FACTORS IMPACTING GREEN ENTREPRENEURIAL INTENTION AMONG SMALL AND MEDIUM ENTERPRISE OWNERS IN WESTERN PROVINCE, SRI LANKA

Bimali Ranasinghe
Department of Entrepreneurship, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura
Email: bimali@sjp.ac.lk

Roshan Ajward
Department of Accounting, Faculty of Management Studies and Commerce,
University of Sri Jayewardenepura
Email: ajward@sjp.ac.lk

ABSTRACT

Green Entrepreneurship, a sustainable and a conservationist business model is a great platform for the entrepreneurs to address the emerging environmental concerns of the society. Given the enormous contribution made by Small and Medium Enterprises for a country’s economy, their role in green entrepreneurial behaviours is noteworthy. Accordingly, this study expects to find out the factors and their impact on Green Entrepreneurial Intention among Small and Medium Enterprise owners in Western Province, Sri Lanka. Accordingly, based on the Theory of Planned Behaviour and extant literature, it is identified that attitudes towards green entrepreneurial behaviour, social norms and perceived behavioural control could predict Green Entrepreneurial Intention with also the control variables of age, gender, religiosity and the size of the firm. Further to that, recognizing the role of education in shaping one’s behaviour, its moderating effect on the associations is also addressed in the study. Adopting a quantitative strategy, the data collection is carried out from a sample of 279 Small and Medium Enterprise owners in Western Province, Sri Lanka by means of a self-administered structured questionnaire. In terms of findings, the descriptive analysis indicated that the level of green entrepreneurial intention is 4.88 (mean value) out of a Likert scale 1 to 7, which is slightly higher than the neutral value (4). Further, the results of the correlation and regression analyses empirically supported that Green Entrepreneurial Intention among Small and Medium Enterprise owners was significantly (p<.01) influenced by the attitudes towards green entrepreneurial behaviour and perceived behavioural control (perceptions of the behaviour’s feasibility to perform an act). Moreover, a significant moderating effect (p<.10) of education was noted on the association between attitudes towards green entrepreneurial behaviour and Green Entrepreneurial Intention. Thereby, this study draws the attention of the authorities and policymakers to incorporate the educational aspects on green entrepreneurship to the contemporary education system as an initial step towards promoting green entrepreneurial behaviours within the country.

Keywords: Green Entrepreneurship, Green Entrepreneurial Intention, Theory of Planned Behaviour
INTRODUCTION

According to Low and MacMillan (1988), entrepreneurship, in its naivest sense is the creation of new enterprise. The recent literature incorporates a process paradigm for Entrepreneurship and defines it as a “dynamic process of vision, change, and creation which requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions” (Kuratko & Rao, 2013, p. 23). Koe, Omar and Majid (2014) highlight that entrepreneurship has contributed greatly to economic and non-economic development of a nation by means of generating jobs, improving products and processes, establishing new business firms and changing human life. This concept which carries creativity, innovation and risk taking at its core, accordingly, is vital in any context as it leads to wealth creation and social wellbeing at its ultimatum (Stokes, Wilson & Wilson, 2010). However, Allen and Malin (2008) citing Bell (2004) argue that the term ‘entrepreneur’ as an enthusiastic, industrious individual who is ready for embracing challenges and create innovations, yet allied with high-pollution industry and devoted to the bottom line. Furthermore, Uslu, Hancioglu and Demir (2015) citing Aykan (2012) support the argument elaborating that enterprises have caused massive indemnities on the natural environment in the instances of higher profit targets of them triggering several unfavourable effects namely environmental pollution, unconscious consumption of natural resources, global warming and reduction of biodiversity. Meanwhile, Koe et al. (2014) suggest that since entrepreneurial activities are regarded as a cause of environmental degradation in tackling with the sustainability issues, entrepreneurs also have a vital role to play.

In the meantime, the demand for the ‘green’ related behaviours are increasing day by day, with these inflating numbers of high-pollution and failing of solely profit-driven businesses as suggested by Volery (2002, cited in Allen & Malin, 2008). In such a stance, green economy is identified by Uslu et al. (2015), as an emerging concept centered on environmental preservation. They further, write that green entrepreneurship, the building block of the green economy, is merely a conservationists and a sustainable business model, as a solution provider for those social groups affected by environmental destruction. Even before that, Allen and Malin (2008, p. 828) have stated that “a new breed of entrepreneur is creeping up the business ranks, fusing environmentalism with entrepreneurial spirit, potentially moving toward a reorganized ecological society known as green entrepreneurs”. Ideally, the green entrepreneurs are the entrepreneurs who are interested in developing green product solutions, the products with a minimal environmental impact. Ndubisi and Nair (2009) claim that green entrepreneurship is the propensity to innovate or create a green organization and further highlights that it’s a matter of survival and prosperity in the modern business context.

