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A STUDY ON FACTORS THAT CONTRIBUTE TO THE EMERGENCE OF GREEN ENTREPRENEURS IN KERALA

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The term green entrepreneurs are a mixture of two words i.e. environment and entrepreneurship. But it was first espoused by Bennett and Berle (1991), Blue (1990) who the concept 'environmental entrepreneur', 'green entrepreneur', 'eco-entrepreneur' and 'eco preneur' in their studies. Green entrepreneurs are the ones who make use of opportunities and initiates business for sustainable development which helps in structure transforming, are socially devoted and technologically advanced usually based on eco-friendly process and environmental product. In this study the researcher used both descriptive and exploratory research designs. The method of sampling used for this study is multi stage stratified random sampling method was adopted in the study. For the purpose of data collection the study areas are 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 identified 33 shops from Nedumanadu, 32 shops from Nemom and 35 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 selected 100 green entrepreneurs. From these shops (100 shops) the researcher regularly visits and collects the details of customers who frequently visit the shops and purchase the green product. This paper tries to study and understand the factors that contribute to the emergence of green entrepreneurs in Kerala. It attempts to provide directions and a viable solutions to the potential entrepreneurs to understand the relationship between the factors of emergence of entrepreneurs such as green innovation, green production and green marketing with socio-demographic variables such as location of the entrepreneurs, nature of product etc. the various factors that contribute This study is useful to the entrepreneurs who wish to start a new venture as this reveals the relationship between the socio demographic factors and factors of emergence of green entrepreneurs.

Key words; green entrepreneurs, green innovation, green production, green marketing

Introduction

The Green product is a term that describes a product that protects the environment and replaces artificial ingredients with natural ones. 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 (**Stuti Haldar and Indira Dutta).** 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. Green marketing is a marketing of environment-friendly product that arranges into different functions like as product adjustment, packaging, modification of production processes, advertising strategies, labelling as well as enrich awareness on compliance marketing amongst industries. The study found that the maximum level of people/customers are known, aware and interest about Green Marketing. Thus green marketing is an approach that is green product, green price, green place, green promotion, green packaging, green process etc. For majority of the firms innovation is the key to survival **(Schumpeter 1934, Baumol 2002).** It's a potent instrument that new enterprises can employ to undercut old firms, as well as established firms that need to stay competitive in dynamic markets. The nature of innovation and its determinants have an impact on technology development and adaptation patterns. The elements that operate as barriers and triggers to 'green innovation,' as well as how changes in access to information, new technologies, resources, and markets impact or change the dynamics of innovation and management. (**Farinelli, F.et, al 2011).** Green manufacturing (GM) is quickly gaining traction as a long-term manufacturing solution that has the ability to solve the majority of the world's problems. By maximising resource usage and reducing waste and pollution, GM covers the complete product life cycle from conception to disposal in a benign, harmless manner that has no or minimum negative impact on the environment **(Minhaj A.A. Rehman, R.L. Shrivastava 2013).** According to **Mendler et al. (2005),** GM means addressing the requirements of the current generation without compromising future generations' ability to meet their own. According to **Cortellini (2001**) GM is a manufacturing method that reduces waste and pollution, slows the depletion of natural resources, and reduces the quantity of rubbish that ends up in landfills. **Atlas and Florida (1998)** expressed that GM involves efficient production processes that incorporates source reduction, recycling and Green design. **Gutowski (2002)** compel manufacturers to consider the environment at all stages of the manufacturing process, including resource conservation and component recycling. On the other hand **Zhang et al. (1997)** interpret that Manufacturers will be able to turn garbage into a profitable product thanks to GM technologies and design methods.

Emergence of green entrepreneurs

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. Demographic criteria are less significant than the psychographic criteria in case of green consumer purchase behavior. 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. 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. 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)**

This paper is going to look on the factors that affect the emergence of green entrepreneurs and the relationship between the factors of green entrepreneurs' emergence and socio-demographic factors. There are a lot of study related to green entrepreneurship and sustainable development etc. But the relationship between the factors of emergence of green entrepreneurs and socio-demographic factors affecting 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 the present era where the environmental concerns of societies and the immense support of governments are increasing.

