

GREEN ENTREPRENEURSHIP: A SUSTAINABLE DEVELOPMENT INITIATIVE WITH SPECIAL REFERENCE TO SELECTED DISTRICTS

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ABSTRACT

This study explores the influence of green entrepreneurial activity on sustainable development, using institutional economics as a theoretical framework. We could easily say that Green Entrepreneurship is now easier than ever. Considering not only the environmental problem but the pandemic crisis as well, we notice that people are more inclined towards social and green enterprises.

At the end of the day, a young entrepreneur needs to be able to answer the question, “**how does my company help solve environmental and social problems?**”. And there are many ways to do that. All you need to do is to let creativity and innovation be combined.

The good thing about modern green entrepreneurship is the fact that with today’s technology, the range of potential ideas has grown. People can now use new and innovative technologies to come up with new models that will save energy, solve existing problems, and of course predict future issues that might occur.

What are the challenges and opportunities that green entrepreneurs face when building their network compared to traditional network formation?

This research explores how network formation challenges differ between green entrepreneurs and traditional entrepreneurs, aiming to fill the currently existing research gap, knowing that closing it is beyond the scope of this research. Next to that, the findings of this research will guide green entrepreneurs by providing an overview of frequently occurring challenges that other green entrepreneurs faced when building their network. Herewith, green entrepreneurs can adjust their networking strategy in order to save time, resources and ultimately create opportunities to build a network more effectively.

To achieve the study objectives, we adopted integrative review of literature methodology. Concerning the findings, the paper identified new trends in green entrepreneurship and identified the need to clarify some relevant concepts, such as: industry life cycle, entrepreneurship knowledge sharing, institutional framework, and entrepreneurship financing, green entrepreneurship decision-making process among others. We also identified the need to properly delineate the process leading to the practice of green entrepreneurship as a departure from the old entrepreneurship philosophy. Therefore, we recommend that further studies should endeavor to focus on identifying the step-by-step processes involved in the green entrepreneurship practice for the possibility of wider accessibility and ease of understanding of prospective green entrepreneurs in the interest of green entrepreneurship growth and development.

Finally, we identified the dearth of literature with change management scholars’ view and contributions to the emancipation of green entrepreneurship from the cocoon of traditional entrepreneurship management practice hence, we threw it open for future research undertaking. Finally, we identified the dearth of literature with change management scholars’ view and contributions to the emancipation of green entrepreneurship from the cocoon of traditional entrepreneurship management practice hence, we threw it open for future research undertaking.

KEYWORDS: Born green firm, entrepreneurship, sustainable development.

INTRODUCTION

Environment is one of the major concerns nowadays with day by day degradation and misuse leading to calamities and disasters worldwide. Droughts, Floods, Earthquakes, Landslides, Water Crisis, Air pollution, Land pollution, Noise pollution, Severe Weather Conditions, Global Warming has all been becoming quite intense and frequent these days. Every corner of our beloved planet is being affected by the Environmental problems and something needs to be done quickly to revert back the situation to normal.

Some initiative needs to be undertaken to cope with the ongoing environmental problems. This shall include both Government and People's contribution towards harnessing our natural environment in such a way as to create sustainable solutions to the environmental challenges we are facing. Sustainable Solutions, Sustainability or Sustainable development is controlled development concept which aims at utilizing the resources available to us in such a manner as not to negatively affect the future generations' ability to meet up their own needs. These measures which benefit our environment in a positive manner and are sustainable can be termed as 'GREEN'.

Initiatives taken for the betterment of our Environment or 'Green Initiatives' can range from mere planting of trees, waste management, saving natural resources like water, energy etc. to involving unique and effective production methods, Recycling and reuse on mass scale, Energy efficient premises, Eco-friendly products and services etc. A major contribution in this respect can come from the businesses as they have a major capacity to both produce and pollute. They have both the capital and potential to invest towards betterment of our environment.

