OPEN INNOVATION PRACTICES IN WOMEN OWNED HANDICRAFT MANUFACTURING SMEs: (A CASE FROM CENTRAL PROVINCE, SRI LANKA)

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ABSTRACT

Innovations depict clear-cut differences between entrepreneurial ventures and the normal business ventures as a fore-walker of driving a business venture in to growth orientation which is considered as the heart of entrepreneurial orientation. Open innovation practices are very popular among large MNCs though the adaptability of the practice has not been still researched and illustrated in the perspective of small and medium businesses. The study aims at observing the open innovation practices among small and medium women business owned ventures (in the field of handicrafts manufacturing) in Central Province in Sri Lanka. The study based on the primary data gathered from women business owners in the Central Province within the industry and the data were collected through a postal survey from a sample of 50 women business owners which represents 30% of the total population of handicrafts manufacturing industry in the province and descriptive analysis method was adapted to analyze the data The results show that there is a positive trend within women business owners in the handicrafts industry to adapt open innovation practices in ensuring their survival and the growth of the businesses that automatically pushes them towards the entrepreneurial orientation. Moreover, the study findings reveals of a significant difference in the adaption to open innovation practices within medium and small ventures. Study findings further illustrate that the lack of knowledge on innovation management practices, lack of capabilities for networking and the mistrust they have towards venture growth play as main barriers those prevent them in occupying innovation management practices within the ventures.

Keywords
Open Innovation Practices, Entrepreneurial Orientation, Women Business Owners,

1. RESEARCH BACKGROUND

Much evidence identifies innovation as the main driver for companies to prosper, grow and sustain a high profitability (e.g. Drucker, 1988)[i]. Innovations can be introduced as the main driver in converting a business venture towards entrepreneurial orientation. In the organizational context, innovation may be linked to performance and growth through improvements in efficiency, productivity, quality, competitive positioning, market share, etc. In a conceptual way, the fundamental functions of creating and maintaining relations between components in an innovation system could be as follows according to Baker, W. E. and Sinkula, J. M. (2001)[ii].

- To create new knowledge or new ideas.
- To enhance the search and diffusion of knowledge and ideas.
- To create human capital.
- To supply resources, such as capital, competencies, raw materials etc.
- To test and implement new products or services.
- To ensure synergy with other economic activities.
- To control competition.
- To facilitate the formation of markets.
- To create new organizations.
- To create and legitimize new institutions.
- To legitimize and promote the system vis-à-vis the environment.
- To wipe out obsolete organizations and institutions.

The relative importance of the discipline of managing innovations has led the business organizations to revise their traditional strategies by making innovation management as a core part of their business strategies. In this sense, innovations can be introduced as main drivers of business success those enable businesses to craft leading competitive edges in the market places (Bellon B. 1996)[iii].

The ever changing business environment has urged the businesses to keep continuous innovations by focusing on further sharpening of the strategies on doing more innovations. The situation has caused so many differences in the ways of managing innovations. Earlier, companies invested millions of dollars on R&D as a mode of nurturing innovations and by now, the trend has been changed towards an era of purposeful corporate strategies through which investments in intramural R&D are supplemented or even substituted (Mariussen 2007)[iv] by extensive use of external knowledge sourcing and external paths to commercialization. Hence the approach of open innovations emphasizes that internal R&D no longer is the invaluable strategic asset that it used to be due to a fundamental shift in how companies generate new ideas and brings them to the market (Chesbrough, 2003)[v]. Open innovation is based on the following principles (Chesbrough, 2006)

- Not all smart people work in-house – need to tap into external knowledge
- External R&D can generate significant value to us Research does not need to originate from our internal work to be profitable for us
- A strong business model is more important than first to market
- Internal as well as external ideas are essential to win
- We can capitalize on our own IP and we should buy others' intellectual properties when needed

The illustrations of West and J. Callagher, S. (2006)[vi] argue that the basic assumptions of the strategies regarding managing innovations have been changed with the new paradigm shift in managing innovations from closed model of innovations to the open model of innovations. Table 1 illustrates the basic differences of the assumptions regarding the old model and the new model of doing innovations. Works of Shane S. (2003)[vii] have further emphasized the particulars quite similar to the works of West and J. Callagher, S.

