



Building Ecological Entrepreneurship: Creating Environmental Solutions Based on the Cultural Realities and Needs of Local People

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Abstract

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The endogenous economy (as compared to a linear paradigm of economic growth) has recently attracted interest in sustainable development debates due to its ecological friendliness. In this article, I examine the function of endogenous ecological entrepreneurial investments as a strategy that shifts from corporate-oriented capitalism and local survival strategies toward sustainable environmental management by local people. In order to investigate the subject, a questionnaire was administered to young people who worked on a green economy project in Cameroon, and a data analysis was conducted by employing quantitative and qualitative techniques. A positive attitude toward green ventures was observed in the participants and the survey confirmed that attitudes, social norms, and perceived behavior control were significant predictors of the participants' intention to engage in ecological entrepreneurship. Male and female participants did not show any significant difference regarding attitudes about green business and start-up intent. In fact, the critical role of green economy awareness and investment in green entrepreneurship was evident. Despite the optimistic look, however, qualitative analysis exposed difficulties in actualizing ecological entrepreneurship as a model of sustainable resource exploitation, economic growth, and climate change mitigation. Drawing on lessons derived from the community-based intervention project, I conclude the study with practical research directions for future policies.

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Within the context of a green economy, the concept of ecological entrepreneurship has emerged as a way to mitigate market failures and promote social welfare through the exploitation of environmentally responsible opportunities (Meek, Pacheco, and York, 2010; Tandoh-Offin 2010). In the Majority World, the concept legitimately shifts from a dependence on corporate ventures to a focus on small-scale survival activities typical of rural entrepreneurship, in which local people invest mainly in natural resource development, such as agricultural exploitation. As traditional entrepreneurs, farmers engage in subsistence farming activities that affect the ecosystem. Farming is the natural capital upon which society depends, but it has not been adequately recognized, valued, or preserved by the people it serves, and is subject to serious climate risks (Hill et al. 2010; Petrin 1994). Although the motivation to undertake entrepreneurial action is moderated by social, cultural, and ecological norms, it is at times influenced by economic interests that are characterized by patterns of aggressive and unsustainable consumption. Recently, ecofriendly entrepreneurship has been perceived as an intervention strategy capable of accelerating the process of rural development (Petrin 1994; United Nations Organization 2011), and at the core of this action is the eco-entrepreneur. Thus, given the necessary drive, self-confidence, and capacity to manage their endogenous economic activities, local people promote investments in small-scale agro-enterprises.

Hill et al. (2010, 37) highlight the growing business viewpoint that “as pressure increases on the world’s natural resources, concerns over environmental degradation have shifted from the fringes of altruistic concern to tangible global economic losses.” On the local level, however, economic behaviors are expressed through small social or familial subsistence enterprises with their great potential for employment, poverty alleviation, and environmental justice. Marsden and Smith (2004, 441) emphasize that in order to respond appropriately to emerging needs, “sustainable wealth creation and local economic development within the wider context of sustainable development require new entrepreneurial initiatives that focus on investing in the local environment. . . . employing people and their resources.” Local green growth, therefore, requires a transformation that is influenced by the strong motivation to create new products; the act of doing so must then be perceived as a socially responsible investment strategy with competitive advantages for both investors and beneficiaries (Tandoh-Offin 2010; Young 2010). In addition to their potential for engaging in green, entrepreneurial practices, local people have been recognized for their natural expertise in practicing sustainable approaches to survival, which are derived from their perceptions, attitudes, and ecological identity. However, because of the demographic and economic pressures, local agricultural practices

also contribute to climate change risks. In other words, climate change and the alteration of the global atmosphere are directly or indirectly attributed to human activities, (Momodu, Akinbami, and Obisanya, 2011). Such barriers to encouraging agricultural entrepreneurship and consequent investments must be creatively transformed into opportunities for socially responsible economic growth; this transformation requires a critical analysis of entrepreneurial attributes.

Despite the fact that economic activities vary across cultures, local people in the concerned demographic are predominantly farmers. They initiate rural ventures within the context of agricultural entrepreneurship to aid in the production of food for the consumption of rural and urban people (FOA 2011; Ndenecho 2011). Production processes are closely tied to existing norms, implying that agro-ecological ventures are meant to serve more than economic interests because of their inherent cultural, social, and ecological values. But the globalization of the green economy should not be built on the false premise that external investment can sustainably ensure economic growth and environmental gains. On this note, Petrin (1994) warns that without the possibility of entrepreneurial capabilities that are well developed, external funds will be wasted on projects that will not provide long-term economic growth. Transforming the economy from brown to green or reinforcing existing green values requires a critical understanding of the human factors, needs, and cultural realities of local people as drivers of green ventures. In this article, I examine the human dimension of ecological entrepreneurship by exploring local needs and entrepreneurial dispositions as antecedents of environmental risk mitigation by people in the North West Region of Cameroon.