Entrepreneurs being an individual business unit can contribute a lot if they have the right vision and will to safeguard our environment. Since the development of any nation is based upon the potential of its Entrepreneurs so is the Sustainable Green Development also. They can induce a chain of Green Initiatives and practices which will

significantly affect our environment in a positive manner.

Entrepreneurs working towards reducing negative impact on environment can be termed as 'GREEN ENTREPRENEURS'. They are the torch bearer who works with a mindset to reduce negative environmental impact on one hand and increase the positive effects of natural Green ways on the other. This can be achieved by any means be it product, service, process, habit etc. and can be termed as 'Green Practices'. The term 'Green Entrepreneurship' is very broad and includes both 'Startups' and 'Existing Businesses' working towards the betterment of Environment. It includes any such activity which provides for environmental up gradation and reduction or slowdown of environmental degradation.

1.1 Green Practices- Basis for Green Entrepreneurship

Green Entrepreneurship practices/Green practices are those which compel to have or seek out the knowledge, initiative and resources and find innovative, ecofriendly solutions to the existing problems or challenges. Green practices therefore include all those activities which negate the degradation of environment and benefit it in a positive manner. These practices may include.

- Energy conservation and Enhanced Energy efficiency
- Recycling and reuse of resources
- Optimum utilization of resources
- Waste and ecosystem management
- Lower emission
- Eco-friendly production process and
- Eco-friendly products/services etc

Green Practices are eco-friendly practices involved in production of a product, service or process which is beneficial to the environment in one way or other. Those businesses performing these activities with a dedication towards safeguarding the environment and maintaining profitability of the enterprise may be called as practicing green entrepreneurship. Green practices along with financial sustainability thus form the basis for green entrepreneurship.

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Figure 1 Green Practices as the basis for Green Entrepreneurship

Green practices can be performed by anybody in respect of benefitting the environment be it individual, enterprise, government/government body etc. However, for the purpose of this study green practices here refer to 'green entrepreneurial practices' undertaken by existing and startup businesses for the gross benefit of the environment.

1.2 Need for Green Entrepreneurship

The natural resources available to us are finite and fast depleting due to unmanaged and unsustainable use. With major population increase and tremendous rise of industries, pollution and degradation of nature has led to serious environmental concerns nowadays. Rapid development has taken huge toll on environment due to ignorance towards sustainable growth and lack of eco-friendly approach. Reduction of forest cover, air pollution, water pollution, ground water depletion, over-utilization of land, slapdash extraction of minerals and metals etc. have all led to Earth clock ticking fast towards its doom. Now is the time to be aware of the situation and beware of the consequences which we have to suffer if we don't change our traditional ways. The current situation calls for an immediate reversal into the damage we have done to our planet so that we could sustain longer

In order to preserve our future, sustainable development is very important and so is green entrepreneurship. Green entrepreneurship is vital element for sustainable development as only by focusing on the environment/nature, which is uncontrollable factor; all other factors be it economic or social can be managed.

Now the question arises, why green entrepreneurship? the answer is simple because entrepreneurs are the life engine of any business and if that is utilized to handle the environmental challenges, it will surely give effective results in this respect. Some authors have also mentioned about this fact:

According to **Paul Hawken** (An expert in this field), "Business is the only mechanism powerful enough to produce the changes

necessary to reverse global environment and social degradation".

1.3 The Process of Green Entrepreneurship

The process of green entrepreneurship involves tackling with the environmental challenges utilizing innovative ideas and fulfilling social and economic obligations. It includes the activity to be performed in green entrepreneurship by the green entrepreneur or the green business. Sharma and Kushwaha (2015)⁵ has proposed in their study that green entrepreneurs are related to four components which has been validated through a conceptual model. These four components are:

- **Green challenges:** The environmental problems faced by the business which is to be sorted out. This may include problems related to pollution, global warming and climate change, natural resource scarcity, energy consumption, waste, and other hazardous disturbances in the environment.
- **Social and Economic goals:** The social and economic obligations to be achieved by the business. This includes profit to be earned, revenue generation, societal obligations like housing, schooling, environmental conservation, health etc.
- **Green Business:** The green business constitutes an enterprise fulfilling the environmental obligations which include either reduction of ecological degradation or enhancing the positive impacts on environment. This includes greening (making eco-friendly) the product, service, process or practice of the enterprise. Green business here refers to both 'green' as well as 'green-green' businesses.
- **Green idea and innovation:** The green idea and innovation involves having unique sustainable solution to the green challenges. This may include solutions like green product/service and green design, green production, green practices, green supply-chain etc.