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

Each constructs of emergence of green entrepreneurship such as green innovation, green manufacturing and green marketing has been analysed with some socio demographic factors by using the statistical tools like ANOVA

5.3.1 Analysis based on green innovation.

Detailed analysis has been conducted based on the construct green innovation. the main variables for analysing green innovation factors are environmental rules and regulations, time, availability of recent production technique etc. these factors has been first ranked using Friedman rank test method.

Table 5.5 Friedman Ranking to rank of green innovation

VARIABLES	MEAN RANK	RANK	CHI-SQUIRE VALUE	P VALUE
Environmental rules and	2.46	III		

regulations			41.368	< 0.001
Time	2.60	I		
Availability of recent production technique	2.44	IV		
Affordability of cost	2.51	II		

Since P value is less than .01 null hypothesis is rejected at 1% significant level. Hence it is concluded that there is a significance difference between mean ranks towards the all the variables of green innovation. As per the result the variable time (2.60) is ranked first followed by affordability of cost (2.51), environmental rules and regulations (2.46), availability of recent production technique (2.44).

As a result, when it comes to innovation, the time it takes to bring a new innovation to market is crucial. This clearly indicates there are so many innovations in green products. The affordability of the cost of innovation is another factor that affects innovation. Entrepreneurs are facing a problem of cost at the time of innovation. Environmental rules and regulations are another problem when inventing a product. Entrepreneurs should keep in mind the rules and regulations while inventing a new green product. Lastly, the availability of production techniques is the least important factor in innovation.

b. **Relationship between green innovation and location**

Here analysed the factors of green innovation like environmental rules and regulations, time and availability of recent production technique with the location of respondents such as urban area, semi-urban area and rural area. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between locations of the green entrepreneurs with all factors of green innovation. Table 5.6 showing the relationship between locations of the green entrepreneurs with all factors of green innovation.

Table 5.6

Variables	**Location**			**F value**	**P value**
	Urban area	Semi-urban area	Rural area		
Environmental rules and regulations	4.31 (1.198)[a]	3.89 (1.260)[a]	3.77 (1.239)[a]	1.631	.201
Time	4.17(1.071)[ab]	**4.44** (1.081)[b]	3.69(1.301)[a]	3.874	.024
Availability of recent	**4.38** (1.083)[b]	3.78 (1.198)[a]	3.60 (1.311)[a]	3.545	.033

production technique					
Affordability of cost	3.52 (1.430)[a]	3.56 (1.423)[a]	**4.54** (.950)[b]	7.016	.001

Since P value is less than 0.05, null hypotheses is rejected at 5% significant level. Hence it is concluded that there is a significance difference between location with the all the variables in Green innovation except environmental rules and regulation. This indicates that there is no effect on innovation with regard to environmental rules and regulations. The entrepreneurs from semi-urban area believed that innovation is based on time (4.44) and the entrepreneur from urban area considers that the availability of the recent production technique (4.38) is the main factor when innovation is concerned. On the other hand the entrepreneurs from rural area believed that the innovation is based on cost (4.54).

From the above result it is clear that while inventing the green product the rules and regulation is not a problem to the entrepreneurs from all locations, but they consider the cost, time, availability of production technique etc. Also the availability of recent production technique is the main factor which affects the innovation of green product. Since innovation is essential to maintain the competitive position in dynamic markets. Thus the entrepreneurs from urban area are very much concern on technique of production, they consider the availability of recent production technique is important while making innovations on green product. Thus the entrepreneurs from semi-urban areas believe that time is the main factor while inventing a new green product. It is also important that the time which takes a new innovation reached to the final customers because the firm needs to withstand in the competitive market. Basically the entrepreneurs from rural areas face financial difficulties while running a business. So the cost of innovation is the important factor for the rural entrepreneurs.

c. Relationship between green innovation and nature of business

Here analysed the factors of green innovation with the nature of business like Flour and Oil Milling, Food Product, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between natures of business with all factors of green innovation. Table 5.7 showing the relationship between natures of business with all factors of green innovation.

