

VICENNIAL GROWTH OF ECOPRENEURSHIP AS A RESEARCH FIELD

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ABSTRACT-- *Interestingly, since last two decades ecopreneurship has received recognition from academicians and researchers, with few conceptual and empirical contributions and increasing publications. Ecopreneurship is an emerging field as a convergent of ecology and entrepreneurship that should be embedded within the economic activities to transcend its impact in environment conversation and commitment. Through using bibliometric database and techniques, this study analyses the academic literature on ecopreneurship and give a brief representation of the contributions in the field and highlights further need for its expansion as a research field. The literature analysis from the Web of Knowledge (Thomson Reuters) database—until December 2019—provides some surprising insights pertaining to various articles, journals who been the catalysts in the emergence of this field and highlighting its importance. As a result, out of a total 30 articles from Web of Science (WOS) since its inception (1998) to 2019 were retrieved. After applying various inclusion criteria on these we could finally identify the most significant articles. The analysis identifies acceptance for these neophyte publications and opportunities for further research.*

Keywords--*Ecopreneurship, Bibliometric Analysis, Web of Science, Entrepreneurship*

I. INTRODUCTION

Ecopreneurship can be understood as an important research field once associated with the background of increasing environmental problems in the world. All environmental problems are resultant of human activity, which to large directly or indirectly caused by human activities, which largely consist of economic activities (refer figure 1). According to the findings of World Health Organization (WHO), “air pollution is now the world’s largest single environmental health risk. That is because it is responsible for approximately 3.7 million deaths a year”. Sadly, we will witness garbage island of the size of India, Europe and Mexico combined together. Despite this,

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people like Jadav Payeng from India who planted 1360-acre forest, all by himself to restore woodland areas and founder of Future Forest, Kwon Byong Hyon, from South Korea who has led desert tree-planting efforts throughout Mongolia and China. Although environmental issues necessitate a shift towards “ecologically sustainable economy”, an adaptation in which management studies can contribute through ecopreneurship that will be acknowledged as the greatest contributions to environmental sustainability.

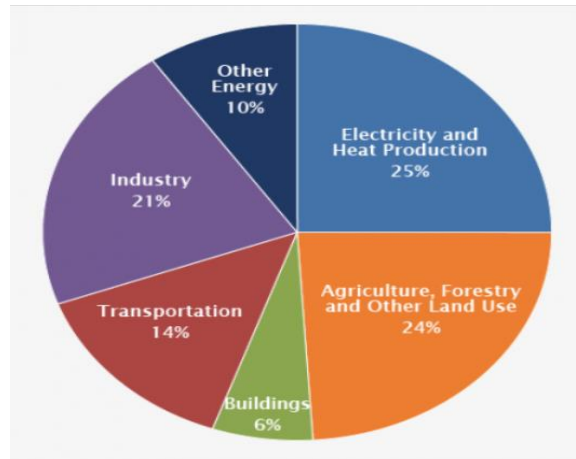


Figure 1: Sectorwise Global anthropogenic GHG emissions.
Source: IPCC (Synthesis Report) Climate Change 2007, pp. 36

Most world’s increasing environmental problems are a result of improper use of resources, ecological degradation and irresponsible business practices that make it necessary to adopt ecopreneurship: an environmentally friendly way of doing business. “The intersection of the fields of environmental sustainability and entrepreneurship defines ecopreneurship” (Kainrath, 2009).

The major three concepts which are compatible with both sustainability science and entrepreneurship are; eco-innovation, eco- commitment and eco- opportunity. Rennings (2000) defines eco-innovation as, “eco-innovations are all measures of relevant actors (firms, politicians, unions, associations, churches, private households) which; develop new ideas, behaviour, products and processes, apply or introduce them, and which contribute to a reduction of environmental burdens or ecologically specified sustainability targets.” “Eco- commitment has become more significant in the context of entrepreneurship because an entrepreneur certainly both has more power to determine strategy (guided by the eco- entrepreneurial vision), and more freedom to let personal commitments and values influence strategy and company policy” (Schaltegger, 2002). Similarly, Dean and McMullen (2005) states that eco-opportunities are identified from a list of environmentally relevant market failures, which lead to environmental degradation, and thus allow ecopreneurs to suggest remedies to the failures. By mitigating the environmental degradation, environmental eco-opportunities may be exploited.

II. LITERATURE REVIEW

Studies on Entrepreneurship

Mair and Marti (2006) acknowledged “social entrepreneurship as a field of scholarly investigation which provides a unique opportunity to challenge, question and rethink the concepts and assumptions from different fields of management and business research”. Social entrepreneurship can often be differentiated from other forms of entrepreneurship on the basis that it relatively gives higher priority in promoting social values and their development rather capturing economic value. Also, the study stated that assessing social performance and impact will be biggest challenges for practitioners and researchers in social entrepreneurship, where to quantify the performance and impact of social entrepreneurship seems to be a big problem.