1. REVIEW OF LITERATURE

Green Entrepreneurship' is quite a new concept and the term has emerged only in the 90's and later whereby the term 'Ecopreneurship', 'Environmental Entrepreneurship', 'Green Entrepreneurship' etc. developed which all have similar meaning with minimal differences. 'Green

Entrepreneurship' is made up of the combination of two words namely 'Green' and 'Entrepreneurship/Entrepreneur' and this is where it is different from traditional entrepreneurs. It refers to a process whereby a person (Green Entrepreneur) starts or implements in his business an effort to make or offer a product, service or process that benefits the environment and is economically viable. Green entrepreneurship practices are those which compels a person have or seek out the knowledge, initiative and resources and find innovative eco-friendly solutions to the existing problems of the society. Green entrepreneurship can be practiced by startups as well as existing businesses, the common agenda being achievement of environmental sustainability through eco-friendly initiatives maintaining the economic health as well.

Barkemeyer, **Holt and Preuss (2014)¹**, examined the extent to which original principles laid down under the concept of sustainable development given in the Brundtland Report 1987, is embedded within the key business guidelines at present. The guidelines include UN Global Compact, the OECD Guidelines, the ICC Business Charter for Sustainable Development, the CAUX Principles, the Global Sullivan Principles and the CERES Principles. It was found that these guidelines gave undue emphasis to the environmental aspect rather than social aspect in particular as opposite of what was mentioned in the Brundtland Report. It was a win-win situation for businesses to emphasize on environmental issues rather than focusing on social aspects and therefore such discourses were adopted but the more conceptual environmental issues concerning system interdependencies, critical thresholds etc. were totally ignored. Suggestions were made for moving towards more conceptual aspects of sustainable development as is mentioned in the Brundtland Report to achieve more holistic growth.

Cloutier and Pfeiffer (2015)², states that happiness is a community characteristics influenced by factors external to the individual and therefore forms an alternative sustainable community development framework focused on improved opportunities for happiness. This framework includes happiness visioning, public participation, happiness profit inventory,

systems planning, and sustainability interventions. Overall, happiness offers a universal measure based on quality of human life and a community development framework which will ultimately lead towards sustainable future.

Holden, Linnerud and Banister (2017)³, argues that the concept of sustainable development has become weak, vague and meaningless in the process of delivering all-good for society. A new model has been suggested against the three pillar model of sustainable development; based on three moral imperatives: satisfying human needs, ensuring social equity, and respecting environmental limits. Sustainable development as such consists of a set of constraints on human behavior and economic activities. It has also been established that different regions or groups of countries face different challenges.

Carley and Christie (2017)⁴, concluded through their study that: 1) The resource system of our planet is finite and bound with the social systems which needs to be managed and economic, social, and political factors plays an important role for the same. 2) Knowledge and skills in related areas, teamwork, and continuous monitoring of vulnerable ecosystem is crucial. 3) Negotiations, mediation and consensus-building is necessary to sort out problems and challenges in the path of sustainable development. 4) Local actions are very important as compared to global efforts because different regions face different challenges, however, there is a need to link both local and global efforts through centralized as well as decentralized actions to achieve overall sustainability

2. RESEARCH METHODOLOGY

Research methodology is a way to systematically solve research problem. It refers to the various steps that are generally adopted by the researcher in studying the research problem along with the logic behind it¹. It describes the design sample, tools used, procedure of data collection and statistical techniques used for data analysis.