On the other hand, Kruger and Brazel (1994) quoting Bird (1988) and Katz and Gartner (1988) state that entrepreneurship is a planned behaviour and thus can be amenable to research through models of intention. Particularly, Kruger, Reilly and Carsrud (2000) highlight that upon the thorough emphasis on the business plan in both academic and practical arenas on commencing a new venture, any entrepreneurial act could be termed as a planned behaviour. Hence, Green Entrepreneurship also can be considered as a planned behaviour and can be argued to be amenable to research using the formal intention models.

Entrepreneurial intention as per Bird (1988) is the states of mind of an individual which is directed towards forming new venture, developing new business concept or creating new value within existing firm. This entrepreneurial intention predict entrepreneurial behaviour. Having identified that entrepreneurship leads to economic development and social wellbeing via wealth creation, and recognized as a profound factor defining the whole future of the world (Stokes et al., 2010), researching more and more of factors leading to the entrepreneurial intention is of vital importance.

Apart from the social responsibility factor of entrepreneurs in his entrepreneurial behaviour, there is a need to find out whether which factors drive for one to have a Green Entrepreneurial Intention (GEI). Even though, there is ample studies related to the problem of the factors related to entrepreneurial intention (Fayolle & Linan, 2014), there is an empirical and theoretical gap to address the facets of GEI. The question is critical as today human life is very much affected from unfavourable environmental deviations such as global warming, air pollution, land erosions which demands us to more and more to walk towards the concepts of greening. Furthermore, there are arguments by Nikolaou et al. (2011) referring to Menon and Menon (1997) on the prevalent trend of large enterprises in integrating environmental phenomenon with their management and marketing agendas with the intention of gaining competitive advantage and exploiting novel market opportunities. It is questionable about the state of smaller firms in relation to this...
context. Hence, the GEI of Small and Medium Enterprises (SMEs) has to be researched too as they constitute larger parts of economies (Schaper, 2002).

Taking all these factors into consideration, the researchers were keen in identifying the intention on green entrepreneurship in the Sri Lankan SME context and a preliminary survey was carried out by asking twelve questions adopted from Silajdzic et al. (2015) from ten SME holders in Colombo, Sri Lanka. It was noted from these preliminary interviews that the green entrepreneurial awareness and intention among the Sri Lankan SME owners is quite low. However, when the concept was explained, it was noted that still they hold an interest (intention) in engaging in green entrepreneurial activities.

On the other hand, education has been identified as a means to empower children and adults in active society transformations by shaping values, attitudes and behaviours (“Role of Education | United Nations Educational, Scientific and Cultural Organization”, 2019). Wu and Wu (2008) support this view quoting West and Hore (1989) that education can be considered as a profound factor which can shape an individual behaviour via personal development with changes in attitudes and values, abilities; and with possible societal influences. In the context that green entrepreneurship stands as a behaviour led by intention, it is noteworthy to identify the role of education particularly in modifying or moderating the antecedents of this intention.

On the whole, the importance of researching the level of GEI and factors affecting GEI in the SME sector can be justified based on the prevailing environmental concerns, the popularity of sustainable practices and demands for the small firms to practice green entrepreneurship. Thus, the research intends to address this gap in the green entrepreneurship literature related with its intention, particularly among the SME owners considering the Western Province of Sri Lanka as the commercial capital of Sri Lanka, Colombo, being home to 28 percent of the country population and producing about 50 percent of gross domestic product (GDP), is situated in this province ("Colombo: The Heartbeat of Sri Lanka", 2019).

Accordingly, the research problem of the study is formulated as “What are the factors and their impact that influence GEI of SME owners in Western Province, Sri Lanka including the moderating effect of level of education?”. Addressing the aforementioned research problem, the objectives of the study are formulated as, to assess the degree of GEI, to identify the factors influencing GEI, to examine the impact of factors on GEI, and to examine how level of education moderates the association between factors impacting GEI and GEI in terms of SME owners in Western Province, Sri Lanka.

The next sections of this paper are structured as follows; the extant literature on the concepts, theories and empirical studies are discussed in the subsequent section, while the methodology adopted in addressing the research objectives of this study is explained after elaborating the literature. Then, the findings and discussion of these findings are presented, and finally the conclusions and future research directions are elaborated.