Table 1: Closed innovation approach vs. open innovation approach

Closed Innovation	Open Innovation
The smart people in our field work for us	Not all the smart people work for us. We need to work with smart people inside and outside the company
To profit from R&D, we must discover it, develop it, and ship it ourselves	External R&D can create significant value; internal R&D is needed to claim some portion of that value
The company that gets an innovation to market first will win	Building a better business model is better than getting to market first
If we create the most and best ideas in the industry, we will win	If we make the best use of internal and external ideas, we will win
We should control our intellectual properties, so that our competitors don't profit from our ideas	We should profit from others' use of our IP, and we should leverage others' IP whenever it advances our own business model

According to Hamel, G. (2002)[viii], open innovations are too called 360 view of doing innovations as the approach is enriched with the contribution of all stakeholders regarding the products or services as well as the approach make direct and sharp influence on all types of innovations like Products, packaging, production, marketing, distribution, commercial innovation, cost innovation etc

Though open innovation practices are not new in the perspective large and multi national companies, studies those have been done regarding open innovation practices from the side of small and medium firms are not much popular. Although Chesbrough et al. (2006)[ix] argue that large firms could differ from small firms in their adoption of open innovation, only a small number of studies on open innovation within smaller firms exist.So, it is important to search whether the small business are practicing the open innovation practices those are new practices in the business world.

The small scale industries - including handicrafts can play a major role in the development of the economy of both developed and the developing countries equally. The 90-95% of the total industrial products of the world is produced in small workshops run by less than 100 people. For instance, Japan, which is at the peak of the economic development, has considered 84% of the

it's industries as small and medium scale industries. (Scarborough, N.M. and Zinmerer, T.W. 2005)[x].

Handicraft industry has become a main industry of world nations specially with rich culture and heritage. As the industry is highly labor intensive industry, countries like India and China are reaping the best profit opportunities from the industry. Especially these countries have crafted a significant positions in the world handicraft market and also in these countries handicrafts are as high as the mechanized products in quality and volume, and the most important thing is the industry has been a main industry that provides them foreign earnings.

Handicraft industry is a famous industry in Sri Lanka though it is not developed up to level like handicraft industry in India and China. But greater potentials can be observed in improving the industry to a higher degree with the development of industries like tourism and also the country is having a rich country as well as the labor cost is relatively low in Sri Lanka.

2. OBJECTIVES

As illustrated above, researchers have done intensive efforts on exploring open innovative practices within ventures in nurturing different types of innovations within them as an approach of converting them towards entrepreneurial orientation. But all most all the efforts have been focused on applying the open innovation models in the perspective of large scale businesses. The core of this study is to explore the degree of adapting of open innovation practices in the perspective of SME sector by giving special reference to handicraft industry in Central Province, Sri Lanka. The objectives of the study can be illustrated as follows.

1. To study the open innovation practices adapted by women business owners within SMEs in central province (in handicraft industry)

   The handicraft industry is a very different industry from other industries. It is highly labor intensive and the creativity is at the heart of the sector. This industry is localized segment of the domestic and international market. In Sri Lanka, the production of handicrafts is done on both large and small scale. In Sri Lankan perspective, most of the handicraft producers are falling in to the category of small and medium enterprise category. These inherent characteristics of the industry require a higher level of innovativeness and proper adaptation of business practices those minimize the cost and maximize the profit of the industrialists. As a mode of nurturing a higher degree of innovativeness within firms, relying and adapting new innovative practices like open innovation practices are very important in building a higher level of innovativeness and creativity that leads for enhancing the profitable opportunities for the firms.

2. To evaluate the most famous modes used by the ventures use for promoting open innovation practices within the ventures

The study was aimed at assessing the degree of adapting open innovations through five components namely customer involvement, employee involvement, inter organizational networking, participation in other firms and outsourcing R&D those are creating a greater degree of openness for a firm to fertilize the innovative ideas within the venture.