The choice of the methodology is complicated because of the availability of a large variety of methods, techniques, procedures and the numerous combinations. An

extensive review of related literatures reveal that the earlier studies on 'Green Entrepreneurship' are majorly focused on explanation of the term and concept, yet different authors had different viewpoints. There is a need for explanation of the concept in a broader and more generalized sense utilizing a balanced combination of both quantitative and qualitative approach.

3.1 Research Design

'A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.'²

This study aims at explaining and clarifying the overall concept of green entrepreneurship in a wider and more comprehensive sense. The study will also enhance our knowledge about the effects of green entrepreneurship practices on the enterprises undertaking it and that green practices leads to sustainable development. Moreover it will not only take into consideration the green initiatives of the startup green businesses/typical green entrepreneurs (green-green businesses), but also majorly focus on the initiatives undertaken by existing businesses (green businesses) adopting the green movement. Suggestions will be made for strengthening the green movement based on both primary and secondary sources of information.

The aim of the study is to collect information, demonstrate relationship and describe as it exists. Thus descriptive cum exploratory research design was used for the study. Descriptive research, also known as statistical research, describes data and characteristics about the population or phenomenon being studied. Descriptive research answers the questions who, what, where, when and how. Exploratory research is generally conducted for those problems which have not been clearly studied or understood. It is directed towards determination of the research design, data collection and subject selection. Developing operational definitions, improvement in research design, priority establishment etc. are some of the measures taken under exploratory research³. Greater focus is on establishment of conceptual model and operational definition as well as perceiving a generalized view of the green entrepreneurship practices of the

enterprises as sustainable development initiative for the nation. In this sense, the study is based on a mixed research design approach.

3.2 Identification of Research Problem

Defining the research problem in a sequential and logical manner is essential for the researcher. The process of problem formulation requires a comprehensive collection of relevant data and information so as to get an inclusive insight of the selected topic. For this purpose a detailed study and in-depth analysis has been done by the researcher. In this context, an extensive literature review has been done, consisting of both theoretical as well as empirical literatures.

Observation and practical exploration and not merely theory, has given a further new set of both primary and secondary data which has been collected. A generalized analysis to enhance the knowledge of the concept and its effects has been undertaken in reference to the research problem and objectives selected for the purpose of the study.

3.3 Objectives

After thorough examination of the identified research problem, following objective has been framed by the researcher:

- **Primary Objective:** To study Green Entrepreneurship as a Sustainable Development Initiative

- **Secondary Objectives:** It will also include the following:

1. To conceptualize the term 'Green Entrepreneurship'.
2. To know about the current Green initiatives
3. To know the effects of Green Entrepreneurship on the enterprises practicing it.
4. To show that Green practices in enterprises lead to Sustainable Development

3.4 Scope and Coverage

The scope of my study revolves around the concept of Green Entrepreneurship and its effects as a sustainable development initiative.

Green Entrepreneurship is a new and emerging concept especially in three Districts.

There has hardly been any thorough research work on this topic. Thus, there is a vast scope of future researches in this field; to explore the various aspects of Green Entrepreneurship. In the coming years more and more studies on Green Entrepreneurship and related topics must be undertaken due to the growing need of 'Green' businesses which positively affect the overall environment.

My study aims to merge several aspects of Green Entrepreneurship and bring it under a broad conceptual framework that will clarify the overall concept. Moreover, limited information has also been sought through primary sources so as to support and validate the objectives of this study.

The researcher has collected both primary and secondary information for the research. The primary information has been collected from employees of existing businesses adopting green practices through tailor-made questionnaire filled in by manager and above level employees. The area covered for collection of primary data includes 3 Districts Thoothukudi, Viruthunagar and Madurai. However, the actual responses were recorded from those organizations which have their in the respective District but have different work locations. Other information relating to the data collection and sources are given further in this chapter only.

3.5 Basic Information of the Study Population and Area of the Study:

Population of the Study:

The population of the study is selected businesses in Thoothukudi, Virudhunagar and Madurai which are undertaking green entrepreneurship practices in any form-product, service or process.