LITERATURE REVIEW

Green Entrepreneurship

Today, many a number of people are alert to the requirement of a newer aspect in business models which integrates environmental concerns into its bottom line considerations and pleasing for sustainable ends (Allen & Malin, 2008) whilst entrepreneurship is recognized as a panacea to transition in to a more sustainable society (Hall, Danek & Lenox, 2010). Accordingly, green entrepreneurship is referred to as combining environmental and business aims, with the intention of achieving the social and ethical transformation of business sectors (Isaak, 1998, cited in O’Neill & Gibbs, 2014). Ndubisi and Nair (2009) positions it as the “propensity to innovate or create a green business” (p. 22). Nikolaou et al. (2011) presents some examples for green business ventures namely ecotourism, biotechnology, eco-industrial parks and climate exchange organisations. Remarkably, Isaak (2002, cited in Allen & Malin, 2008) distinguishes between types of green businesses as ‘green’ and ‘green-green’. ‘Green’ businesses accordingly are ventures commenced without environmental concerns, but later engage in innovations for ethical concerns or marketing advantages. ‘Green-green businesses’ being extensively green from the origin, are established with the dream to transform the respective business sectors.
Schaper (2002, cited in O’Neill & Gibbs, 2014) states literature on green entrepreneurship is growing and claims that individuals combining environmental awareness with entrepreneurial action are a main force in the overall transition headed for a more sustainable business paradigm. Further, it is important to note that the concept of green entrepreneurship is presented in literature with range of terms carrying different meanings namely green, environmental, ecological, sustainable entrepreneurship, eco-entrepreneurship and eco-preneurship (Nikolaou et al., 2011). However, some pinpoints slight differences in between the terms (Gast et al., 2017; Uslu et al., 2015).

The idea that green entrepreneurs operating their businesses different from conventional perceptions of entrepreneurial behaviour is challenging perhaps to an extent that they may reject the entrepreneurial label as possessing connotations of profit maximization, materialism, and aggressive behaviour (O’Neill & Gibbs, 2014). As per Silajdzic, et al. (2015) most of the green entrepreneurs hold a “fundamental belief in the importance of the environmental and social awareness beyond the strict economic success”. In such a stance, opinions such as green entrepreneurs may be seen to ‘embody de-growth ideas in new material spaces’ (Kallis, 2011, p. 878) opens avenues for arguments leading to the field of green entrepreneurship to remain as a fluid and blurred, rather than static state in its literature scope.

In considering the benefits of green entrepreneurship it is imperative to cognize that exploring solutions to the problems related to natural environment has become a substance for survival and prosperity of every contemporary business venture nowadays (Baker & Sinkula, 2005). Allen and Malin (2008) proposes that the monarchy of natural resources can facilitate local entrepreneurs to create ample number of sustainable, lucrative businesses showcasing a great hope for natural resource-dependent communities suffering with the curse of poverty. Silajdzic et al. (2015) reveals referring to Farinelli et al. (2011) that green entrepreneurs are economically very prominent in their significant contributions to job creation, for being engines of change and their role in innovations, adaption of newer ideas and in rapid, flexible and efficient response to changes. Moreover, they stress the importance of the green entrepreneurs via eco-innovations and eco-specific promotional and developmental efforts which has a potential of resulting in enhanced green growth and sustainable development.

**Green Entrepreneurship and SMEs**

At the outset of green entrepreneurship, Allen and Malin (2008) quoting Schaper (2002) pin points that the importance of small businesses is usually overlooked even given the observable representation of 95 percent of all private sector SME firms in most nations resulting to a larger cumulative impact specially in their role in the environmental movement. It is further reported that SMEs are more reactive in adopting green methods, because of their limited resource base, control and the understanding of the owner manager over all the activities of the firm compared to a giant company. Moreover, they state that SMEs are more environmentally active, still lack the skills, ability, conditions and knowledge on environmental legislation (Allen & Malin, 2008; Ndubisi & Nair, 2009; Hoogendoorn et al., 2015).

Meanwhile, it is evidenced that accomplishing national environmental targets are not possible without the very involvement of SMEs (Holt et al., 2001, cited in Rodgers, 2010). On the other hand, Hoogendoorn et al. (2015) points out two contrasting views on SMEs and environmental practices, as their reluctance to engage in environmental practices due to the perception of social responsibility as a burden and a threat and their favourableness towards the same resulting as a consequence of inseparable ownership and management facilitating control over the allocation of resources according to personal beliefs on environmental concerns, etc.

On the whole, Koe et al. (2014) sentences that embarkation of SMEs on environmental management is not satisfactory with scant studies in the intention towards sustainable entrepreneurship among SME owners. However, as depicted by Affolderbach and Krueger (2017) referring to UNEP (2011); Bina (2013) and OECD (2013) the role of SMEs as green entrepreneurs amongst the notions of green economy and green growth is irreplaceably vital to overcome economic, environmental, and social confines of the prevalent mode of production in relation to capitalism.

