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Changing Business Environment and Young Ecopreneurs: Interpretative Structural Modeling

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ABSTRACT

Sustainability entrepreneurship can offer a win-win scenario for the business and the environment and also enable young ecopreneurs to fulfill their goals. The purpose of this paper is to understand the correlation between young ecopreneurs and changing business environment leading to sustainability. To address this gap, this paper develops a theoretical framework and the factors identified are grounded in literature review.
Literature Review is done for identifying the factors through extensive literature review and then, a qualitative and interpretive tool, ISM was applied to the study.
Our study is unique and innovative as we have focused on exploring the different effects of the relationship between young ecopreneurs and the changing business environment leading to sustainability. The framework proposed in this paper can be utilized to develop business strategies in changing business environment. In the Indian context, this is a good study done for targeting young ecopreneurs .
Sustainability and ecopreneurship emerged as the most important factor. An important fact that evolved is that almost all the factors have interdependence and were in coherence.
The research limits itself to a conceptual understanding of young ecopreneurs in the current trends of business; however it does not show the results at a microscopic level. It is inclusive of factors at Macro Level. Outcome is based on intensed literature review.
The present study needs to be further investigated under the light of market scope and issues. The model developed can be empirically validated by utilizing the conceptual framework.

Keywords: business, environment, entrepreneurship, young ecopreneurs etc.

INTRODUCTION:

Globally, the indications are to assess the global problems, youth needs to be connected to the environment. Strategies for global sustainability and developing the green economy must talk on current economic models driving today's unsustainable forms of globalization (Henderson, 2007). Young entrepreneur's engagement in business in general is critical to positive youth development (Gambone, Yu, Sipe, & Lacoe, 2004)
Ecopreneurship is a mix of two words "ecological" and "entrepreneurship". Thus it is entrepreneurship through environmental scanning. Environmentally superior production processes, products and services can have a positive environmental influence on company's. Ecopreneurship focuses towards more environmental protection and progress. Young ecopreneurs can achieve business success through environmental solutions for the mass market. Sustainability has been established as an advanced and a world recognised term. It has been

defined as an perpetual process. (Shediac-Rizkallah & Bone, 1998) but there are no emphasis on measuring the extent of continuation (Yin,1994) and typology of the sub system for the organisation. (Katz & Kahn, 1978).As per United Nations Environment Programme (UNEP) out of the total world's population, youth comprise of nearly 30%. The involvement of youth in environment related policies and development decision-making, implementation of programs is critical to the long-term success of nations

The dynamicity of young ecopreneurs in changing business environment is necessary to achieve sustainable goals of a community (Berardi, 2013)

REVIEW OF LITERATURE:

Inclusion of social, cultural, ecological and environmental factors is sustainable development. (Huovila, 1998). Formulation of policies and strategies is a challenge to respond to sustainability is an important agendas of the world's leading nations (Olsen, 2007).

Sustainability needs to pay attention to the present and future generation as they are the wealth of the nation. (Sen, 2013); (Kordestani, Peighambari, & Foster, 2015) have summarized the area of research towards developing sustainability. Manners in 2014 proposed sustainability economics as compliant to society. Concept of sustainability to different stakeholders is inevitable in the current business environment. (Felix et al ,2015) for entrepreneurial value creation (Cohen, Smith, & Mitchell, 2008).Whereby a community becomes a centre for entrepreneurial innovations. (Cohen, 2006)

The number of young ecopreneurs is increasing due to a growing concern towards a more sustainable society. (Choi & Gray, 2008) Focus of environmental business management is on greener firms. Opting for environmentally responsible business practices will consequently open up a wide range of opportunities for young entrepreneurs. The move to a sustainable business frame work provides numerous niches which enterprising individuals can identify. This includes the innovation of new products and services, enhancing the efficiency of existing firms, new methods of marketing, re structuring existing business models and practices.

(Hall, Daneke, & Lenox, 2010) stated that entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are being held up as a panacea for many social and environmental concerns Ecopreneurship is not only inevitable because it provides new opportunities for the young ecopreneurs who identify and explore such opportunities; it also has the probability to be a major force in the overall transition to a more sustainable business paradigm. Young ecopreneurs prioritise the environment over profits whenever practical, and are conscious of doing the best they can to lessen their impact on the environment.

Entrepreneurship skills of young ecopreneurs are different from those of older people. The key areas of differentiation is inclusive of accumulation of resources and skills; psychological, and reaction to influences from the environment, culture and norms. There exists a lynchpin between youth entrepreneurialism and sustainability. Green-Works business model is utilised for attaining sustainability of the organizational, environmental and social objectives (Dixon, 2007). Ecopreneurship is seen as a positive form of business behavior assuring to sustainability (Isaak, 2002). Ecopreneurship is considered as important because eco-innovations made by the youth will be the future competitive advantage of countries.