3. To diagnose the trends that the SMEs are having in adapting open innovation practices within the ventures

   Both small and medium sized firms were surveyed in the study. The size differences in businesses determine the nature of problems that they face and the nature of businesses solutions they are adapting to overcome the business issues. One of an objective of this study is to observe and explore whether there are differences that the two sectors are having in adapting open innovation practices.

4. To assess the correlation between open innovation practices and frequency of innovations

   The study too attempted at identifying and assessing whether the open innovation practices lead for the ventures to come up with more innovations.

3. RESEARCH METHODOLOGY

Open innovation models force ventures to become more open in incubating and nurturing different types of innovations within ventures. Within this study the degree of openness within ventures was identifies through five dimensions namely customer involvement, employee involvement, inter organizational networking, participation in other firms and outsourcing R&D. If the customers contribute for the firms for developing new products, processors, marketing methods and distribution methods, the study identified that customer involve in doing innovations and this is denoted by the first factor, "customer involvement" in nurturing different types of innovations within the firms. If the employees of firms are creating impacts on decisions regarding nurturing innovative practices, products , processors, marketing methods and distribution methods, the study has defined it as the "employee involvement" in nurturing different types of innovations. In the modern business world, ventures show positive trends in networking with both competing and non competing firms in developing new technologies and leveraging new technologies. The companies are also willing of network with the competing firms in exploring and sharing the cost incurred by R&D and the risk of innovations. This phenomena has been identified as "inter- organizational networking" in this study. Inter-organizational networking might also take the specific form of participation in new or existing companies, for instance through minority holdings or corporate venture capital investments (Chesbrough, 2006)[xi]. Many large companies try to absorb other companies, hold minority interests within other firms or invest in other firms for exploring more advantages in exploring innovations by expanding their organizational capabilities and the phenomena is identified as "participation in other firms" within this study. And also if the firms are creating arms length transactions with third parties for outsourcing R & D the phenomena has been identifies as "outsourcing R & D activities" within the study.

The sample was selected on the basis of the directory regarding women business owners in Central Province prepared by ministry of industries and women affaires, Central Province, Sri Lanka. 167 women business owners have been listed under the category of handicraft in the directory. Out of all 120 firms fall in to the category of small sized firms and 36 firms were selected for the study sample and 47 firms fall in to the category of medium sized firms and 14 firms were randomly selected for the study purposes.

The sampling technique that was occupied within the study was stratified random sampling. Stratification was done on the basis of the size and the scale of the firms by using the definition of World Bank regarding Sri Lanka on the basis of number of employees. A firm in which the number of employees is between 5- 49, it has identified as a small sized firm (SSF) while a firm in which between 50-99 employees has been identified as a medium sized firm (MSF).

The initial step of the methodology was to differentiate the innovative firms from the non innovative firms. The study defined innovations as products, processes, marketing practices, distribution methods, cost reduction methodology new to the company or new to the market. The study defined the innovative firms as firms who introduced new product to the market, who adapted a new process/ new processers, newly adaptation of marketing practices, new adaptation of distribution methods and new practices on reducing the cost during the period of 2007 to 2009 while other firms were identified as non innovative firms. All surveyed fifty firms had done at least a single innovation component of above mentioned and all fifty were identified as innovative firms.

A self administered questionnaire was used to collect the data and necessary information from the women business owners.

Data were analyzed by using qualitative approaches. And also the correlation analysis was done to find the relationship between components of open innovation approaches identified for the study and different types of innovations in the organizations. In analyzing the degree of strength between each variable, the analysis has been done on the basis of the following key.

+1	- Perfect positive relationship
+0.5 - +0.99	-Strong positive relationship
0.1 - +0.49	-Moderate positive relationship
0	-No relationship
(-0.49) – (-0.1)	-Moderate negative relationship
(-0.99)- (-0.5)	-Strong negative relationship
(-1)	-Perfect negative relationship

4. FINDINGS AND ANALYSIS

It is obvious that the adaptation of open innovation practices is very important for the ventures irrespective of the size of them as they are having immense capabilities in directing the industry towards the growth orientation. The practices are becoming more important due to the inherent nature of the handicraft industry as its success purely depends on offering innovative and creative products to the customers. This section observes how the women owned small and medium handicraft manufacturers focus upon the approaches of open innovation practices and also the section illustrates the differences of adapting the open innovation practices on the basis

of the size of the ventures. And also the section explores the correlation between different types of open innovation practices and different types of innovations identifies within the study scope.