**Intention in Entrepreneurship and Green Entrepreneurship**

Based on the extant literature reviewed it is apparent that many a number of theories and models such as Theory of Reasoned Action (Fishbein & Ajzen, 1975), Shapero’s Entrepreneurial Event Model (Shapero, 1982), Bird’s Model (Bird, 1988), The Theory of Planned Behaviour (TPB) (Ajzen, 1991), Krueger and Brazel’s Entrepreneurial Intention Model (Krueger & Brazel, 1994), Boyd & Vozikis Model (Boyd & Vozikis, 1994), Davidson Intention Model
(Davidson, 2009), Olmos and Castilo’s Model (Olmos & Castilo, 2015) are available to predict entrepreneurial intention. Furthermore, among the many studies on the green practices and intention, TPB is considered as a basis of a theoretical and conceptual framework to define the dormant construct of individual intention to behave (Boyd & Vozikis, 1994; Krueger & Brazeal, 1994; Linan & Chen, 2009; Koe et al., 2014; Buana, 2016; Rezai et al., 2016; Miranda et al., 2017). Intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes toward the behaviour, social norms, and perceived behavioural control and these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour (Ajzen, 1991). Based on these theories and other extant studies, factors such as attitudes, social norms, perceived behavioural control can be identified as the factors driving the entrepreneurial intention.

In determining the level of sustainable entrepreneurial propensity or intention among SME owners in Malaysia in the study of Koe et al. (2014), an overall mean of 6.93 (from a 10 points Likert scale) with standard deviation of 1.73 is evidenced denoting a slightly higher position than the neutral value. When considering environmental practices, sustainability attitude such as recycling attitude is treated as a main predictor of pro-environment intention (Tonglet, Philips & Read, 2004). Koe et al. (2014) states that sustainable attitude qualifies as an important determinant of exercising sustainability practices in businesses with a resultant significant correlation of 0.381. Rezai et al. (2016) too indicate significant positive relationships between attitude and intention to adopt green practices for sustainable innovation with a coefficient of 0.111(p<0.10). Accordingly, more favorable attitude toward ecological entrepreneurship, GEI would make ecopreneurial action more feasible, while a less favorable attitude would portend the reverse outcome (Mbebeb, 2012).

Koe et al. (2014) cites Vermeir and Verbeke (2008) and suggests that social pressures from the close individuals around has an extensive impact on intention towards sustainable behaviour and reports a significant correlation of 0.434 between sustainable attitudes. Additionally, Birgelen, Semeijn and Keicher (2009) points out that social norm and ecological behavioural intention is significantly and positively related to each other. Rezai et al. (2016) too report significant relationships between social norms and intention to adopt green practices for sustainable innovation with values: coefficient: 0.069, (p < 0.001, t > ± 2.58).Moreover, social norms and their consequent pressures also result in person’s environmental entrepreneurial actions and ecological entrepreneurial behaviours and values embedded in ecopreneural activities (Mbebeb, 2012).

Perceived behavioural control which is related to the perceived ‘self-efficacy’ concept by Bandura (1987) has been tested with the GEI by Tan et al. (2013) using dimensions such as market opportunities, innovative environment, initiating relationships, defining purpose, coping with challenges, and developing human resources. Further Koe et al. (2014) has tested positive correlation between perceived feasibility, which is compatible with perceived behavioural control and propensity for sustainable entrepreneurship and provide a significant correlation of 0.545. In addition, Rezai et al. (2016) proves that entrepreneurs with stronger self-control and intentions are more likely to adopt green methods and reports a significant relationship between perceived behavioural control among the herbal-based entrepreneurs and intention to adopt green practices of a coefficient of 0.120 (p< 0.05).

**Education and Entrepreneurial Intention**

Education is a facilitator for any individual to deal with different situations with the knowledge and experience (Gurel, Altimey & Danelle, 2010) and a principle element in the development of human resources (Turker & Selcuk, 2009). Literature indicates that upgrading educational levels can lead to higher future earnings of individuals and wholesome success (Wu & Wu, 2008) and proves that it has been researched adequately with the phenomenon of entrepreneurship intensely (Yaghmaei & Ghasemi, 2015).

It is vital to note that, in the context of entrepreneurial intention, the education has generated contradictory results over time, as some claiming that formal education shrinks the intention to become entrepreneurs whereas some suggest otherwise (Yaghmaei & Ghasemi, 2015). Gurel et al. (2010) argue that education may sharpen up individual creativity, flexibility, self-direction, analytical and decision making skills thus leading at innovative behaviours whilst the characteristics such as reduction in curiosity, vision, increase in risk aversion, conformity, decreased tolerance for ambiguity resulting from formal education system may disturb the intentions to start a new business. Gurel et al. (2010) further quote Learned (1992) and state that although individuals may have the necessary combination of traits and
background: the potential, interactions of the potential with the situation takes place when forming intention leading education to moderate the relationship between entrepreneurial trait and intention.