Table 5.7

Variables	Nature of business						F value	P value
	Flour and Oil Milling	Food Product	Paper and Coir Product	Handicraft and Handloom	Wood Products	Consumable Products		
Environmental rules and regulations	4.17(1.169)a	3.82(1.249)a	4.26(1.172)a	4.33(.816)a	3.60(1.517)a	3.40(1.506)a	1.141	.344
Time	3.00(1.265)ab	**5.00(.000)c**	3.91(1.245)b	3.67(.516)b	3.20(.837)ab	2.70(1.160)a	34.789	.000
Availability of recent production technique	1.83(.753)a	3.74(1.201)ab	4.49(1.011)bc	**5.00(.000)c**	3.00(1.000)b	3.40(.699)b	11.875	.000
Affordability of cost	**5.00(.000)b**	3.79(1.339)a	3.60(1.439)a	4.33(1.211)a	**5.00(.000)b**	3.80(1.476)a	2.577	.004

Since P value is less than 0.05, null hypotheses is rejected at 5% significant level. Hence it is concluded that there is a significance difference between nature of business with the all the variables in Green innovation except environmental rules and regulation. Time is a major problem in innovation that affects production of food products (5.00). Availability of recent production technique is the problem which affects the invention of Handicraft and Handloom products (5.00). Affordability of cost is an important factor while inventing flour and oil milling products and wood products (5.00)

For inventing all the type of green product such as Flour and Oil Milling, Food Product, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products the environment rules and regulations is a least important factor. Special care should be there for innovating in food products. Since so many new arrivals are food products, time is a major problem for inventing in this category. Handicraft and handloom products, demand some sort of technology. As a result, innovation in this category of green products is dependent on the availability of recent production techniques. Starting a flour and oil milling and wood product producing company usually requires the installation of some machines that become costly. Thus, entrepreneurs find affordability of cost is the major problem when inventing products in these categories.

5.3.2 Analysis based on green production /manufacturing

Detailed analysis has been conducted based on the construct green production. The main variables for analysing green production factors are Awareness about new product design, Less Wastage production Affordability of advanced production technique, Green sourcing options etc. these factors has been first ranked using Friedman rank test method.

Table 5.8 Friedman Ranking to rank of green production/manufacturing

VARIABLES	MEAN RANK	RANK	CHI-SQUIRE VALUE	P VALUE
Awareness about new product design.	2.68	II		
Less Wastage production	2.91	I		
Affordability of advanced production technique	2.23	III		
Green sourcing options	2.18	IV		

Since P value is less than .01 null hypothesis is rejected at 1% significant level. Hence it is concluded that there is a significance difference between mean ranks towards the all the variables of green production and manufacturing. From the above table it is clear that the variable less wastage production is ranked first (2.91), awareness about the new product design (2.68) ranked second, affordability of advanced production technique (2.23) ranked third and green sourcing options (2.18) ranked fourth.

Wastage of production is a serious issue when green entrepreneurs are concerned. When it comes to producing a green product, ensuring minimal waste is a huge challenge for entrepreneurs. Thus, while producing a green product, reducing wastage has become the first priority of green entrepreneurs. In production, knowledge about the product design is also important. Once the green entrepreneurs know the product design, then only they can produce it according to that. So it has become the second priority when green entrepreneurs are concerned. Cost is another factor that influences production. Green entrepreneurs needs to ensure that the production can be carried out at an affordable cost before producing a green product. The availability of green raw materials is another factor that influences green production.

a. Relationship between green production and location.

Here analysed the factors of green production such as Awareness about new product design, Less Wastage production, Affordability of advanced production technique, Green sourcing options etc with the location of the green entrepreneurs like urban area, semi urban area and rural area. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between locations of green entrepreneurs with all factors of green innovation. Table 5.9 showing the relationship between locations of the green entrepreneurs with all factors of green production.

Table 5.9

Variables	**Location**			**F value**	**P value**
	Urban area	Semi-urban area	Rural area		
Awareness about new product design.	**4.93**(.258)[b]	4.78(.422)[b]	3.97(1.043)[a]	19.144	.000
Less Wastage production	**5.00**(.000)[b]	4.56(1.027)[a]	4.54(.919)[a]	3.096	.050
Affordability of advanced production technique	3.48(1.184)[a]	3.44(1.340)[a]	**5.00**(.000)[b]	25.582	.000
Green sourcing options	**5.00**(.000)[b]	3.67(1.195)[a]	3.51(1.292)[a]	18.746	000

Since P value is less than 0.05, null hypotheses is rejected at 5% significant level. Hence it is concluded that there is a significance difference between location with the all the variables in Green production or green manufacturing. The entrepreneurs from urban area consider that awareness about the new product design (4.93), less wastage (5.00) and green sourcing options (5.00) is the important factor for green production or manufacturing. On the other hand the entrepreneur from rural area considers that affordability of advanced production technique (5.00) is the major factor in green manufacturing.