Santhi and Kumar (2011) highlighted the challenges and opportunities for entrepreneurs in India. According to them, true entrepreneurs are innovative, resourceful, passionate and driven to succeed and believe in themselves. While there are numerous challenges that are faced by entrepreneurs like financial, technological and social, they are busy working towards their dream and frequently take risks in doing so. There are also ample opportunities for entrepreneurs but more focus should be put on enabling the entrepreneurs to provide a magical touch to an organization, whether in public or private or joint sector, in achieving “speed, flexibility, innovativeness, and a strong sense of self-determination”. The study also found its relevance in helping entrepreneurs to understand their personal needs and provides an insight into the meaning, qualities required for an entrepreneur, opportunities and challenges faced by them. It was highlighted that entrepreneurship acts as a bridge between innovative ideas and placing them in the market in form of products or services along with adding to national income by creating jobs.

The study by Swetha and Rao (2013) focused on elucidating the history of entrepreneurs and its development stages in India. The study also highlighted the role of women entrepreneurs and the future of entrepreneurship in India. The data was collected from secondary sources and concluded: “Indian entrepreneurs are more about overcoming barriers, obstacles, inspiring & surmount in their fields”. An entrepreneur brings in an overall change through innovation for the maximum social good and technology is the driving force for a brighter future of entrepreneurship. Moreover, Indian women entrepreneurs have significantly contributed to the industrial development of India. Women are definitely good citizens but they also offer good organizations to the nation.

Carlsson *et al.* (2013) proposed an analytical framework that organizes our thinking about entrepreneurship domain. The study did a chronological review to understand its evolution and the present status as an academic field. The study revealed that “entrepreneurship has flourished in recent years and is evolving rapidly”. Entrepreneurship has developed in many subfields within several disciplines primarily “economics, management/business administration, sociology, psychology, economics, marketing, finance, and geography representing a variety of research traditions, perspectives, and methods”. With this the inclusion of areas that highlight the need for dynamic theory and frameworks of entrepreneurship that relates entrepreneurial activity to “ecology, economic growth and human welfare”.

Studies on Ecopreneurship

Pastakia (1998) identified eco-conscious social entrepreneurs he named, ecological entrepreneurs or ecopreneurs. The study-highlighted innovative techniques developed by framers themselves in states of India and ways to overcome barriers while undergoing this process.

Schaper (2002) stated that more attention needs to be paid to the role that entrepreneurs can play in the move to a more sustainable economic and commercial system. The article also highlighted the importance of eco-entrepreneurship, “providing new opportunities for the nimble first movers who identify and exploit such opportunities” to become a most powerful force in shifting current business scenario into sustainable business paradigm. He believed that ecopreneurship is “an exciting area to be involved in”. According to the author, entrepreneurship is “about harnessing the enthusiasm, initiative and creative energy of individuals.” Moreover, when this dynamism is applied to the businesses that are adopting sustainable ways, then the outcomes could possibly be more fascinating and rewarding.

Dixon and Clifford (2007) identified a strong linkage between environmentalism and entrepreneurialism. The case study adopted in this research contributed a business model that offers the economic sustainability of the enterprises. The findings of the case study conducted on Green Works, a UK based firm resulted in a model comprising of the relationship between the corporates, community and the government.

Ivanko (2008) in his series of blogs on ecopreneurship discusses about ecotourism as a viable branch of ecopreneurship and defines it as, “travel that sustains, enhances or restores diverse ecological systems, preserves the economic and social well-being of the local and global community, and fosters a greater understanding on the part of the traveller of nature, culture or the community visited”. It will be righteous to state that it’s the “triple bottom line of profits, planet and people” applied to the travel industry. He illustrated the need for adoption of ‘ecotravel’ as one of the ways of sustainable business as gratitude towards earth. This is possible by changing study methodology of ecotourism and adopt approaches that influence us to preserve, protect and restore the planet through travel.

Pathak (2012) adopted a descriptive study and suggested the need for efficient support originations to monitor activities of small enterprises. “Prediction of future demand, the introduction of modern technologies, cost control and business expansion”, were discussed as major areas, where entrepreneurs seek regular support. Well according to the study, major problem is that farming is considered as a tradition rather than an enterprise and thus the need to promote successful entrepreneurship in agriculture will also help in overall rural development.