On the other hand, Yaghmaei and Ghasemi (2015) write education as a directly influencing variable on entrepreneurial intention, yet claim that few have looked at the impact of education as a mediator on entrepreneurial intention. Moreover, they reveal that some studies show a non-significant relationship between education and entrepreneurial intention whereas some portend reverse outcomes with positive nature, and some with nonlinear relationships.

When considering the findings of education and entrepreneurial intention research, Jemal’s (2017) study conclude that undergraduate in the education field of Agriculture had positive attitude towards entrepreneurial intention. Wang and Wong (2004) suggest education is a deterrent to entrepreneurship as in their study honour students showed less entrepreneurial intention. Heuer and Kolvereid (2014) particularly talk about the entrepreneurial education and state that higher entrepreneurial education level enhances the entrepreneurial intention.

Wu and Wu (2008) state that, for the most part, it is apparent that the consideration of educational background in entrepreneurial intention based on Ajzen’s TPB model is quite low. Moreover, Wu and Wu citing West and Hore (1989) suggest that there are three aspects in which education can shape an individual via personal development with changes in attitudes and values, abilities, and possible social impacts. These can be relooked corresponding to the predictors of Ajzen’s predictors of intention model attitudes, perceived behavioural control and social norms, respectively.

Wu and Wu (2008) explain the relationship of attitudes and education stating that attitudes are exposed to change, and hence, may be influenced by educators and practitioners. Gerba (2012) also proposes that education uplift the entrepreneurial intention by inspiring students’ attitudes towards entrepreneurship. Pihie and Bagheri (2010) further support the notion referring to Malay students highlighting curriculum may improve attitude toward entrepreneurship.

Heuer and Kolvereid (2014) furthermore, identify a prevalence of a lower attention in researching the role of education on perceived behavioural control and social norms when predicting entrepreneurial intention. However, they quote Basu (2010) as a study that indicates a significant positive impact of entrepreneurship classes on behavioural control perceptions. Moreover, by referring to Souitaris et al. (2007) state of a significant variation between the pre- and post-education programme values for subjective norm. Referring to the relationship between education and perceived behavioural control, Wu and Wu (2008) pinpoint that there are two principal functions of education as knowledge transfer and ability development. Thus, they state that education could change the perception of a person on his/her ability to perform an intended behaviour.

Accordingly, it is apparent that there is dearth of literature in measuring the associations among the independent variables: attitudes, social norms and perceived behavioural control of Ajzen’s TPB with GEI among SMEs worldwide, particularly GEI of SMEs in Western Province, Sri Lanka. Further, the researches on impact of education level on intention antecedents are hardly conducted. Thus, the study was compiled to fill the aforementioned gap in literature and performances.

METHODOLOGY

A quantitative approach based on positivist paradigm was deemed appropriate and used in this study as the main objectives of this study involve assessing the level of Green Entrepreneurial Intention (GEI) and examination of the associations between factors impacting GEI. Studies such as Krueger and Brazeal (1994), Linan and Chen (2009), Koe et al. (2014), Olmos and Castilo (2015), Ozaralli and Rivenburgh (2016), Rezaai, et al. (2016), Miranda et al. (2017) et cetera have adopted a similar approach.

Moreover, in achieving the objectives discussed in the introduction of this study, the researchers carried out a comprehensive literature review and identified the Theory of Planned Behaviour (TPB) as the base theoretical model where Attitudes towards green entrepreneurial behaviour (ATB), Social Norms (SN) and Perceived Behavioural Control (PBC) were identified as predictors of GEI. In addition, gender (Gen), age (Age), religiosity (Reg), and the size (Size) denoted by the number of employees were identified as control variables while education (Edu) was identified as a
moderator. Accordingly, the researchers developed the conceptual framework mainly based on Ajzen’s TPB in 1991 as illustrated in the Figure 01 below.

**Figure 01. Conceptual Framework**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Moderating Variable</th>
<th>Dependent Variable</th>
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<tbody>
<tr>
<td>Attitudes towards Green Entrepreneurial Behaviour</td>
<td>Education</td>
<td>Green Entrepreneurial Intention</td>
</tr>
<tr>
<td>Social Norms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Behavioural Control</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author constructed

In considering the operationalization of the main variables of this study, GEI is defined as the state of mind that influences the cognitive thinking of the entrepreneur towards forming of a green entrepreneurial firm or an activity; Attitudes towards green entrepreneurial behaviour (ATB) as the favourable or unfavourable evaluation towards green entrepreneurial behaviour; Social Norms (SN) as the extent of the influence of the opinion of important people that matters and Perceived Behavioural Control (PBC) as the perceptions of the behaviour’s feasibility. Working definition of Religiosity (Reg.) referred to the numerous aspects of the effect of religion on the behaviour and mindset of its observers while Education (Edu) was considered to be the Education level of the respondent (Operationalisation table is given as appendix 01 for further study).