Theoretical Perspectives: The Planned Behavior Model

Theoretical models have been advanced to explain the motivation behind entrepreneurial action, and in this study, I employ the Theory of Planned Behavior (TPB) (Ajzen 1991) in order to understand the dynamics of ecological entrepreneurship. TPB has been extensively used to analyze entrepreneurial intentions in different contexts. The present study hypothesizes that the deposition of ecological entrepreneurship depends on attitudes, social norms, self-efficacy, and the ability to control the entrepreneurial action. The main variable of interest is intention, since without intention, action cannot occur; thus, it has become a fundamental element of analysis. Intention is the cognitive representation of an individual's preparedness to express a particular action, and is therefore a predictor of entrepreneurial behavior. The basic assumption holds that the decision to engage in entrepreneurial action occurs as a consequence of some inner belief or external change or pressure precipitating the event, and that an individual's response depends on perceptions of available alternatives (Liñán, Battistelli, and Moriano, 2008).

The TPB explains entrepreneurial intention as a function of three variables: attitude/attraction toward the behavior, social norms, and perceived behavioral control. The component of attitude/attraction refers to an individual's attitude toward the behaviors inherent in the practice of entrepreneurship. A more favorable attitude toward ecological entrepreneurship would make ecopreneurial action more feasible, while a less favorable attitude would portend the reverse outcome.

Another component of the model, the idea of social norms, involves the subject's perception of other people's opinions of the proposed behavior, and is understood to be an individual's assessment of social pressure to perform or not to perform entrepreneurial actions. At any given time, such "pressures can become a trigger or a barrier in the development of the entrepreneurial career, depending on the social environment" (Liñán, Battistelli, and Moriano, 2008, 23). Societal norms and their consequent pressures can influence and promote the ecological entrepreneurial behaviors and values that are expected of "ecopreneurs" and their activities.

The third component of TPB is perceived behavioral control, which relates to the perceptions of the behavior's feasibility as an essential predictor of the intended action. It is assumed that ecological entrepreneurs would like to work toward behaviors that they think could be controlled in the process of opportunity exploitation. The willingness to perform ecological venture activities (perceived desirability) would be a function of the attitude toward those activities, and of the perceived social norms held by people of a given society.

Evidence of Expanding Literature

Although the green economy and ecological entrepreneurship have recently emerged as panaceas to environmental risks, and in particular to climate change, literature that explains the context already abounds. Conceptualizations and empirical knowledge expose the relationships and interplay between factors that facilitate the understanding of the critical role of ecopreneurship investment in climate change mitigation and adaptation.

From Environmental to Investment Risks

In sub-Saharan Africa, subsistence agriculture is critical to income generation and food security, but ventures in this region are prone to both environmental and investment risks. According to Hill et al. (2010), financial institutions may be exposed to short-term losses due to flooding, storm surges, erosion, and higher energy costs. In the longer term decreased food production, increased health risks, and general instability from the loss of natural resources can have a negative impact on investment ventures. By overlooking the

traditional norms and values of the green economy, local people often foster the collapse of the earth's natural life support systems and attract risks. The United Nations Environmental Programme (UNEP) asserts that both conventional and traditional agriculture generate substantial pressure on the environment, and that the effects of climate change on food security are local and global (2011). Likewise, Momodu, Akinbami, and Obisanya (2011, 835) explain that "climate is an important factor of agricultural productivity, and at the same time agriculture is one of the main greenhouse gas sources, which is important to consider in terms of climate change." In addition, traditional smallholder agriculture is typically low-productivity farming that is practiced on low-value small plots. It relies primarily on the extraction of nutrients from the soil. Neither organic nor inorganic fertilizers are applied to sufficiently replenish those nutrients.