To enjoy the advantage it is a must for young ecopreneurs to come up with new and innovative environmental technologies, services and processes which can be an important sources of competitive advantage. Economic system should promote long-term sustainability considering ecological aspects of the growth and sustainable development (Klímová, 2011).Young ecopreneurs can find new innovative technologies to protect the environment and to ensure sustainability, i.e., that there are enough resources to fill the needs of both the current population and future generations (Minola, Criaco, & Cassia, 2014); (Volery, 2002). Young ecopreneur's attitude and perception on information technology innovation adoption is very significant.

In a market system, sustainable development requires sustainability innovation and young ecopreneurs who can help to achieve environmental or social goals. Contribution towards solving the current environmental problems and for creation of economic value.

(Thompson, Kiefer, & York, 2011) examined the differences and similarities between social, sustainable, and environmental entrepreneurship. Young ecopreneurs and business opportunities can be the Earth's savior (Berle, 2005). India as an economy must come up with incentives and rewards for environmental reporting in business reports. Fortis (2002). There exists significant difference between current environmental legislations and business approach towards environmental issues.

(Kirkwood & Walton, 2014), in their article analysed young ecopreneurs with respect to the way they manage their businesses whilst maintaining their commitment to the environment.

The realm of environmental entrepreneurship offers a rich and fascinating view into how individual beliefs, economic incentives, and broader societal forces can interact to bring about ecologically sustainable practices. (Lenox & York, 2011) Young ecopreneurs are therefore able to incrementally improve the environment within their own companies, and with their products and services they have the ability to educate a wide audience on the benefits of protecting our environment.

RESEARCH METHODOLOGY:

The study is constructed based on secondary data collected from different sources. It includes extensive literature review from Ebsco, Emerald, Scopus, Jstor, Thomson Reuters and Google Scholar. Information is also collected from secondary data sources such as books, articles that aid the study. In this study, the researchers have opted for extensive literature review. To establish the relation among the various variables isometric modeling technique(ISM) proposed by Warfield in 1973 is used. This model is further analyzed using MIC MAC analysis.

IDENTIFICATION OF VARIABLES:

The preliminary five variables based on Systematic Literature Review and are grounded in literature. These are the variables that have occurred multiple times in the review of literature and hence hold considerable importance in this area of research. Following are the variables identified based on review of literature.

Nomenclature	Variable
V1	Innovation
V2	Young ecopreneurs
V3	Environmental awareness
V4	Business Strategies
V5	Sustainability

ISM Modeling:

The term ‘interpretive structural modeling’ indicates the contextual relationship among a set of elements .ISM method gives researchers more flexibility than many conventional quantitative modeling approaches. It offers a qualitative modeling language for structuring complexity and thinking on an issue by building an agreed structural model.

Structural self-interaction matrix:

The first step was to establish a contextual relation between the five factors. After deriving the contextual relation, SSIM (see Table 1) was constructed where one out of the following four symbols was used to denote the nature of the relationship between factors I and j (where I denotes a factor in the row of the matrix and j denotes a factor in the column of the matrix): . V – For relation from i to j only; A – for relation from j to i only; . X – For relation both from i to j and j to i; and. O – For no relation between factors i and j.
Applying the concept to the five variables, the SSIM is as follows:

Table 1: Structural Self Interaction Matrix

i ↓ j →	V5	V4	V3	V2	V1
V1	X	A	X	X	
V2	V	X	X		
V3	V	X			
V4	X				
V5					

Reachability Matrix:

SSIM developed from contextual relationships was then converted into binary matrices called initial reachability matrices as shown in table 2. The reachability matrix was developed by replacing V, A, X and O by a combination of 1s and 0s as per the rules.
Based on the reachability matrix the driving and dependence power is further derived.

Table 2: Reachability Matrix

i J → / ↓	V1	V2	V3	V4	V5	Driving Variables
V1	1	1	1	0	1	**4**
V2	1	1	1	1	1	**5**
V3	1	1	1	1	1	**5**
V4	1	1	1	1	1	**5**
V5	1	0	0	1	1	**3**
Dependent Variable	**5**	**4**	**4**	**4**	**5**	

Level Partitions:
Based on the reachability matrix, the antecedent set and reachability set is determined. The intersection of the 2 sets is then determined which helps to identify the different levels of hierarchy.

Table 3: Level Partitioning Level 1

i J → / ↓	Reachability Set	Antecedent Set	RS∩AS	Level
V1	1,2,3,5	1,2,3,4,5	1,2,3,5	
V2	1,2,3,4,5	1,2,3,4	1,2,3,4	**Level 1**
V3	1,2,3,4,5	1,2,3,4	1,2,3,4	**Level 1**
V4	1,2,3,4,5	2,3,4,5	2,3,4,5	
V5	1,4,5	1,2,3,4,5	1,4,5	

Thus from table 3, it is clear that variables 2 and 3 form level 1 of the model i.e. Young ecopreneurs (V2) and Environmental Awareness (V3) form level 1 of the model.