Moreover, in addressing the research problem six hypotheses were proposed as follows. Among SME owners in Western Province, Sri Lanka:

- H1: There is a significant association between Attitudes towards green entrepreneurial behaviour (ATB) and Green Entrepreneurial Intention (GEI)
- H2: There is a significant association between Social Norms (SN) and GEI
- H3: There is a significant association between Perceived Behavioural Control (PBC) and GEI
- H4: Education level moderates the association between ATB and GEI
- H5: Education level moderates the association between SN and GEI
- H6: Education level moderates the association between PBC and GEI

In testing the above hypotheses, the researcher defined the study population as SME owners of Western Province Sri Lanka and collected data by means of a self-administered structured questionnaire from a convenience sample of 279 SME owners. Absence of a reliable sample framework lead the researcher in selecting this non-parametric sampling
method. Saunders et al. (2009, p. 241) indicate that “problems of convenience sampling are less important where there is little variation in the population” as in the case of this study. Furthermore, Farrokhi (2012), Chrisman et al. (2012), Brodaty et al. (2014), Uslu, Bulnul and Cubuk (2015), Yusuf, Musa and Rahman (2012) have adopted this sampling technique in their quantitative studies successfully.

The self-administered questionnaire was developed based on an extensive literature survey and was subjected to expert opinions. Then the refined questionnaire was pilot-tested and further adjustments were done. The final version was administered among the participants.

In terms of analytical strategies deployed in this study, first data collected via questionnaires were screened and cleaned, and then was subjected to validity and reliability testing. Then, in accomplishing study objective to assess the degree of GEI the descriptive analysis including measures of central tendency and measures of dispersion were used. In examining the impact of factors on GEI, Pearson product moment correlation analysis and regression analysis were carried out. Finally, in examining how education moderates the relationship between factors impacting GEI and GEI, regression analysis with interaction effects was adopted.2

ANALYSIS AND DISCUSSION

This section explains the key findings of the study together with a brief discussion on them. In terms of the first objective in which the level of green entrepreneurial intention (GEI) was assessed, the measures of central tendency indicated that among the SME owners in Western Province, Sri Lanka, GEI level of 4.88 (out of a Likert Scale 1 – very low to 7 – very high), which is slightly higher to the neutral value (4) denoting an alarming position. This finding is consistent with Ozaralli and Rivenburgh (2016), Koe et al. (2014), Pretheeba (2014) and Nishantha (2008) who also have found quite low levels of intention.

The second objective of this study was to identify the factors influencing GEI and was accomplished by carrying out a comprehensive literature review. Researcher identified eight factors predicting GEI. Among them the main independent variables identified were the Attitudes towards green entrepreneurial behaviour (ATB), Social Norms (SN), and Perceived Behavioural Control (PBC). Education (Edu) was identified as a moderator whereas age (Age), gender (Gen), size of the entity (Size), and religiosity (Reg.) were identified as control variables. Similar findings are reported from studies of Gelderen et al. (2008), Linan and Chen (2009), Kautonena et al. (2013), Koe et al. (2014), Ozaralli and Rivenburgh (2016), Ambat and Damit (2016), Buana (2016), Patricia and Silangen (2016), Miranda et al. (2017), Wu and Wu (2008) and Gurel et al. (2010).

Addressing the third and fourth objective, in predicting the model for GEI with the moderation effect of education, three interaction variables were created, computing interactions between Edu variable and ATB as Edu×ATB, Edu variable and SN as Edu×SN and Edu variable and PBC as Edu×PBC. Then all the independent variables ATB, SN, PBC, the control variables; Age, Gen, Size and Reg, the education dummy (Edu) variable and the interaction variables namely Edu×ATB, Edu×SN, Edu×PBC were forwarded to perform the multivariate regression analysis under the below regression model.

\[ GEI = a_0 + a_1 ATB + a_2 SN + a_3 PBC + a_4 Gen + a_5 Age + a_7 Size + a_8 Edu + a_9 Edu \times ATB + a_{10} Edu \times SN + a_{11} Edu \times PBC + \epsilon \]

1 The Cronbach's alpha values were over 0.7 and the factor analysis performed indicated construct validity of the independent and dependent variables considered in this study.
2 Regression diagnostics, normality, linearity, multicollinearity and heteroscedasticity did not indicate any significant issues.
Accordingly, the test result indicated that the model is significant at $p<0.01$ with an adjusted $R^2$ of 0.686, meaning that 68.6 percent of variance of the dependent variable, GEI is explained by the selected independent and control variables. Moreover, model indicates statically significant ($p<0.01$) positive associations between ATB and GEI with a coefficient of 0.586, statically significant but weak positive relationship between PBC and GEI with a coefficient of 0.315 ($p<0.01$). In grasping through supportive literature Linan and Chen (2009) model explains 55.5 %, Miranda et al. (2017) explains 56.8%, Kautonen et al. (2013) model explains 41%, Mbebeb (2012) predicts 62.2 % variance in entrepreneurial intention contexts.