4.1. Adapting of open innovation practices by the ventures

The study attempted on observing the degree that the SMEs trust on each approaches under open innovation model identified for the study purpose. Table 2 points out the degree that the firms rely on approaches of open innovations identified within the study.

Table 2: adapting rates of approaches of open innovation practices by the firms

No.	Approaches of increasing openness	Total Percentage
1	Customer involvement	60%
2	Employee involvement	86%
3	Inter organizational networking	58%
4	Participation in other firms	28%
5	Outsourcing R&D	12%

Source: field Survey 2008/ 2009

Table 2 clearly demonstrates that employee involvement has been the most popular sources of innovations as the percentage is 86%. 86% of firms are using employees as a strong source of generating innovations within their ventures. Traditionally it is believed that outsourcing research and development activities is a main component of adapting open innovation model within a venture. And also the large multi national companies like P & G and Samsung spend a millions of dollars for this in ensuring their open innovation models within their ventures but in the perspective of small and medium women owned manufacturing industries, the situation is much deviated from the accepted business trends within large business firms as only 12 % of business owners use adapt outsourcing of R & D.

4.2. Differences of adapting open innovation practices on the basis of the size of business firms

It is obvious that the business problems that the ventures are facing are greatly determined by the size of ventures (Frost, P.J. & Egri, C.P. 1991)[xii] . For example small firms are having different types and sets of business problems rather than the medium sized firms and medium sized firms are having a different set of problems compared to big companies. The study attempted to depict the differences of adapting the open innovation practices based on the size of the ventures. Results are shown by the table 3.

Table 3: Adaptation Rates of open innovation practices on the basis of the size of firms

No	Approaches of increasing openness	SSFs (%) (n= 36)	MSFs (%) (n= 14)
1	Customer involvement	58.33	64.29
2	Employee involvement	86.11	85.71
3	Network usage in innovation processes	55.55	64.28
4	Participation in other firms	22.22	42.86
5	Outsourcing R&D	8.33	21.43

Source: Field Survey 2008/ 2009

The table illustrates that both types of ventures irrespective of their sizes use employee involvement as a main component of doing innovations within their ventures as 86.11% of SSFs use employee involvement as a mode of nurturing innovations and 85.71% of MSFs as a mode of nurturing innovations within the ventures. The results further illustrate that SSFs use the particular tool as a mode of increasing the openness in nurturing different types of innovations within their ventures at a higher rate than MSFs. The last two factors namely Participation in other firms and Outsourcing R&D have been uncommon approaches regarding the increasing of openness within firms specially for SSFs. 22.22 % of SSFs use the approach of participation in other firms as a mode of nurturing innovations while the rate is 42.86% regarding MSFs. This situation shows a huge difference of the ventures regarding adaptation of the fourth component. And also the results clearly demonstrates that MSFs' reliance on outsourcing R&D practices is relatively higher than SSFs. And also the most special observation of the study is MSFs are keen on ensuring of maintaining open innovation model within their ventures compared to the SSFs.

The next important observation is that employee involvement has been the major approach of increasing the openness for SSFs and they are not much relies on other approaches in increasing the openness within ventures ultimately results in creating open innovation model. The situation further shows vast opportunities for SSFs. They have to use and adapt other open innovation practices to ensure a higher degree of openness within ventures.

4.3. Perception levels Vs. adapting levels of open innovation approaches within firms

Positive perceptions and attitudes towards new business practices and models within firms can be viewed as the forwalker of winning the business challenges through exposing themselves to the new managerial practices.

The study also attempted in observing the perceptions of ventures regarding adapting the components of an open innovation model in the ventures. Table 4 points out the perceptions of adapting open innovation practices by the ventures. The attitudes and actual performing levels were measured through a 5 point Likert Scale.