At present, the African Union (2011) has concluded that climate impact is critical and poses important challenges for agriculture that must be addressed through changes in agro-ecological conditions; these changes, in turn, will affect the distribution of income, especially to rural households. Within the context of green growth, "growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services" (UNEP 2011, 16). Although this viewpoint is quite optimistic, the potential for ecopreneurship investments is low, particularly in local communities, because environmental risk is still seen as an extraneous issue in mainstream finance and investment (Hill et al. 2010). Despite the recognition that green agriculture offers many opportunities for investment, financial institutions always express skepticism; thus, risk is attached to the practice of investing in environmental ventures. In the realm of green economic thinking, however, financial investing has been perceived as capable of reducing the vulnerability associated with anticipated negative impacts of climate risk. Such investing can be done through financial assistance to micro-eco-enterprises, particularly in rural localities.

Transforming Brown into Green: The Force of Ecological Entrepreneurship

At all levels, there have been recent, frantic efforts to transform the prevailing brown economy, characterized by fossil fuels, resource depletion, and environmental degradation, into a green economy with the inherent potential for economic growth, environmental progress, and social justice. Emanating from the ecological aggressiveness of the prevailing economic paradigm, the force of the green economy has been studied from the perspectives of "ecological entrepreneurship," "ecopreneurship," or "environmental entrepreneurship." Ecological entrepreneurship is considered to be the

main driver of the green economy, and has been described by Schaltegger (2002) as entrepreneurship through an environmental lens. It has a sound economic, ecological, and social justification, with the potential for becoming a new engine of growth, a net generator of decent jobs, and a vital strategy in the fight to eliminate persistent poverty (UNEP 2011). As part of the key investment attraction, the ecological entrepreneur is capable of transforming environmental risks into green business opportunities while minimizing those same risks. The practice of ecological entrepreneurship is equally a response to negative environmental externalities, undervalued natural resources, over-exploitation, and depletion of the earth's support system, which it combats by means of the introduction of eco-friendly products and processes into the marketplace (Pastakia 2002). Linnanen (2002, 72) clarifies that "most of the normal entrepreneurial laws, such as the correlation between risk and profit, the right timing for market entry and the need for adequate financial and human capital are valid also in environmental venture." Still, Schaltegger (2002, 46) cites the unique role of ecopreneurs, claiming that "whereas all entrepreneurs deal with bridging activities between suppliers and customers to create and change markets, ecopreneurs differ from conventional entrepreneurs in that they also build bridges between environmental progress and market success." Environmental entrepreneurship is applicable to any small business looking to increase growth since "ecopreneurship has thus become a diversified market-based approach for identifying opportunities . . . to convert dreams and aspirations into realities" (Tandoh-Offin 2010, 28).

In addition, green entrepreneurial perspectives are capable of providing a strong foundation for the creation and growth of micro-to-macro enterprises, considering that agricultural entrepreneurship is locked up in the green business framework (Mbebeb and Songwe 2011). Petrin (1994) recognizes that in rural communities, environmental entrepreneurship can improve the quality of life for individuals, families, and communities, and can enable the maintenance of a healthy economy and environment. This potential extends to the concept of rural entrepreneurship, "the use of traditional knowledge in the context of agricultural productivity and economic development to respond to climate change issues to achieve food security" (Momodu, Akinbami, and Obisanya 2011, 881). Such approaches embody a shift away from modern agricultural systems toward natural systems where the repressive properties of modern agriculture are abandoned for endogenous survival strategies.

Ecological entrepreneurship also implicitly entails the transformation of perceived and actual climate risks into opportunities, since agriculture-dependent communities are highly vulnerable to the effects of climate change. It emphasizes an economic system that enhances the earth's natural capital. This aspect of ecological entrepreneurship is extremely

pertinent to the situation in Africa, an area in which agricultural exploitation takes a central place (African Union 2011; Mbebeb and Songwe 2011). In terms of a motivational strategy, investing in resilient individuals and small-scale, home-grown activities has become an optimistic option in climate change mitigation, and has illuminated the fact that the transformation of survival strategies into systems and approaches capable of containing diversity needs is imperative. But such a framework, for instance, should “embody green farming and sustainable irrigation practices, as a way to conserve soil quality, enhance biodiversity and maintain higher levels of productivity to feed an expanding population” (African Union 2011, 8).

The green entrepreneurship model as a paradigm of diversity has behavioral implications that must be considered in the broader framework. To the African Union (2011, 3), “a green economy fuelled by green growth requires radical changes in behavior and shifting public opinion. . . . The greatest challenge thus lies with changing behaviors and transforming institutions to enable the adoption of sustainable patterns of production and consumption.” This statement justifies the role of attitudes, motivations, norms, behavioral control, and intention in ecological entrepreneurship investment and sustainable development drives.