In addition to this McEwen (2013) has identified ecopreneurship as the biggest and most important solution to environmental problems. The study even focused on harnessing the potential of ecologically conscious and environmentally aware entrepreneurs, called ecopreneurs, that adopt innovative ideas and technologies to overcome environmental problems. The study also highlighted the importance of entrepreneurship education and learning for promoting ecopreneurial behavior. This behavior can be achieved with the help of higher education in field of entrepreneurship by presenting an “ecopreneurship course”.

Toth and Imreh (2014) who highlighted the importance of entrepreneurship education support the above study. They mentioned in their research that creation and shaping entrepreneurial attitude is not an easy task. Facilitation

of ecopreneurs or “green entrepreneurs” can help in identifying tools and remedies for many environmental and social problems by offering sustainable products and services. The study reviewed the possibilities of environment and entrepreneurship education and therefore found that “the subject of the sustainable enterprise in a narrow sense is a largely innovative corporate start-up that makes environmentally and/or socially useful products and services suitable to conquer a larger segment of the market”. The innovative ecopreneurs create sustainable businesses and education on it can help eventually in shaping the entrepreneurship attitude among young aspirants in by imparting knowledge and by improving entrepreneurial skills just by shifting the approach and changing the content.

While focusing on service industries like tourism Rout and Mohanty (2015) tried to highlight the role of women in tourism development and most importantly concluded that tourism industry is playing a crucial role in women’s empowerment. Though tourism provides enough direct employment opportunities, women have identified many economic activities that are indirectly tourism-related like tea stalls, travels, handlooms and handicrafts and other SME’s. More tourists bring more employment opportunities in this industry, which reflect in the possibility of empowering women even through low investments. Tourism is a service-oriented, labour-intensive and multidimensional sector which is linked with many other sectors of the economy like transportation, hotels, restaurants, travels and tour businesses, seasonal home, etc. Ecological practices adopted in this industry may have a greater impact and therefore, there is wide scope for ecopreneurial practices in tourism industry. In addition, Issak (2016) context of magnifying ecopreneurship in economic terms and associating it with unemployment crisis believing that it is like killing two sparrows with one arrow.

An extensive literature review by Santini (2017) highlighted research outputs and emerging trends in ecopreneurship. He concluded that ecopreneurship is gradually gaining the attention of many scholars but still has few empirical contributions to its credit. The major reason could be difficulty in drawing the boundaries of ecopreneurship. Thus, empirical researches can play a crucial role in embodying progress towards diffusing the roots of the theoretical approach of ecopreneurship. To improve this research field substantially, it is important to implement quantitative and qualitative research based on available models or proposing new models, further expanding case studies at multiple facets and empirical investigations on a larger scale.

Highlighting the importance of sustainable economies Saleem et al. (2018) conducted an empirical study to examine the intentions of young business minds to adopt ecopreneurship. Results inclined towards the existence of ecopreneurship attitude as a result of communal or humanitarian grounds making them subjective drivers.

III. MATERIALS AND METHODS

In order to outline the quality of published articles and journals, bibliometric studies quantitatively assess the bibliographic indicators (Araujo, 2007). “The whole field of bibliometric includes quantitative aspects and models of scientific communication, storage, dissemination, and data retrieval” (Kobashi and Santos, 2006). Hence, bibliometric studies are significant in measuring impact of scientific research articles in terms of number of citations (Lazzarotti et al. 2011). It helps to ascertain the importance of the knowledge area and consider past contributions/trends and future possibilities/potentials. To achieve the purpose of this review article, the following questions were responded for understanding the growth of ecopreneurship as a research field:

- How the research theme evolved chronologically (Publications over time)?
- Which journals include most publications on the topic (highlighting the no. articles published in each journal)?
- What are the most contributing regions to the topic (no. of contributions country-wise)?

Step 1: Searching the Literature

The decision to retrieve articles from WOS was taken considering that it is one of the most comprehensive and world-recognized scientific database available online that comprises of not just academic journals but also book reviews, magazines and newsletters. The 30 articles considered for research from the last two decades (vicennium) i.e. 1998 to 2018 were peer-reviewed. The nine major categories of WOS resulted in the identification of the 27 journal articles, one book and two book reviews. The categories were: ‘business’, ‘management’, ‘environment studies’, ‘environment sciences’, ‘economics’, ‘engineering environmental’, ‘green sustainable science technology’, ‘planning development’, ‘sociology’.

Only, articles published in academic or other journals were included. The inclusion criteria for selection of articles was: (1) articles from peer reviewed journals; (2) language (English); (3) every single article published between 1998 (when the first article was published) and 2019. From these procedures, finally, we were able to find 27 publications until 1 January 2020 (the date when the literature was retrieved) out of total 30 articles (including a book and two book reviews) on ecopreneurship.

Also, many articles highlighting the role of entrepreneurship and other articles from different databases were included in the literature review to justify the importance of the study.