Since trained entrepreneurs are more in urban area they might be consider the awareness about the new product design is the major factor of green manufacturing. Once they know the product design they can start producing it. Also the wastage of production is a serious issue in all cities; the entrepreneurs definitely entertain minimum wastage of production. Also the availability of green raw material is an important challenge when urban entrepreneurs are concerned. Normally green materials are not available in urban area; thus the entrepreneurs from urban areas consider the availability of green sourcing is important in green manufacturing. Since the entrepreneurs from rural area have low financial background they can't afford the advanced production technique for their manufacturing.

b. Relationship between production/manufacturing and nature of business

Here analysed the factors of green production with the nature of business like Flour and Oil Milling, Food Product, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between nature of business with all factors of green production. Table 5.10 showing the relationship between natures of business with all factors of green production.

Table 5.10

Variables	**Nature of business**						**F value**	**P value**
	Flour and Oil Milling	Food Product	Paper and Coir Product	Handicraft and Handloom	Wood Products	Consumable Products		
Awareness about new product design.	4.33(.816)[b]	4.55(.602)[b]	**4.94(.236)[b]**	4.67(.516)[b]	3.60(1.140)[a]	3.60(1.430)[a]	8.329	.000
Less Wastage production	4.00(1.095)[a]	**4.95(.226)[b]**	4.83(.707)[b]	3.50(1.517)[b]	3.60(1.673)[a]	4.80(.422)[a]	7.875	.000
Affordability of advanced production technique	**5.00(.000)[b]**	3.82(1.373)[a b]	3.74(.1.221)[a b]	3.67(.1.506)[a]	4.80(.447)[a b]	4.80(.632)[a b]	2.744	.023
green sourcing options	3.00(1.265)[a]	3.42(1.266)[a b]	4.66(.938)[b]	4.17(.753)[ab]	**5.00(.000)[b]**	3.90(.994)[a b]	6.754	.000

Since P value is less than 0.05, null hypotheses is rejected at 5% significant level. Hence it is concluded that there is a significance difference between the type of green product with the all the variables in Green production or green manufacturing. The entrepreneurs of paper and coir product consider that awareness about new product design (4.94) is the main factor while manufacturing these kinds of products. The food product producing entrepreneurs are considers that less wastage in production (4.95) is important in green manufacturing. The entrepreneurs of Flour and Oil Milling believed that affordability of advanced production technique (5.00) is the major factor in green manufacturing. The availability of green sourcing options (5.00) is the main factor when manufacturing wood product.

There are a lot of varieties of products available in paper and coir products category. So the entrepreneurs of this category should aware about new product designs of paper and coir products. At the time of producing food product there is a great possibility of generating food waste. Thus for food product producing entrepreneurs believed that production with less wastage is important. The flour and oil mills used comparatively big machines and equipment for producing oils and flours. There is more possibility to use advanced technology for producing these kinds of products. So the entrepreneurs consider that affordability of these advanced production technique is important while producing oils and flours. Wood is the main raw material which is used to produce wood products. So the availability of quality wood is the main issue at the time of producing wood products.

5.3.3 Analysis based on green marketing

Detailed analysis has been conducted based on the construct green marketing. The main variables for analysing green marketing factors are Green advertising campaigns, Affordability of promotional cost Recycled packaging, Awareness about green labelling etc. these factors has been first ranked using Friedman rank test method.

Table 5.11 Friedman Ranking to rank of green marketing

VARIABLES	MEAN RANK	RANK	CHI-SQUIRE VALUE	P VALUE
Green advertising campaigns	2.41	III		
Affordability of promotional cost	2.36	IV		
Recycled packaging	2.72	I		
Awareness about green labelling	2.52	II		

Since P value is less than .01 null hypothesis is rejected at 1% significant level. Hence it is concluded that there is a significance difference between mean ranks towards the all the variables of green marketing. From the above table it is clear that the variable Recycled packaging is ranked first (2.72), Awareness about green labelling (2.52) ranked second, Green advertising campaigns (2.41) ranked third and Affordability of promotional cost (2.36) ranked fourth.