Area of the Study:

Area chosen for the study includes the following 3 Districts,

1. Thoothukudi, 2. Virudhunagar and 3. Madurai

Respondent's Profile:

· Respondents of the Study: Managers or higher level employees of businesses undertaking green practices in any form.

· Total number of valid responses: The total number of valid responses were 130

3.6 Sample Unit and Sample Profile

Sampling can be defined as the selection of some part of an aggregate or totality on the basis of which a judgment or inference about the aggregate or totality is made¹. It is just a subset of the total population. Various Businesses which are adopting Green Entrepreneurship practices, have been chosen according to availability of data across the selected states for this study. Manager and above level employees working in those businesses, were the respondents of my study.

The sampling procedure thus adopted is convenience sampling. A sample set of 300 respondents was chosen out of which only 130 responded (valid responses). The Population for the study is unknown. Questionnaire was distributed to the manager and above level employees, public relation officers (PROs), and related staff. Most of this is done online as the questionnaire is created by using Google Forms.

3.7 Processing and Analysis of Data

After the collection of relevant data, the primary data and secondary data has been treated as follows:

Secondary Data:

This type of data has been collected from various sources including the literatures, reports, magazines, journals, articles, internet sources etc. which has then being used as and when needed. The secondary data has helped in the following

- Identifying the research problem and selecting the course of study.
- Understanding the concept of Green Entrepreneurship in a broader sense.
- Decision-making for the primary study.
- Framing of the questionnaire for primary data collection.
- Conceptualization of the Green Entrepreneurship model.
- Defining the overall concept of Green Entrepreneurship.
- Listing of the Green initiatives undertaken in India by both green and green businesses.

A conceptual model of Green Entrepreneurship along with an operational definition has been proposed based on secondary sources of information. Moreover, the listing of the current Green initiatives of both existing green businesses and startup green-green businesses in India, has also been done. Through this the secondary objective 1 and 2 of the study, has been tried to be fulfilled.

Primary Data:

This type of data has been collected primarily through the questionnaire. Some opinions and interviews of professionals, scholars, entrepreneurs and students have 69 also been taken. After data collection it has been analyzed through the statistical software MS-EXCEL and IBM SPSS Statistics 17.0. The data collected is then properly presented with the help of Bar Graphs, Pie Charts, and Percentage charts. For analysis and interpretation both descriptive statistics as well as combined mean scores have been utilized. This method of mostly describing the obtained data into meaningful interpretations has been adopted due to the nature of the study. No Hypothesis has been formulated for this study as the topic is an established fact rather than an uncertain assumption. For this reason only, the analysis and interpretation is statistically descriptive in nature rather than being based on complex statistical tools.

The primary data analysis and interpretation has been done with aim of

fulfilling the secondary objective 3 and 4 of this study. The questionnaire has been divided into 2 parts- first part fulfilling objective 3 i.e. effects of Green Entrepreneurship on the enterprises practicing it and second part fulfilling objective 4 i.e. showing that Green practices leads to Sustainable Development.

3.8 Limitations of the Study

- Green Entrepreneurship is an emerging and new concept of the respondents are not fully aware of it, and were unable to answer the questions properly.
- Time and financial constraints have restricted the study.
- Past researches are mostly narrative in nature.
- Open-ended questions were not answered properly
- Lack of cooperation in submission of questionnaire, resulting in limited number of responses (130 out of 300)
- Difficulty in personal meeting and interview with the professionals, Green Entrepreneurs etc.
- True information was not received in some cases.