Local Pathways: Investing from Below

Historically, local people have always responded appropriately to diverse environmental conditions and potential risks by developing indigenous strategies. Patterns have emerged in the bottom-up approaches used to create sustainability in rural spaces (Marsden and Smith 2004). The act of investing from below implies that the social and cultural dimensions inherent in agricultural investments are generated as a way of life by the local people. Such cultural values are passed on from generation to generation through family and community socialization. Although public perceptions of green business often center exclusively on environmental technology (Linnenen 2002), the transition to a green economy varies across regions due to the level of development and resources in the relevant area (UNEP 2011). This fact accounts for the different responses that help create the indigenous strategies of each unique location. Customary laws, shared values, and belief systems constitute an integral part of a local people’s lifestyle and directly influence their inbuilt ecovalues. In local communities, indigenous knowledge has been directly applied to weather forecasting, vulnerability assessment, and the implementation of adaptation strategies in agriculture (Nyong, Adesina, and Osman-Elasha 2007). Due to its green growth potential, endogenous agricultural entrepreneurship is now considered one possible solution in the global quest to diminish the risks of climate change. Local pathways, although often sidelined, are therefore vital in preserving biodiversity, and are

considered by many to be very successful mitigation strategies. Again, local people interpret and react to the effects of climate change in creative ways, drawing on traditional knowledge and new technologies. Farmers are known to make decisions on cropping patterns based on locally derived climate predictions and often determine their planting dates based on complex cultural models of weather (Nyong, Adesina, and Osman-Elasha 2007). Such skills are acquired through social learning processes that generate collective knowledge. It is therefore necessary to integrate indigenous knowledge and values into the mainstream strategies used to mitigate climate-change within the diversity paradigm.

The gender dimension of ecological entrepreneurship is of equal importance, especially in rural areas. Women in developing societies are principally concerned with food crop production, but regrettably lack an enabling environment (Fonjong 2004; Petrin 2004). As agricultural entrepreneurs with small-scale holdings, women are vulnerable to the risks of climate change; however, this situation could be transformed into great opportunities for everyone's benefit through the possibilities offered by ecological entrepreneurship.

The Context of the Study

In Cameroon, agriculture is the life-wire of the economy in terms of employment, food security, and the provision of raw materials to the industrial sector (Ndenecho 2009; Fonjong 2004). Rain-dependent subsistence farming typifies the rural communities of the area. In this study, I focus on the north westerners of Cameroon, who are commonly known as people of the grassfield because of the area's savannah vegetation. In this region, agriculture remains the mainstay of the economy and the source of livelihood for men, women, and young people, but is largely characterized by small-scale family farms. The environment of the people meets their ecological, social, and economic needs, and it is usually governed by traditional injunctions or norms of exploitation. Before the advent of chemical fertilizers, local farmers largely depended on organic farming, and today use local approaches to soil conservation, such as zero tilling in cultivation, mulching, and other soil management techniques. To ensure their ecological identity, the people have learned to understand the ecosystem and how to relate to it according to core farming values and customary regulations.

But despite the desire of the people to live in harmony with nature, the demographic pressure, economic motives, and farming approaches are the main sources of environmental risks. Orthodox methods of resource exploitation degrade the environment, and young people remain jobless, underemployed, and poor as a result (Mbebeb and Songwe 2011). Environmental risk, therefore, remains a critical problem due to discrepancies between economic, sustainable livelihood values and ecological values.

Ndenecho (2009, 27) laments that “traditional farming systems, which over centuries developed in constant interaction with local culture and local ecology, have disintegrated because of the lack of local capacity to adjust to population growth and the influence of foreign values.” This means that the people face a major threat to their beliefs about farming systems, particularly with regard to the perception of farming by young people.

The Green Growth Project

Motivated in recent years by the need to simultaneously address environmental degradation and boost income generation at the local level, a number of projects have been implemented in developing countries (UNEP 2011). But despite the increase in environmental and social challenges, only a small number of leading businesses are taking significant action to mitigate future environmental risks (Hill et al. 2010). This article focuses on one such program, the green growth project of Youth Outreach Programme-Cameroon, supported by the United Nations Human Settlements Programme (UN-HABITAT). The project was designed to promote the economic and social inclusion of young people through investments in market gardening and poultry farming, with an emphasis on organic farming values as part of a climate-change mitigation strategy. The first phase of the initiative involved capacity building relating to organic farming; it also included a focus on entrepreneurial competence, environmental risks, ecological attitudes, and self-conceptions. The study hypothesized that upon participating in training, young people would have a more favorable attitude toward ecological entrepreneurship and start-up creation with regard to micro-agro-business. The study was designed to respond to the following fundamental questions:

1. Is green business training capable of encouraging favorable ecopreneurship attitudes in local youths, and of promoting ecopreneurship as a strategy for achieving a sustainable livelihood and environmental risk mitigation?
2. Are social norms sensitive factors in determining ecological entrepreneurial attitudes in young people?
3. Can attitudes and social norms as single and combined factors predict the ecological entrepreneurial intentions of young people?
4. With regard to attitude and levels of intent, are there any significant differences between the males and females?