In addition, results denote that the association between ATB and GEI is moderated by education level with a weak positive relationship carrying a coefficient value of 0.146 ($p<0.10$). All the other variables do not indicate a systematic relationship according to the results of the multivariate regression analysis performed (Table 1: Regression Analysis with the Moderation Effect of Education). Consistent with these findings, Wu and Wu (2008) also have stated in their research, that the relationship of attitude and education when considered in entrepreneurial intention is significant and stronger compared to perceived behavioural control and social norms.

On the whole, the summary of the data analysis carried out in relation to addressing the six hypotheses formulated in the study is presented in the Table 2.
Table 2: Summary of Results of Hypotheses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Regression Analysis</th>
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<tbody>
<tr>
<td>H₁: There is a significant association between ATB and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Supported</td>
</tr>
<tr>
<td>H₂: There is a significant association between SN and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Unsupported</td>
</tr>
<tr>
<td>H₃: There is a significant association between PBC and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Supported</td>
</tr>
<tr>
<td>H₄: Education level moderates the association between ATB and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Supported</td>
</tr>
<tr>
<td>H₅: Education level moderates the association between SN and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Unsupported</td>
</tr>
<tr>
<td>H₆: Education level moderates the association between PBC and GEI among SME owners in Western Province, Sri Lanka</td>
<td>Unsupported</td>
</tr>
</tbody>
</table>

CONCLUSION AND RECOMMENDATIONS

Green entrepreneurship: the main concept around which this study is compiled on, is recognized as a “major force in the overall transition towards a more sustainable business paradigm” (Schaper, 2002, cited in O’Neill & Gibbs, 2014, p. 1090). Accordingly, the study addressed the empirical and theoretical research gaps by accomplishing four objectives namely assessing the degree of Green Entrepreneurial Intention (GEI), identifying the factors influencing GEI, examining the impact of factors on GEI and examining how level of education moderates the relationship between factors impacting GEI and GEI among the SME owners in the context of Western Province, Sri Lanka.

Study was compiled executing a quantitative strategy based on the positivist paradigm and considered its population as the SME owners of Western Province, Sri Lanka as the commercial hub of Sri Lanka is situated in Western province. In the absence of a reliable sample framework, it selected the convenience sampling method and used a structured questionnaire developed through a comprehensive literature survey subjected to expert opinions.

In addressing the first objective that refers to the degree of GEI it was observed a slightly higher degree to the neutral position of GEI within SMEs in Western Province. In accomplishing the second objective a thorough literature review was carried out identifying eight factors predicting GEI. Attitudes towards green entrepreneurial behaviour (ATB), Social Norms (SN), Perceived Behavioural Control (PBC) were identified as main variables. Education was selected as a moderator while control variables namely; age, gender, size of the entity, and religiosity were also identified. Third objective which was focused on examining the associations between GEI and the factors influencing GEI was addressed finding that ATB and the PBC significantly predict the GEI among the SME owners in Western Province, Sri Lanka. In response to the fourth objective, a moderating effect was observed between ATB and GEI while others did not indicate any systematic relationships.

Affolderbach and Krueger (2017) claim that green entrepreneurship and environmental justice as vehicles driving potentially wider system changes and improve green development amidst growing environmental issues and disturbances in the ecology system. In such a stance, engaging in green entrepreneurship behaviours can bring about positive hopes in economic and sustainable development for a developing country like Sri Lanka. Within the notion that intention can predict the behaviour for a greater extent (Kim and Hunter, 1993), this study took an effort to identify factors impacting GEI which can thereby later proposed to be resulting in green entrepreneurial behaviour. Thus, it is underlined that by increasing the intention towards green entrepreneurship, there is a possibility of increasing green entrepreneurship behaviours which could be identified as a panacea for sustainable development.
Given the study findings on the slightly higher degree to the neutral position of GEI and the moderation effect of education, and together with the notions such as education can be considered as a profound determinant which can shape an individual behaviour via personal development with changes in attitudes and values, abilities and with possible societal influences (Wu & Wu, 2008), the researcher draws the attention to developing educational courses in green entrepreneurship in academic and professional platforms, conducting awareness programs on green entrepreneurship starting from SME owners and expanding it to general public.

Especially, the need of the school and university curricular to be amended incorporating learnings on green entrepreneurship paradigm is proposed. Interestingly, a cursory examination of degree programs in the national universities indicated that they hardly contained course contents on green entrepreneurship. Thus, the attention is drawn to the authorities to engage in curriculum changes as an initial step in promoting GEI and thereby influence green entrepreneurial behaviours.