3. RESULTS & INTERPRETATION

4.1 District-wise classification of responses:

Table 4.1 District-wise classification of responses

State	Target number of responses	Number of responses actually received
Thoothukudi	100	38
Virudhunagar	100	47
Madurai	100	45
Total	300	130

4.2 Type of Ownership of Businesses in which the respondents are working:

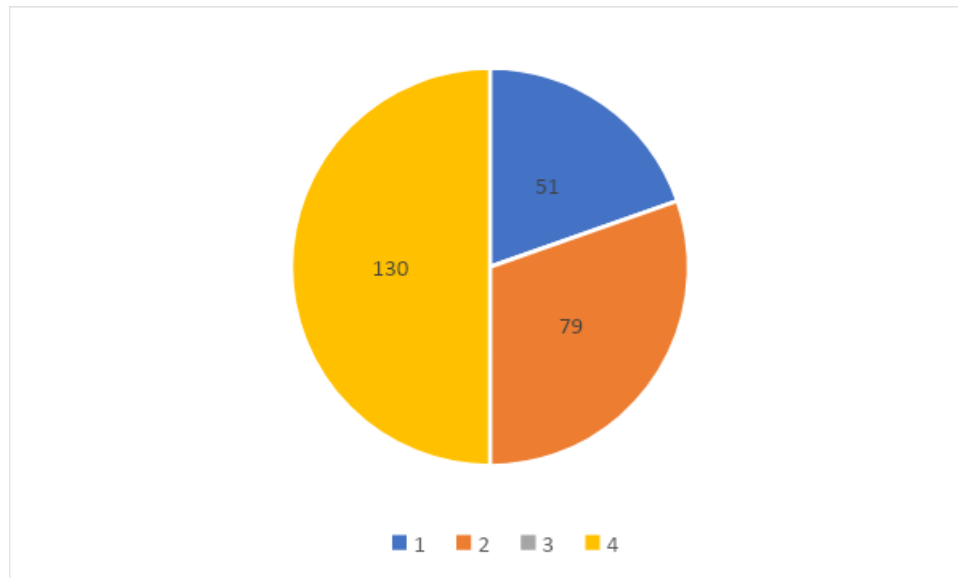
The ownership of businesses in which the respondents are working is divided into two categories

1. Government
2. Non-Government

Table 4.2 Type of Responses by Ownership of Business

Sl.No	Category	Total	Percentage (%)
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1	Government	51	39.2
2	Non-Government	79	60.8
	Total	130	100



4.3 Industrial segmentation of the Businesses and Respondents: Responses have been recorded through segmenting industries into 5 different categories. From each category 6 enterprises were chosen and in each of the enterprise 10 questionnaires were served. However the response rate was very less as compared to the questionnaire served. The categorization has been done with the aim of getting more diversified set of data so as to deduce generalized information.

The 5 categories of Industry are:

1. **Agriculture/Animal Husbandry**
2. **Extraction** (Mining, Fishing and Forestry)
3. **Heavy Manufacturing** (More Capital-intensive, producer of intermediary or semi-finished products, e.g. petrochemical, shipbuilding, automobile, steel etc.)

4. **Light Manufacturing** (More consumer oriented, producer of end-user products, e.g. food and beverages, personal care, consumer electronics, clothing etc.)

5. **Service** (e.g. financial services, telecommunication, tourism, healthcare, education etc.)