As a result, while marketing a green product, green entrepreneurs should ensure that the product has recycled packaging and should highlight the quality of packaging while marketing the green product to meet customer demand. Thus, it has become an important factor in green marketing. The second major factor in marketing green products is green labelling. The marketer should have knowledge of green labelling so that they can convince the customers regarding its quality. The third factor that influences green marketing is green advertising campaigns. The marketer feels that adequate promotion is important while marketing the green product. Lastly, the affordability of promotional costs is another factor while marketing a green product.

a. Relationship between Green marketing and location.

Here analysed the factors of green marketing with the location of the green entrepreneurs like urban area, semi-urban area and rural area. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between location of green entrepreneurs with all factors of green marketing. Table 5.12 showing the relationship between locations of the green entrepreneurs with all factors of green marketing.

Table 5.12

Variables	Location			F value	P value
	Urban area	Semi-urban area	Rural area		
Green advertising campaigns	**4.79(.412)[b]**	3.53(1.253)[a]	3.63(1.140)[a]	14.287	.000
Affordability of promotional cost	3.55(1.088)[a]	3.17(1.424)[a]	**4.80(.406)[b]**	22.523	.000
Recycled packaging	3.79(1.264)[a]	**4.72(.454)[b]**	4.37(.843)[b]	8.889	.000
Awareness about green labelling	**4.72(.455)[b]**	3.86(1.125)[a]	3.69(1.367)[a]	8.155	.001

Since P value is less than 0.05, H_0 is rejected at 5% significant level. Hence it is concluded that there is a significance difference between location with the all the variables in Green marketing. The entrepreneurs from urban area believed that spending in green advertising campaign (4.79) and awareness about green labelling (4.72) is the major factor in green marketing. But the entrepreneurs from rural area consider that the affordability of promotional cost (4.80) is the major factor in green marketing. Recycled packaging (4.72) is the main factor of green marketing when semi urban entrepreneurs are concerned.

Since the entrepreneurs from urban area are comparatively educated and they used to think that green advertising and green labelling are the main factors of green marketing. Marketing is mainly concerned with advertising and sales promotion they considers that these are the main factors which they needs to consider while marketing a product. The entrepreneurs from rural area have financial issues and they are unaware about the technicalities of marketing. So they are unable to afford the cost of promotion. The packaging of the product is also an important while marketing is concerned. So the entrepreneurs from urban area look into the packaging of green product.

Relationship between Green marketing and nature of business

Here analysed the factors of green marketing with the nature of business like Flour and Oil Milling, Food Product, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products. For the purpose of this, the following null hypothesis is (H_0) framed.

There is no significant relationship between nature of business with all factors of green marketing. Table 5.13 showing the relationship between natures of business with all factors of green marketing.

Table 5.13

Variables	**Nature of business**						**F value**	**P value**
	Flour and Oil Milling	Food Product	Paper and Coir Product	Handicraft and Handloom	Wood Products	Consumable Products		
Green advertising campaigns	3.83(1.602)[ab]	3.37(1.282)[a]	**4.63(.598)[b]**	4.33(.816)[ab]	3.80(1.095)[ab]	3.50(.972)[a]	8.329	.000
Affordability of promotional cost	4.17(1.602)[ab]	3.58(1.426)[a]	3.77(1.114)[ab]	3.50(1.517)[a]	**5.00(.000)[b]**	4.60(.516)[ab]	7.875	.004
Recycled packaging	4.53(.647)[ab]	**4.83(.408)[b]**	3.86(1.240)[a]	4.67(.816)[ab]	4.20(.837)[ab]	4.80(.422)[ab]	2.744	.023
Awareness about green labelling	**5.00(.000)[b]**	3.53(1.179)[a]	4.49(.887)[b]	3.50(1.049)[a]	2.60(1.140)[a]	**5.00(.000)[b]**	6.754	.000

Since P value is less than 0.05, null hypotheses is rejected at 5% significant level. Hence it is concluded that there is a significance difference between type of product with the all the variables in Green marketing. Conducting more advertisement campaign is the major problem in green marketing when paper and coir products are concerned (4.63). Affordability of promotional cost is the problem at the time of marketing of wood product (5.00). Recycled packaging (4.83) is important in the case of food product; on the other hand awareness about green labelling (5.00) is important in the case of flour and oil products and other consumable product.