Methods of Investigation

This small study used a correlational design to assess the role of participants’ attitudes, social norms, and ecological entrepreneurial intent with regard to green business

investment and to determine if they were antecedents of economic growth and environmental risk mitigation. Forty-four local young people (n=25 females and 19 males) drawn from the green economy project of Youth Outreach Programme-Cameroon constituted the sample. The majority of participants (43.2%) fell within 26 to 30 years of age, were unmarried, and had secondary school graduation certificates. An adapted version of the Entrepreneurial Intention Questionnaire (EIQ) (Liñán, Battistelli, and Moriano, 2008) was used to assess the ecological entrepreneurial dispositions of participants. The test included four subcategories pertaining to attitudes, social norms, perceived behavioral control, and intention. In addition, some open-ended questions were presented to participants to obtain qualitative information. Following the training, participants filled out the questionnaires and returned them immediately after completion. Data were entered using the Statistical Package for Social Sciences (SPSS), and descriptive and inferential statistics were used to analyze the data. The scale's internal reliability coefficient was determined with Cronbach's alpha: attitude ($\alpha = .72$), social norms ($\alpha = .60$), perceived behavior control ($\alpha = .74$), and ecological intention ($\alpha = .86$).

Results of the Study

In order to examine the place of green agricultural entrepreneurship as a driver of livelihood and environmental protection, the pretraining occupations and post-training aspirations of local youths had to be identified (Figure 1). Before capacity building, the majority of the youths invested in small businesses, but after training, local youths expressed more interest in becoming ecopreneurs. This response indicated a shift toward organic agriculture, income generation, and environmental protection.

Figure 1: Pre-training Occupations and Post Aspirations

Occupations	Count	% Resp	% Cases	Prospective career	Count	% Resp	% Cases
Teaching	1	2.4	2.9	Eco-entrepreneur	34	69.4	77.3
Small business	15	36.1	44.1	Employer	6	12.2	13.6
Crop farming	13	31.7	38.2	Civil servant	7	14.3	15.9
Poultry farming	4	9.8	11.8	Formal sector	2	4.1	4.5
Gardening	4	9.8	11.8	-	-	-	-
Sewing/design	4	9.8	11.8	-	-	-	-
Total responses	41	100	120.6	Total responses	49	100.0	111.4

Source: Field investigation.

The drivers of ecopreneurship and the ensuing challenges experienced by local youths were subject to analysis. Achieving a rewarding career and creating jobs appeared to be the most powerful motivators for undertaking green business ventures, which include investments in ecological entrepreneurship such as the scaling up of organic agriculture. The greatest investment barrier was the lack of capital, followed by mismanagement and a low skill base (Figure 2).

Figure 2: Ecopreneurship Drivers and Investment Barriers

Eco-drivers	Count	% Resp	% Cases	Investment Barriers	Count	% Resp	% Cases
Creativity	6	9.5	14.0	Lack of capital	33	67.3	80.5
Flexibility	1	1.6	2.3	Low skill base	6	12.2	14.6
Profitability	8	12.7	18.6	Mismanagement	8	16.3	19.5
Autonomy	9	14.3	20.9	No cooperation	2	4.1	4.9
Experience	4	6.3	9.3	-	-	-	-
Train others	5	7.9	11.6	-	-	-	-
Create jobs	10	15.9	23.3	-	-	-	-
Rewarding career	20	31.7	46.5	-	-	-	-
Total responses	63	100	146.5	Total responses	46	100.0	119.5

Source: Field investigation.

Further analysis revealed the future perspectives of young people with regard to investing in ecological entrepreneurship (Figure 3). Though the results isolated financial difficulties as a principal challenge, they also revealed that participants expected education and workshops to be key values in realizing agricultural ventures.