Table 4: level partitioning level 2

i J → / ↓	Reachability Set	Antecedent Set	RS∩AS	Level
V1	1,5	1,4,5	1,5	Level 3
V4	1,4,5	4,5	4,5	**Level 3**
V5	1,4,5	1,4,5	1,4,5	**Level 2**

Thus from table 4, it is clear that variables 5 forms level 2 of the model i.e. Sustainability (V5) and Innovation (V1), Business Strategies (V4) form level 3 of the model.

Table 5: Level wise variables

Level	Nomenclature	Variable
1	V2	Young Ecopreneurs
1	V3	Environmental Awareness
2	V5	Sustainability
3	V1	Innovation
3	V4	Business Strategies

From the level portioning above, table 5 depicts the levels of the variables based on hierarchy.

Building the Isometric Model:
After partitioning the levels, relationships between various factors are depicted by drawing a node for each variable and connecting those nodes by arrows as per the direction of relationship.

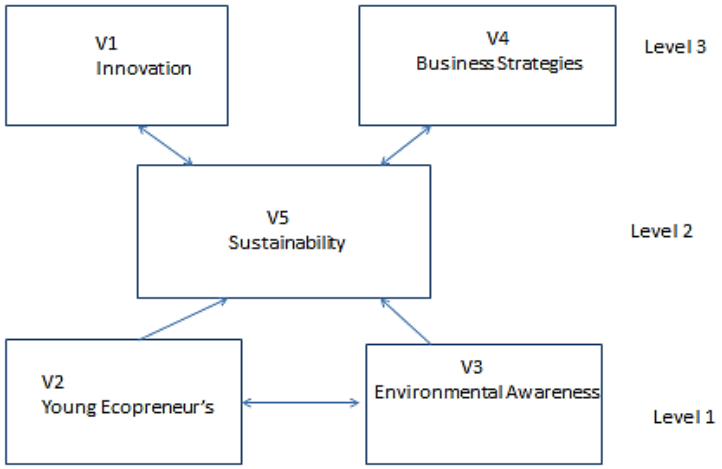

Fig – 2 ISM Model

Figure 2 depicts the mutual influence and inters relation between the factors identified through literature review. The influence of environmental awareness among young ecopreneurs is the major factor for young ecopreneurs to contribute towards sustainability. These factors result in innovation and new business strategies. The five factors are divided into three levels. According to the model, young ecopreneurs and environmental awareness are the most important factors. It influences young ecopreneurs contribution in sustainability.

MICMAC ANALYSIS:

MICMAC is an abbreviation of Matrice d'Impacts croises-multiplication appliqué an classment (Cross-Impact Matrix Multiplication to Classification). It is used to examine the Driving Power and Dependence Power of the variables; based on which they have been classified into four categories viz. Autonomous, Linkage, Dependent and Driving variables as shown in table 6.

Table 6: MICMAC Matrix

Factors	Variables	Driving Variables	Dependent Variables
Innovation	V1	4	5
Young Ecopreneur's	V2	5	4
Environmental Awareness	V3	5	4
Business Strategies	V4	5	4
Sustainability	V5	3	5

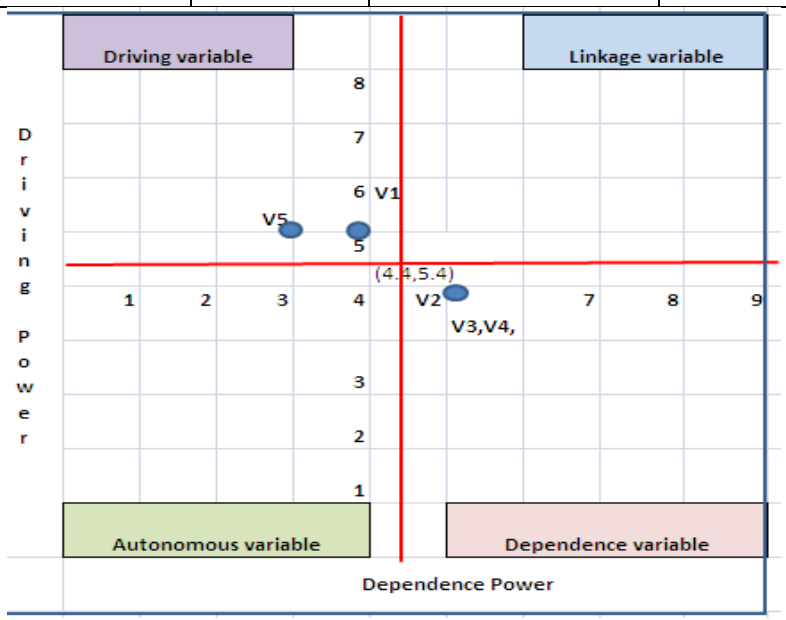

Fig 3 : Cluster of variables

As shown in figure 3, the drivers are Innovation and Sustainability. Out of these, sustainability has the highest driving power and should be given the top priority. There are no linkage and autonomous factors implying that all the factors are important and an integral part of the system. Young ecopreneurs, environmental awareness and business strategies are the dependent factors.