There are a lot of varieties in the case of paper and coir products, so it is important for providing more advertising campaigns for marketing these products to ensure a space in the competitive market. Since the customers are very much conscious to their health the packaging of food products are very important. So while marketing the food product recycled packaging is important. It seems quite difficult to convince the quality of the green product to the customers, specifically for daily used products. So the producers of flour and oils and other consumable product consider green labelling is important to market this type of green product.

5.3.4 Analysis based on emergence of green entrepreneurs

Detailed analysis has been conducted based on the construct emergence of green entrepreneurs. The main variables for analysing green production factors are Favourable government rules, Availability of green raw material suppliers, Increasing demand for green product, financial support for green business, Favourable infrastructural facilities of Kerala etc. these factors has been first ranked using Friedman rank test method.

Table 5.13 Friedman Ranking to rank emergence of green entrepreneurs' variables

VARIABLES	MEAN RANK	RANK	CHI-SQUIRE VALUE	P VALUE
Favourable government rules	2.87	V		
Availability of green raw material suppliers	3.06	III		
Increasing demand for green product	3.11	II		
financial support for green business	3.28	I		
Favourable infrastructural facilities of Kerala	2.69	IV		

Since P value is less than .01 null hypothesis is rejected at 1% significant level. Hence it is concluded that there is a significance difference between mean ranks towards the all the variables of emergence of green entrepreneurs. From the above table it is clear that the variable financial support for green business ranked first (3.28), Increasing demand for green product (3.11) ranked second, Availability of green raw material suppliers (3.06) ranked third, Favourable infrastructural facilities of Kerala (2.69) ranked fourth and favourable government rule is ranked fifth (2.87).

As per the above result, it is clear that the main reason behind the emergence of green entrepreneurs is the financial support of green businesses. From this, it is clear that the government of Kerala always has a positive attitude towards green business. They are ready to give financial assistance to all green businesses. Since finance is the major concern of all green entrepreneurs, they believe that financial support is essential for starting their green ventures. The increasing demand for green products has also become a factor in the emergence of new green entrepreneurs. For starting a green business, it is important to get a green raw material supplier. Thus, it has also become a factor for emerging green entrepreneurs. Infrastructural facilities such as financial support, availability of green materials, etc., become a factor in the emergence of green businesses. Lastly, the favourable government rules and regulations towards green businesses have also become an important factor in starting a green business.

a. Relationship between Emergence of green entrepreneurs and location.

Here analysed the factors of Emergence of green entrepreneurs with the location of the green entrepreneurs like urban area, semi-urban area and rural area. For the purpose of this, the following null hypothesis (H_0) is framed.

There is no significant relationship between location of green entrepreneurs with all factors of Emergence of green entrepreneurs. Table 5.14 showing the relationship between locations of the green entrepreneurs with all factors of Emergence of green entrepreneurs.

Table 5.14

Variables	**Location**			**F value**	**P value**
	Urban area	Semi-urban area	Rural area		
Favourable government rules	3.72(1.486)[a]	**4.69(.467)[b]**	3.66(1.349)[a]	8.654	.000
Availability of green raw material suppliers	**4.79(.412)[b]**	4.08(1.251)[a]	4.11(1.078)[a]	4.871	.010
Increasing demand for green product	**4.86(.351)[b]**	4.06(1.145)[a]	4.26(.852)[a]	7.218	.001
financial support for green business	4.41(1.086)[ab]	4.06(1.308)[a]	**4.83(.382)[b]**	5.259	.007
Favourable infrastructural facilities of Kerala	4.14(.990)[ab]	**4.47(.696)[b]**	3.80(1.256)[a]	3.968	.022

The entrepreneurs from semi-urban area are willing to start the business because of favovarable rules and regulations of government (4.69) and Favourable infrastructural facilities of Kerala (4.47). On the other hand the entrepreneur from urban area considers availability of green raw material suppliers (4.79) and increasing demand for green product (4.86). The entrepreneurs from rural area willing to start a green business because of the increasing financial support for green business (4.83).

The entrepreneurs from semi urban areas keenly observing the rules and regulations of the government regarding the new businesses. Thus the favourable government rules and favourable infrastructural facilities of Kerala induce the entrepreneurs to start their businesses in semi urban area. In urban area there is always a scarcity of green raw material suppliers. So the entrepreneurs from urban area consider that availability of green raw material suppliers

while starting a green business. Also they recognize that the increasing demand for green product is high in urban areas. This is also a reason for starting a business in urban areas. Always skilled entrepreneurs are there in rural areas, but they don't have enough financial support. Thus normally they consider financial support for their green business.

b. Relationship between Emergence of green entrepreneurs and age of the green entrepreneurs

Here analysed the factors of Emergence of green entrepreneurs with the age of the green entrepreneurs. For the purpose of this, the following hypothesis is tested.