Further to that, the role of government in promoting green entrepreneurial practices by increasing its intention through providing adequate infrastructure and policy implications in both the large companies and SMEs is highlighted in the study. However, with Sri Lanka being identified as less entrepreneurial in relation to the Global Entrepreneurship Index 2018, the efficacy of promoting the new entrepreneurial avenues such as green entrepreneurship could be questionable. Perhaps, some may argue that it is required to address the lower level of entrepreneurship first and foremost which demand a paradigm shift in the Sri Lankan risk averse and less creative culture. In cultivating such entrepreneurial seeds amongst the nation yet again education plays a significant role as revealed in Walter and Block (2016), Ertuna and Gurel (2011) and Teshome (2014). Therefore, it can be expected to enhance the awareness among the public on green entrepreneurship using education as a mechanism in formal and informal platforms.

Researcher confronted with some key limitation in compiling the study such as dearth of literature and its attention being focused only on the Western Province, where the Sri Lankan commercial capital is situated. In future research, it is proposed to extend the research in other provinces of the country in order to find out the national level degree of GEI and to examine even the aspects of green entrepreneurial behaviours to facilitate related policy implications.

REFERENCE


Appendix 01 – Table 03: Operationalisation of Main Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Working Definition</th>
<th>Measure (1-7 point Likert Scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Entrepreneurial Intention (GEI)</td>
<td>Ajzen (1991) Kim and Hunter (1993) Ndubisi and Nair (2009) Uslu et al. (2015)</td>
<td>State of mind that influences the cognitive thinking of the entrepreneur towards forming of a green entrepreneurial firm or an activity</td>
<td>I am ready to do anything to be a green entrepreneur. My professional goal is to become a green entrepreneur. I will make every effort to start and run my own green entrepreneurial firm/ green entrepreneurial activity. I am determined to create a green entrepreneurial firm/ to commence a green entrepreneurial activity in the future. I have very seriously thought of starting a green entrepreneurial firm/ a green entrepreneurial activity. I have the firm intention to start a green entrepreneurial firm/ a green entrepreneurial activity someday.</td>
</tr>
<tr>
<td>Attitude towards Green Entrepreneurial Behaviour (ATB)</td>
<td>Ajzen (1991)</td>
<td>Favourable or unfavourable evaluation towards green entrepreneurial behaviour</td>
<td>Being a green entrepreneur implies more advantages than disadvantages to me. A career as a green entrepreneur is attractive to me. If I had the opportunity and resources, I’d like to start a green entrepreneurial firm/ a green entrepreneurial activity. Being a green entrepreneur would entail great satisfactions for me. Among various options, I would rather be a green entrepreneur.</td>
</tr>
<tr>
<td>Social Norms (SN)</td>
<td>Ajzen (1991)</td>
<td>Extent the opinion of important people matters</td>
<td>If I decided to start a green entrepreneurial firm/ green entrepreneurial activity, the approval for that decision from my close family members matters to me. If I decided to start a green entrepreneurial firm/ a green entrepreneurial activity, the approval for that decision from my friends matters to me. If I decided to start a green entrepreneurial firm/ a green entrepreneurial activity, the approval for that decision from my colleagues matters to me. If I decided to start a green entrepreneurial firm/ a green entrepreneurial activity, the approval for that decision from the important people in my life matters to me.</td>
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<tr>
<td>Perceived Behavioural Control (PBC)</td>
<td>Ajzen (1991)</td>
<td>Perceptions of the behaviour’s feasibility</td>
<td>To start a green entrepreneurial firm/ a green entrepreneurial activity and keep it working would be easy for me. I am prepared to start a viable green entrepreneurial firm/ a green entrepreneurial activity. I can control the creation process of a new green entrepreneurial firm/ a green entrepreneurial activity. I know the necessary practical details to start a green entrepreneurial firm/ a green entrepreneurial activity. I know how to develop a green entrepreneurial activity. If I tried to start a green entrepreneurial firm/ a green entrepreneurial activity, I would have a high probability of</td>
</tr>
<tr>
<td>Variable</td>
<td>Source</td>
<td>Working Definition</td>
<td>Measure (1-7 point Likert Scale)</td>
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<td>--------------------------------------------------------</td>
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<tr>
<td>Education</td>
<td>Edu</td>
<td>Education level of the respondent</td>
<td>succeeding.</td>
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<td></td>
<td></td>
<td></td>
<td>1- No school education</td>
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<td>2 - Still schooling</td>
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<td>3 - Up to G.C.E. (O/L)</td>
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<td>4 - Passed G.C.E. (O/L)</td>
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<td>5 - Up to G.C.E. (A/L)</td>
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<td></td>
<td>6 - Passed G.C.E. (A/L)</td>
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<td></td>
<td>7 - Bachelor’s degree or higher</td>
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<td>8 – Other</td>
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