Step 2: Analyzing the Literature

Out of 30 articles, that consisted of one book and two book reviews we could derive a central theme of ecopreneurship and its thesaurus consisting of green entrepreneurship, green business, environmental business and environment orientations. The most number of articles published in the last decade had comparatively more citation count because of the fact that the ecopreneurship is eventually setting it up as a new paradigm for research and development.

IV. RESULTS

After searching the WOS database, in total 30 articles on ecopreneurship were retrieved and considered for the study. 51 authors of various nationalities contributed to 18 journals of 10 world-renowned publishers. These authors were associated with 48 institutions across the globe and belong to 19 countries, have immensely helped in recognising ecopreneurship as a research area. Following tables and graphs illustrate the general results (bibliographic data) reflected out of this research.



Figure2: No. of articles published per year

Evidently, there is eventual growth in the number of articles from the last decade. The major reason is the concern of academicians and governments in environment protection that again has triggered the research institutes and scientists to propose solutions to environmental concerns. These solutions are presented in the form of either theoretical papers highlighting the role of each business environment agent or case studies highlighting some substantial practices that can be adopted by various industrial sectors.

Environment literacy has increased over the years and people are turning more vigilant towards their health, a greater credit to technology access that has made it possible. This also is playing a crucial role in invoking environment concerns among people and addressing them in form of multidisciplinary approach of problem-solving, different from traditional approaches, bringing together entrepreneurship and ecology as an emerging field of management sciences.

Table 1: No. of contributions country wise

Countries	No. of Publications
Germany	8
England	4
USA	4
Austria	3
Denmark	3
Finland	3
Italy	2
New Zealand	2
Sweden	2
France	1
Iran	1
Pakistan	1
Poland	1
Greece	1
Netherlands	1
Portugal	1

Russia	1
India	1
North Ireland	1

Interestingly, most of the contributions are from the region of Europe and then few from Asia. This means that there is a huge scope of research in this field especially quantitative and comparative study across continents. It also opens up the debate of understanding of the adoption of this concept in developed and developing nations.

Table 2: Total journals and no. of publications in each journal

Journals	Publisher	Articles Published
SMALL ENTERPRISE RESEARCH	Taylor & Francis	5
INTERNATIONAL JOURNAL OF ENTREPRENEURIAL VENTURING	Inderscience	4
BUSINESS STRATEGY AND THE ENVIRONMENT	Wiley Online Library	3
JOURNAL OF CLEANER PRODUCTION	Elsevier	2
JOURNAL OF ORGANIZATIONAL CHANGE MANAGEMENT	Emerald Insight	2
SOCIETY & NATURAL RESOURCES	Taylor & Francis	2
ADMINISTRATIVE SCIENCES	MDPI	1
CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL MANAGEMENT	Wiley Online Library	1
ECONOMIC AND SOCIAL CHANGES; FACTS TRENDS FORECAST	VoIRC RAS	1
ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES	Entrepreneurship and Sustainability Center	1
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH	Springer	1

INTERNATIONAL JOURNAL OF GENDER AND ENTREPRENEURSHIP	Emerald Insight	1
JOURNAL OF BUSINESS VENTURING	Elsevier	1
LAND USE POLICY	Elsevier	1
MANAGEMENT OF ENVIRONMENTAL QUALITY	Emerald Insight	1
PROBLEMY EKOROZWOJU	European Academy of Science and Arts, Salzburg	1
REVIEW OF MANAGERIAL SCIENCE	Springer	1
SUSTAINABILITY	MDPI	1

The above table indicates that maximum articles are published by Taylor and Francis. It publishes quality peer-reviewed and presents practitioner, analytical and theoretical insights. Where the major purpose of Small Enterprise Research is advancing in the field of research, education, policy and practice in the field of small enterprise and entrepreneurship, on other hand Society and Natural Resources publishes pioneering social science research that advances understanding of the interaction between society and natural resources.

V. DISCUSSION

It is quite evident that there is a huge scope of research in ecopreneurship. It is not just a concept but authors find it an initiative towards responsible business. Industries contribute majorly towards environmental damage. While large business is regulated under various government laws and rules, we stay ignorant of the pollution generated by medium and small business. Ecopreneurship should be added in the genesis of the young minds right from the inception of business making it an integral part of all economic activities. Also constructing a baseline data about ecopreneurial orientation of first-generation entrepreneurs can help in addressing the ecological issues and focusing on environmental sustainability through responsible businesses. Introduction as an ecopreneurship course that may be integrated with higher education for developing ecopreneurial behaviour among future entrepreneurs can be deemed as a next paradigm shift. Ecopreneurship as a research field can contribute to the formulation of policies that ensure sustainable and environmentally responsible business offering a better tomorrow for the coming generations.

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