H0=there is no significant relationship between age of green entrepreneurs with all factors of Emergence of green entrepreneurs. Table 5.15 showing the relationship between locations of the green entrepreneurs with all factors of Emergence of green entrepreneurs.

Table 5.15

Variables	**Age**				**F value**	**P value**
	25-30	30-35	35-40	Above 40		
Favourable government rules	3.93 (1.412)[a]	**5.00 (.000)[b]**	3.87 (1.231)[a]	3.97 (1.245)[a]	2.799	.004
Availability of green raw material suppliers	4.30 (1.235)[ab]	4.42 (.669)[b]	**4.77 (.425)[b]**	3.77 (1.223)[a]	5.372	.002
Increasing demand for green product	**4.81 (.622)[b]**	4.17 (1.030)[a]	4.16 (.898)[a]	4.23 (1.040)[a]	3.204	.007
financial support for green business	4.26 (1.318)[ab]	4.08 (1.379)[a]	4.29 (1.006)[ab]	**4.87 (.346)[b]**	2.739	.008
Favourable infrastructural facilities of Kerala	**4.78 (.698)[b]**	4.33 (.888)[ab]	4.03 (.983)[ab]	3.60 (1.102)[a]	7.687	.000

The entrepreneur who are in the age limit of 30-35 considers that favourable government rules and regulations (5.00) is the main factor which affects the emergence of green entrepreneurs. The entrepreneur who is in the age limit of 35-40 considers that the availability of green raw material suppliers (4.77) is the factor which affects the emergence of green entrepreneurs. On the other hand the entrepreneurs who is in the age limit of 25-30 considers that because of the increasing demand for green product (4.81) and Favourable infrastructural facilities of Kerala (4.78) are the main

factors which affect the emergence of green entrepreneurs. The entrepreneur who is in the age limit of above 40 considers that the financial support of green business (4.87) is the main factor which affects the emergence of green product.

Conclusions and Implications.

From the above analysis it can be concluded that, the construct green innovation, green production and green marketing is very important factors of emergenece of green entrepreneurs. The time taken to bring a new innovation to market is crucial so that it is an important factor. This indicates that environment rules and regulations are not a problem while inventing green products in all locations. The environment rules and regulations not an important problem while inventing all type of green product. When inventing a green product, entrepreneurs should examine issues such as the cost of the invention, the time required for the new innovation to reach the final customer, and the availability of production techniques. At the time of inventing all the type of green product such as Flour and Oil Milling, Food Product, Paper and Coir Product, Handicraft and Handloom, Wood Products and Consumable Products the entrepreneur should provide lesser priority to environmental related rules and regulations.

When it comes to producing a green product, ensuring minimal waste is a huge challenge for entrepreneurs. The entrepreneurs from urban area consider that awareness about the new product design, less wastage and green sourcing options is the important factor for green production or manufacturing. The entrepreneurs of paper and coir product consider that awareness about new product design is the main factor while manufacturing these kinds of products. There is a need to provide technology exhibitions on product designs since rural entrepreneurs believe awareness of new product design to be a significant factor when carrying out production. This can be accomplished by inviting fresh product design techniques from both professional college students and skilled members of the public to their college-level tech-expos. This will provide aspiring entrepreneurs a concept of how the product will be designed.

While marketing a green product, green entrepreneurs should ensure that the product has recycled packaging and should highlight the quality of packaging while marketing the green product to meet customer demand. The entrepreneurs from urban area believed that spending in green advertising campaign and awareness about green labelling is the major factor in green marketing. Conducting more advertisement campaign is the major problem in green marketing when paper and coir products are concerned. Rural entrepreneurs are mainly facing the problem of affordability of promotional costs. According to the nature of products, government co-operative societies should take the initiative to market the products of rural entrepreneurs. If their product is coir, marketing can be done

through coir societies. Likewise, if it is agricultural products, it can be done through agricultural societies and so on. This will encourage the rural entrepreneurs a lot to come with new green business idea.

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