about the recent green marketing options.

Apart from the three factors the preference of customers towards green products also a reason for the emergence of green entrepreneurs. The customers' preference now a days switched into eco-friendly products. This will creating the demand for those kind of products. Thus new entrepreneurs' use this opportunity to innovate wide varieties of green product to meet those increasing demand. Also it discovers new possibilities on the market which are in connection with the demand and new way of living of the society.

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