Table 4: Attitudes vs. practicing rates of open innovation practices

	SSFs (n=36)		MSFs (n=14)	
	Attitude level	Actual performance level	Attitude level	Actual performance level
Customer involvement	4	3.75	4.75	4.25
Employee involvement	4.5	3.75	4.25	4.00
Network usage in innovation processes	2.5	1.5	3	2.25
Participation in other firms	2.25	1.75	3	2.25
Outsourcing R&D	2	1.5	4	1.5

Where mean value is 3

Source: Field Survey 2008/ 2009

Table 4 clearly indicates that irrespective of the size, employee involvement is viewed as the top component of nurturing the innovations within women owned handicraft producers in Central Province. In the case of SSFs the value is 4.5 and it shows that the SSFs are having strong positive perception towards the employee involvement in nurturing innovations as 4.5 > 3, while it has been a value of 4.25 in the perspective of MSFs. The overall analysis show that perceptions of MSFs regarding open innovation practices are higher than the SSFs though only one factor is becoming exceptional for the truth. As results illustrate, SSFs' perceptions on open innovation practices are relatively low and this can be the reason for them to adapt these practices at a lower level than in MSFs.

And also the results illustrate that in all the cases the firms, irrespective of the size, are having higher expectation levels that their current performance level regarding the utilization of components of open innovation practices within the ventures. And also the obvious truth is that certain factors avoid them applying of the open innovation approaches causing them to perform at a lower level than the expected level.

The most interesting observation is that regarding outsourcing R & D, MSFs highly perceive the approach as maintaining and nurturing innovations in the venture. The degree of trust is twice in MSFs compared to SSFs. This leads for observing very important question. As illustrated in the table, the real performance level is 1.5 of MSFs use Outsourcing R&D as a mode of nurturing innovations within the ventures. Though that is more than two times higher ratio compared to SSFs, it says only few percentage of firms use the approach but in contrast, MSFs are having very strong perception towards Outsourcing R&D. Hence the gap between the performances and the perceptions is quite obvious regarding MSFs. What can be the reasons for this perceptual and performing gap? The study found that reasons as, lack of research and development culture within the country. Other countries are getting these types of resource from local universities and

companies invest a lot in universities in those countries and even they are having very effective partnerships with universities. But in Sri Lanka, such kind of a culture can not be observed. And also in other emerging countries, the service of research centers are very useful and still that kind of a culture is a strange for Sri Lanka. As a result, though the industry feels the necessity of outsourcing R & D activities, they have become helpless as such type of a culture has not been incubated and nurtured in Sri Lanka.

4.4. Correlation between open innovation practices and the innovative outputs

The study attempted on identifying the correlation between the adapting of open innovation practices and the business performances. The innovative outputs have been identified thorough the number of new products, processes, marketing, distribution and cost innovations that the firms experiences within 2007 to 2009.

Table 5: Correlation between open innovation practices innovative outputs

No.	Approaches of increasing openness	Correlation
1	Customer involvement	0.71
2	Employee involvement	0.81
3	Inter-organizational networking	0.81
4	Participation in other firms	0.75
5	Outsourcing R&D	0.83

Source: Field Survey 2008/ 2009

The results clearly demonstrate that open innovation practices are having a strong positive relationship between all components of open innovation model. Among all of approaches, Outsourcing R&D has been the major factor of the ventures to come up with new approaches within their ventures. But earlier illustrations clearly shows that this is the approach that the women owned handicraft manufacturing SMEs are not practicing to the most extent and its highly reflected by the rate of 12%. Results further illustrate that components of employee involvement and inter-organizational networking are equally important for small and medium women owned handicraft manufacturing firms in central province in nurturing different types of innovations within their ventures.

1.4. Correlation between open innovation practices and types of innovations

The study also attempted to identify the correlation between the innovations and adapting of open innovation practices and different types of innovations in women owned handicraft manufacturing ventures in central Province, Sri Lanka. Table 6 depicts the picture of the scenario.