Figure 3: Investment Perspectives of Local Youths

Investment perspectives	Count	% Responses	% Cases
Eco-entrepreneurship training	3	6.1	7.1
Monitoring	4	8.2	9.5
Saving income and profit	4	8.2	9.5
Education/workshop	27	55.1	64.3
Credit facilities	2	4.1	4.8
Financial support	9	18.4	21.4
Total responses	49	100.0	116.7

Source: Field investigation.

With regard to the conceptual framework of the study, the extent of the relationships between core variables was explored (Figure 4). Green business attitudes showed a high, positive correlation with perceived behavior control and ecopreneurship intentions, but a low association with social norms. There was evidence of a significant positive relationship between perceived behavioral control and intent. Age appeared to be significantly associated with matrimonial status and intent, but also demonstrated a marked negative correlation to gender. In general, the variables exhibited a positive correlation, proving themselves to be instrumental in understanding the dynamics of ecological entrepreneurship investment as a livelihood measure and a possible component of environmental risk mitigation.

Figure 4: Bivariate Correlation Analysis, Mean, and Standard Deviation

Variables	1	2	3	4	5	6	7	N	Mean	Std Dev
Gender (1)	-	-.299*	.203	.011	.104	.003	.039	44	1.57	.50
Age (2)		-	.383**	.338*	-.008	.251	.502**	44	2.64	.83
Matrimonial status (3)			-	.055	-.006	.189	.203	44	1.27	.49
Attitude (4)				-	.302*	.579**	.790**	44	29.68	4.05
Social norms (5)					-	.250	.362*	44	16.86	2.86
Behavior control (6)						-	.776**	43	33.62	5.37
Intention (7)							-	44	35.61	6.79

* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

Source: Field investigation.

In order to determine whether social norms could predict ecological entrepreneurship attitudes, a simple regression was performed (Figure 5), and the results indicated that social norms significantly predicted attitude: $R = .30$; $R^2 = .09$; $\Delta R^2 = .07$, $p < 0.05$. Although it confirmed the assumption that social norms exert influence on ecological entrepreneurship attitudes, the model only accounted for a .07% variation in participants' attitudes.

Figure 5: Regression of Ecopreneurial Attitudes on Social Norms

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
Model					R Square Change	F Change	df1	df2	Sig. F Change	
1(a)	.302	.091	.070	3.91246	.091	4.223	1	42	.046	1.701

a Predictors: (Constant), subjective norms

b Dependent Variable: attitude

Source: Field investigation.

In the study, it was assumed that, at different levels of analysis, attitudes and subjective norms could significantly predict the ecological entrepreneurship intentions of participants. Model 1 showed attitude to be a significant predictor of ecological entrepreneurship: attitude accounted for a 61.4% variation in participants' intention levels. In the second model, the combination of attitude and social norms clearly predicted ecological entrepreneurship intent. Attitude and social norms accounted for a 62.2% variation in participants' intention levels, thus confirming the assumption that attitude and subjective norms could greatly influence the ecological entrepreneurship intentions of youths (Figure 6).

Figure 6: Ecopreneurial Intent Regressed on Attitude and Social Norms

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
Model					R Square Change	F Change	df1	df2	Sig. F Change	
1(a)	.790	.623	.614	4.218145	.623	69.530	1	42	.000	1.839
2 (b)	.800	.640	.622	4.173976	.017	1.894	1	41	.176	

a Predictors: (constant), attitude

b Predictors: (constant), attitude, social norms

c Dependent variable: intention

Source: Field investigation.

In relation to green venture attitudes and start-up intention levels, male-female differences were subjected to analysis (Figure 7). Based on group statistics, female participants, on average, indicated a more favorable attitude toward ecopreneurship than did males (Males: N = 19; M = 29.63; SD = 3.89; SE = .89, Females: N = 25; M = 29.72; SD = 4.25; SE = .85). With regard to intention levels, the scores of the female participants, on average, were higher than those of the males (Males: N = 19; M = 35.31; SD = 6.41; SE = 1.47, Females: N = 25; M = 35.84; SD = 7.19; SE = 1.43). Despite the observed differences between the two groups, analysis using t-statistics didn't offer any significant results in terms of attitude ($t(42) = -.071, p > .05$) or intention ($t(42) = -.251, p > .05$) for either group.

Figure 7: Independent Sample Test for Male and Female Youths

		Levene's Test for Equality of Variances		T-Test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Attitudes	Equal variances assumed	.020	.888	-.071	42	.944	-.0884	1.24913	-2.60926	2.43242
	Equal variances not assumed			-.072	40.510	.943	-.0884	1.23354	-2.58052	2.40368
Intention	Equal variances assumed	.210	.649	-.251	42	.803	-.52421	2.090490	-4.742990	3.694569
	Equal variances not assumed			-.255	40.860	.800	-.52421	2.057422	-4.679691	3.631269

Source: Field investigation.