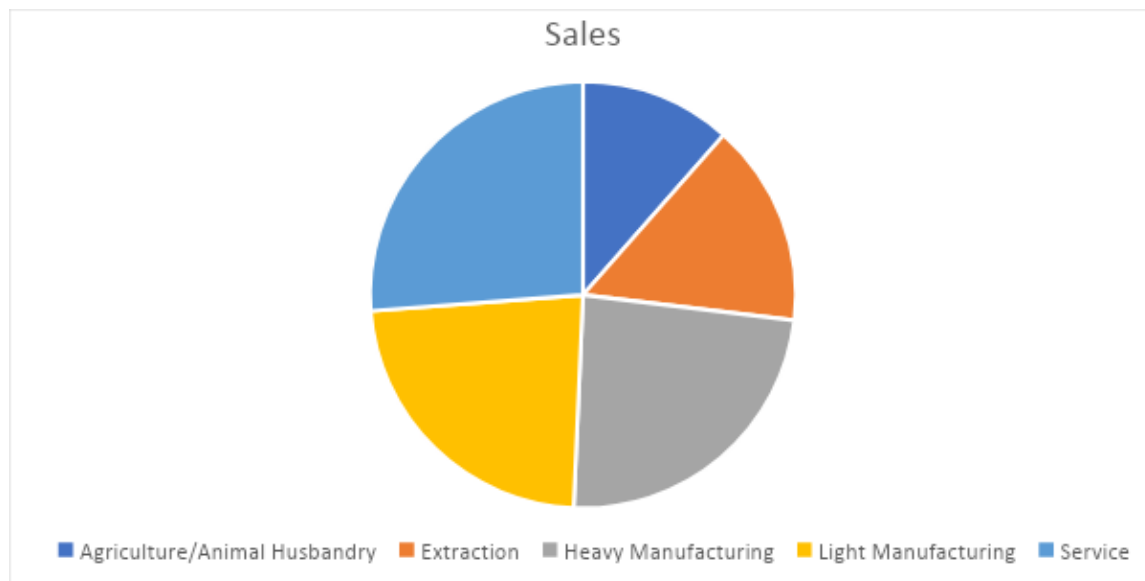
The total number of enterprises (Green Businesses) selected were 30 ($6 \times 5 = 30$) and the number of responses expected from each enterprise were 10. As such the total number of questionnaires served were 300 ($30 \times 10 = 300$). However, the total number of questionnaires responded/respondents (valid responses) were 130.

Total number of valid responses industry-wise:

Table 4.3 Type of Responses Industry-wise

Sl.No	Category of Industry	Total	Percentage (%)
1	Agriculture/Animal Husbandry	15	11.5
2	Extraction	20	15.4
3	Heavy Manufacturing	31	23.8
4	Light Manufacturing	30	23.1

5	Service	34	26.2
		130	100



coefficients such as Cronbach's Alpha, Spearman Brown Coefficient, and Guttman Split-Half Coefficients were calculated using SPSS. The results are:

4.4 Reliability and Validity

To examine the reliability of the questionnaire and the responses, various

Table 4.4 Reliability Analysis

Reliability Analysis- Scale (Split)	Reliability Analysis- Scale (Alpha)
Reliability Coefficients: No. Of Items = 28 Alpha = 0.761	Reliability Coefficients: No. of items = 28 Correlation between forms = 0.547 Equal length spearman Brown = 0.707 Guttman Split-Half= 0.658 Unequal length Spearman brown = 0.707

A Cronbach's Alpha value of above 0.700 is considered acceptable. In the present case, the reliability coefficients: Cronbach's Alpha ($r=0.761$), Spearman Brown ($r = .707$) and Guttman Split-Half ($r = .658$) reveal that the test halves are correlated and the questionnaire has reliability. In order to assess content validity, the pilot study and opinion of faculty experts revealed that the questionnaire was exhaustive and possessed validity.

4. CONCLUSION AND RECOMMENDATIONS

The paper concludes that benefits of green entrepreneurship are enormous. Some of these benefits may include efficiency to own firm,

creation of community goodwill (the basis for amity relationship with the host communities, employees and other stakeholders), consistent open feedback loop (to receive and disseminate useful information from/to the general public) as some of many opportunities open to organizations with genuine green programs. Furthermore, we note that there are still some unresolved issues in the field of green entrepreneurship. Also, the paper highlighted a need for green entrepreneurship to maintain a cluster-like arrangement and knowledge database for effective dissemination of contemporary green information and clarification of entrepreneurship conceptual definitions. The study equally underscores

some knotty issues at the inter-disciplinary crossroads, need for green entrepreneurship policy inclusiveness, reason for and danger in green washing. Specifically, the paper provides a new lens at viewing green entrepreneurship in order to understand the role of entrepreneurship as a bridge to building a sustainable green economy in support of Demirel et al. (2019) call in a fascinating study on the behaviour of born green firms and already established firms. More so, the paper identifies the influence of globalization and modernization in business processes vis-à-vis unprecedented pressure being mounted on the business firms to embrace greening in order to realize sustainable development as some of the reasons businesses have to review their operating plans, policies, procedures and programs.

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