Table 6: Correlation between open innovation practices and different types of innovations

	Customer involvement	Employee involvement	Inter-organizational networking	Participation in other firms	Outsourcing R&D
Products	0.82	0.82	0.81	0.74	0.85
Process	0.56	0.83	0.76	0.71	0.83
Marketing	0.51	0.81	0.83	0.65	0.51
Distribution	0.50	0.76	0.70	0.73	0.62
Cost Innovation	0.45	0.80	0.81	0.73	0.79

Source: Field Survey 2008/ 2009

The results clearly illustrate that all most all the components that the study identified as components of open innovation model have positive relationships with all types of innovations defined within the study scope. For the women owned handicraft manufacturers, customer involvement has been the main tool for generating product innovations, employee involvement has been the main approach of generating process innovations within the ventures, network usage has been the main tool of nurturing marketing innovations, participation in other firms has been the main tool of nurturing products innovations while outsourcing R & D has been a main source of product innovations.

All most all the open innovation practices have done strong impact towards coming up with product innovations for women owned handicraft manufacturing ventures in the Central Province. All the approaches are having strong positive relationships with the product innovations (all the values contributed by the different approaches of doing open innovations lie in between the value range of +0.5 > +1)

Regarding the process innovations, the approaches of employee involvement and outsourcing R & D, inter-organizational networking and participation in other firms are having strong positive relationships (as the values are 0.83, 0.83, 0.76, 0.71 respectively and lie in between the value range of +0.5 > +1).

In nurturing the marketing innovations, the approaches of customer involvement, employee involvement, inter-organizational networking, participation in other firms and outsourcing R&D are having strong positive relationships (as the correlation values 0.51, 0.81, 0.83, 0.65 and 0.51 respectively and all the values lie in between the value range of +0.5 > +1).

In nurturing the distribution innovations, the open innovation approaches of customer involvement, employee involvement, inter-organizational networking, participation in other firms and outsourcing R&D are having strong positive relationships. (as the correlation values are 0.50, 0.76, 0.70, 0.73, and 0.62 respectively and all the values lie in between the value range of +0.5 > +1).

The results also demonstrates that the cost innovations are having strong positive relationships between employee involvement, inter-organizational networking, participation in other firms and outsourcing R&D (as the correlation values are 0.80, 0.81, 0.73, 0.79 respectively and all the values lie in between the value range of +0.5 > +1) while they are having moderate positive relationship between the customer involvement (as the correlation value lie in between the value range of 0.1> 0.49)

As the results illustrate, participation in other firms in doing innovations and outsourcing R & D, are having strong positive relationships with all types of innovations that the ventures undergo though they have been identified as least occupying techniques by both SSFs and MSFs irrespective of their size differences. This is a point that the policy makers should pay their attention when drafting the policy papers in creating sustainable business solutions for SMEs sector. If a culture can be incubated within them for develop these two approaches it will further lead for converting the sector towards entrepreneurial orientation thorough nurturing the innovations within the firms.

1.5. Barriers in adapting open innovation practices

The study also focused on exploring the barriers in nurturing innovations within the firms. As the table 4 illustrates, in the perspective of SSFs, regarding all the approaches of open innovation practices, their attitude level is higher than the actual occupying level of those tools within the ventures. Regarding customer involvement, SSFs attitude value is 4 though they actually using the tool in nurturing the innovations lower than their expectations. The truth is common for all components as well as the MSFs identified in the study and the results lead for the question what factors avoid them from reaching he occupying those tools to the expected levels. Lack of knowledge on innovation management practices has been a main factor that avoids the sector in doing innovations. Further, lack of capabilities for networking, the mistrust they have towards venture growth have been further factors of avoiding the ventures from doing innovations.

2. CONCLUSIONS AND RECCOMONDATIONS

The study attempted in illustrating the open innovation approaches in the perspective of SMFs by giving special reference to handicraft industry in Central Province, Sri Lanka. The study defines the open innovation approaches through five dimensions namely customer involvement, employee involvement, inter organizational networking, participation in other firms and outsourcing R & D and different types of innovations through five dimensions namely product innovations, process innovations, marketing innovations, distribution innovations and cost innovations.