The two groups showed no significant mean difference despite the differences that were revealed in the group statistics. Consequently, ecological entrepreneurship attitudes and intention levels for male and female participants were the same. This confirms the prior belief that agricultural entrepreneurship is the mainstay of local people. The young people of both genders are socialized into farming activities during childhood to help them achieve sustainable livelihoods with responsibility and intelligence.

Discussion

The main aim of this study was to explore how local survival strategies could provide sustainable solutions to emerging environmental problems. The analysis of current and future youth activities show a shift toward ecological entrepreneurship, suggesting that capacity building is an essential factor in building green business ventures. Before training, the subjects' livelihood activities were characterized by disorganization and uncertainty. After training, however, the participants became more focused on ecopreneurship, which denotes a shift in their attitudes and intentions toward agricultural entrepreneurship. This is consistent with prior propositions and studies on the subject, which have found that the more often young people are exposed to green enterprise education and training, the more positive their attitudes and behaviors are likely to be (Mbebeb and Songwe 2011; Schaltegger 2002; UNEP 2011) with respect to green venture drives.

Behavioral expressions are influenced by motives and justify the analysis of ecological entrepreneurship drivers. The emerging recognition of ecopreneurship as a rewarding career and the acknowledgment of its plausible profitability serve as strong motivations

for engaging in ecopreneurial activities. In addition to satisfying these needs, ecopreneurship has the potential to generate solutions to climate risks according to social and ecological values. This idea concurs with the popular opinions about and advocacy of sustainable ecological entrepreneurship (FAO 2011; UNEP 2011) that are supported by recent studies on food security, poverty, and climate change mitigation (Fonjong 2004; Momodu, Akinbami, and Obisanya 2011). Despite the interest of local youths in fostering green investments, moderating factors abound. Although low skill base and mismanagement appeared in the results of the study as factors that could potentially inhibit green business investments, a lack of capital is the most anxiety-provoking factor. Investigations into existing green business practices have isolated financial assistance as a drive-reduction factor (Hill et al. 2010; Tandoh-Offin 2009; Young 2010) and, particularly in Africa, the involvement of financial institutions and social financial initiatives in aiding the green economy therefore becomes imperative. Participants in the study went further in validating their positive attitudes toward and motivations for pursuing green investments by advancing responsive strategies. Despite the poor financial situation of local youths, they identified education and participation in workshops as optimistic pathways. Traditionally, education and training have been found to be key motivators in influencing start-up intentions and actualizing green ventures (Mbebeb and Songwe, 2011; UNEP 2011), which suggests that more training opportunities for young people in agricultural entrepreneurship should be made available.

Evidence derived from correlation analysis confirms that the core variables of the study were mutually supportive in fostering a model of ecological entrepreneurship in a local context. The prevalence of relationships between the variables demonstrates that they are critical to the development of an entrepreneurial intention framework for further exploration, validation, and scale up. The strong relationship between social norms and attitudes uncovered in the study is indicative of these factors' significant influence as predictors. The study also can be seen as a validation of the people's lifestyle as a driver of needs satisfaction, economic growth, and social justice. These results coincide with prior observations about green growth strategies (FAO 2011; UNEP 2011) and with recent studies undertaken within the context of the green economy and climate change (Momodu, Akinbami and Obisanya 2011; Ndenecho 2009; Nyong, Adesina, and Osman-Elasha 2007).

Furthermore, attitudes and social norms were shown to significantly predict ecological entrepreneurship intention, indicating that the more favorable the attitudes of local people, the higher the probability of actualizing green business. Considering that attitude is a predisposition, inducing favorable attitudes through education and training becomes critical. Recent findings (Mbebeb and Songwe 2011) have revealed that favorable

attitudes toward green agriculture are capable of influencing actual behaviors relating to effective practices. The power of social norms to affect ecological entrepreneurship intentions also lies in the way local people perceive farming as a cultural value and as a survival mechanism; failure to conform to the preordained agricultural standards is tantamount to disapproval by the community. These findings are consistent with investigations on social pressure, farming, and cropping behaviors in rural communities (Fonjong 2004; Nyong, Adesina, and Osman-Elasha 2007). Such a situation is a positive valence, considering that by understanding climate risk, local people could be capable of fostering green action and investment attractions.