LIMITATIONS:

The identified factors may not cover all the sides of young ecopreneurs at the microscopic level. The present study clearly highlights that the young ecopreneurs have realized the significance of sustainability. The present study has attempted to identify the enablers of young ecopreneurs and their relationship with sustainability.

Further research directions:

Our research can further be enhanced using different quantitative methods and further the model can be empirically validated by using Structural Equation Modeling.The present study has not included all constructs measuring role of Young ecopreneurs. In future, it may be fruitful to include more constructs. The present study can also be extended to different segments of industry .

REFERENCES:

Berardi, U. (2013). Sustainability assessment of urban communities through rating systems. *Environment, Development and Sustainability, 15*(6), 1573–1591.

Berle, G. (2005). *The Green Entrepreneur: Business Opportunities That Can Save the Earth and Make You Money.* Pennsylvania: Blue Ridge Summit.

Choi, D. Y., & Gray, E. R. (2008). Socially responsible entrepreneurs: What do they do to create and build their companies? *Business Horizons, 51*(4), 341-352.

Cohen, B. (2006). Sustainable valley entrepreneurial ecosystems. *Business Strategy and the Environment, 15*(1), 1-14.

Cohen, B., Smith, B., & Mitchell, R. (2008). Toward a sustainable conceptualization of dependent variables in entrepreneurship research. *Business Strategy and the Environment, 17*(2), 107-119.

Dixon, S. (2007). Ecopreneurship – a new approach to managing the triple bottom line. *Journal of Organizational Change Management*, 326–345 .

Gambone, M., Yu, H., Sipe, C., & Lacoe, J. (2004). A Comparative Analysis of Community Youth Development Strategies. doi:10.1.1.188.8882

Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing, 25*(5), 439-448.

Henderson, K. (2007). Quality of life and leisure education: implications for tourism economies. *World Leisure Journal, 49*(2), 88–93.

Huovila, P. (1998). Sustainable construction in Finland in 2010, Report 2 in CIB. *SustainableDevelopment and the Future of Construction. A Comparison of Visions from VariousCountries*, 225.

Isaak, R. (2002). *The making of the ecopreneur', Greener Management International*. Retrieved November 2014, from http://www.greenprof.org/wp-content/uploads/2010/06/The-Making-of-the-Ecopreneur.pdf

Katz, D., & Kahn, R. (1978). Organizations and the System Concept. *Classics of Organization Theory,* , 161–172.

Kirkwood, J., & Walton, S. (2014). How green is green? Ecopreneurs balancing environmental concerns and business goals. *Australasian Journal of Environmental Management, 21*(1), 37-51.

Klímová, V. (2011). *Eco-Innovation as a Result Companies Innovation Activities*. Retrieved December 2014, from http://www.g-casa.com/conferences/zagreb/papers/Klimova_Zitek.pdf

Kordestani, A., Peighambari, K., & Foster, T. (2015). Emerging trends in sustainability research: a look back as we begin to look forward. *International Journal of Environment and Sustainable Development*, 154–169. doi:10.1504/IJESD.2015.068602

Lenox, M., & York, J. G. (2011). Environmental entrepreneurship. . *The Oxford handbook of business and natural environment*, 70-92.

Minola, T., Criaco, G., & Cassia, L. (2014). Are youth really different? New beliefs for old practices in entrepreneurship. *International Journal of Entrepreneurship and Innovation Management, 2*(18), 233–259.

Olsen, K. (2007). The clean development mechanism's contribution to sustainable development: a review of the

literature. *Climatic Change, 84*(1), 59–73.

Sen, A. (2013). The ends and means of sustainability. *Journal of Human Development and Capabilities, 14*(1), 6–20.

Shediac-Rizkallah, M., & Bone, L. (1998). Planning for the sustainability of community-based health programs: conceptual frameworks and future directions for research, practice and policy. *Health Education Research, 13*(1), 87–108. doi:10.1093/her/13.1.87

Thompson, N., Kiefer, K., & York, J. G. (2011). Distinctions not dichotomies: exploring social, sustainable, and environmental entrepreneurship. *Social and sustainable entrepreneurship* , 201-229.

Volery, T. (2002). An entrepreneur commercialises conservation. *Greener Management International*, 109–119. Retrieved November 2014, from http://dx.doi.org/10.9774/GLEAF.3062.2002.su.00011