The research identified that the women business owners show a positive trend in adapting open innovation practices in enhancing their creativity and developing the quality of products and introducing new products to the market place. The most important observation was adaptation of open innovation practices has been a greater reason for nurturing the different types of

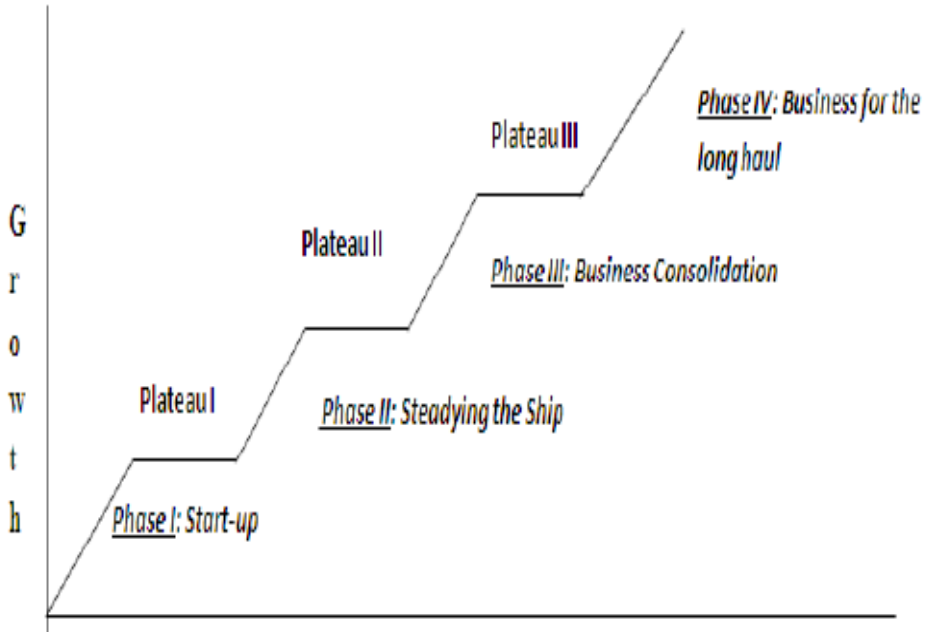
innovations within the women owned handicraft manufacturing firms in Central Province, Sri Lanka.

In addition, the study finds that in spite of the size, the firms are exposed to the innovative practices and the approaches are doing immense positive impact on doing different types of innovations in the ventures. In contrast, the results further denote that medium firms are showing positive trends in adapting open innovative practices compared to small businesses.

Finally, the research suggests that the open innovation practices should be incubated within these ventures as a mode of nurturing innovations within the ventures as the orientation strongly leads for converting the ventures towards entrepreneurial and growth orientation.

The small and medium businesses are having different life cycle pattern than of larger firms. According to Noel Jones (2001)[xiii] SMEs undergo growth phases and the subsequent crises and he named them as 'Plateaus' those should be managed along the way in order to survive and prosper, and be ready for the next growth Phase. And he graphically illustrated the phenomena as follows. According to him, while each SME may seek to grow from the start it will inevitably meet new challenges and crises over time that must be addressed effectively if the business is to survive and prosper. These crises are characterized as 'Plateaus'.