The place of gender in ecological entrepreneurship and climate risk mitigation cannot be underrated. With regard to ecological entrepreneurship attitudes and intentions, differential analysis indicated no significant difference between males and females. The results are similar to Petrin's (1994) observation, which found no differences between male and female entrepreneurs in terms of their propensity toward risk taking. Despite traditional perceptions, findings suggest the need to invest more in female ecological entrepreneurs, which has long been ignored, considering their roles as drivers of livelihoods. The present result could be explained by the significant effect of awareness creation and training on the women, and this is accounted by the fact that although men are traditionally perceived as more preoccupied with productive activities than women, the latter is making significant attempts to meet up with the challenges. This fits well with the growth of green agricultural entrepreneurship since small social-based entrepreneurship is a traditional occupation of most women in rural communities.

Conclusion

In this study, I have examined how local people as rural entrepreneurs satisfy their needs while providing environmental solutions for minimizing climate change risks. The results from using the planned behavior model revealed lessons that illuminate how to transform micro-green-enterprises into giant structures. When considering ecological entrepreneurship as a prominent part of the green-growth, paradigm, it is necessary to "stress the usefulness of the new approaches to business development that have or are revolutionizing environmental management practices around the world" (Tandoh-Offin 2010, 33). These new approaches are often resource intensive, especially for the poor rural people involved, and are no doubt challenging to incorporate into ecological entrepreneurial practices; their implementation, therefore, should build on the cultural values and needs of the local people. Honoring these traditions might also help to avoid dissonance and noncompliant behavior that could result from possible inconsistencies occurring between ecological entrepreneurial attitudes and actions.

Local communities are generally blessed with an abundance of natural resources that permit a wealth of green opportunities for agricultural entrepreneurship. Awareness creation and skills development are necessary to persuade many youths to get on board the green economy platform. The primary task is to influence perceptions and attitudes and to motivate good investment behaviors built on an endogenous economy. This idea comes from the recognition that cognitive constructs play a vital role in reinforcing social norms and in facilitating start-up intentions with regard to green ventures. The possibility of financing pro-poor green investment, particularly from the perspective of social financing, is encouraging considering that rural people are mainly subsistence crop producers with little or no capital for expansion. In any event, critical observation holds that ecopreneurs require access to financial services, and that training is essential to help them grow and create wealth. Financial barriers are contextually likely to moderate the link between planned behavior (intention) and ecopreneurship ventures. Although a growing range of products could be introduced to address environmental risk in the finance sector through eco-friendly lending schemes and investment practices (Hill et al., 2010), such opportunities are largely reserved for eco-initiatives in advanced countries. Only development agencies stand to assist local investors (individuals, local groups, and nongovernmental organizations) in actualizing green economy ventures in rural localities.

Results obtained from the sample show the power of social norms in influencing ecopreneurship attitudes and intention levels. Considering that communities rely on a social capital base, local groups could be encouraged to resuscitate local knowledge and values and integrate them into the mainstream green-growth paradigm. The assumption is that this integration of indigenous cultural ideas into mainstream, climate-change mitigation strategies would aid in the response to emerging and diverse environmental externalities. It should be recalled that “finding ways to protect global ecosystems, reduce the risks of global climate change, improve energy security, and simultaneously improve the livelihoods of the poor are important challenges in the transition to a green economy, especially for developing countries” (UNEP 2011, 19-20). This statement summarizes the challenges inherent in the present discourse. In addition to developing resilience in individuals, a growing green economy must transform traditional rural subsistence entrepreneurs, mobilize local resources, and create a supportive environment, particularly with the help of governmental policy. While acknowledging the general trend toward a green economy, the study results also suggest the need for more policy and action-oriented research activities with the involvement of the social and behavioral sciences, which are capable of explaining behaviors with regard to ecological entrepreneurship interventions.

It is also worthwhile to note the limitations of the study. The use of the theory of planned behavior model could have been constrictive, considering that the present environment is

not entirely supportive of ecopreneurship, and that intentions toward engaging in entrepreneurial activities are hardly ever realized due to financial, policy, and capacity barriers. This suggests the need for an extension to the model capable of considering moderating factors in the intention-action process. At the methodology level, the number of participants used was low, which could pose problems in terms of validity and generalization. The study also solely considered green agricultural entrepreneurs, who are just a subset of the entire ecological entrepreneurial population. Considering that it was one of the rare small-scale projects focused on the green economy, moderate lessons, critical incidents, and stimulating ideas could still be adapted for use in necessary theory building, validation, and practice.

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Biography

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