Graph 1: Life Cycle pattern of SMEs

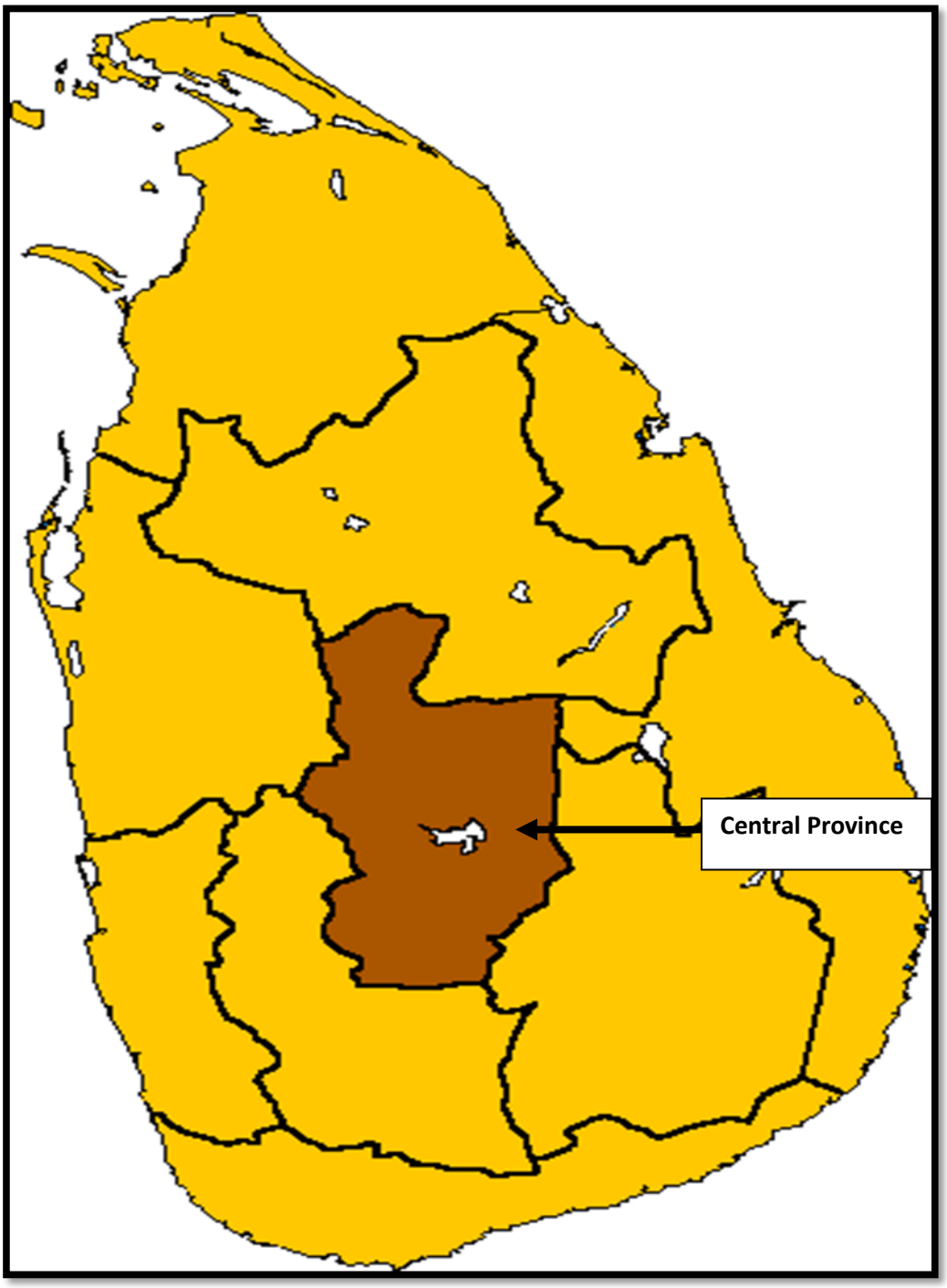


This study also observes same result and due to different managerial crisis, most of ventures get stagnant in these plateau stages for a long period of time. And also the study recommends that if the firms can increase the openness within the firms as identified in the study, it will be a strong approach for them to spend less time on plateaus and move forward as the openness offer them

windows to share the experience with others and craft the best strategies to overcome the issues within each plateau.

And also the study recommends that in crafting policies, the policy makers should be updated with the requirements demanded by the knowledge economy that the 21st century is governed by. Just programs aimed at offering technical skills and finding markets for them would not enough in empowering them with necessary skills and knowledge to make them ready in the market which is based on the knowledge. The knowledge economy demands a different set of skills and orientation for business profiles if they want to seek higher profitable opportunities by making the competitors irrelevant. The new era compels the businesses to face the competition with people with entrepreneurial mind setting, to speed up the initiation of knowledge systems and new information technologies, to revolutionalize the traditional ways of producing and the ways of bringing those products to the customers, to be learning oriented and formulate more learning organizations, to create new business models in competing and crafting competitive edges in the industry, to be more innovative and to create knowledge networks and to respond to the market changes through effective change management mechanisms. (Elis M. Awad and Hussain M. Ghaziri 2008)[xiv]. these types of needs should be captured by the policy makers to empower them to face for the competition created by the knowledge economy which can be an strong initiation of providing sustainable solutions for handicraft manufacturing industry.

Annexure 01



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