The Impact of Post-Materialist Cultural Values on Women's Engagement In Environmental Venturing

Introduction

"Ecopreneurship," involves the launch of ventures that pursue opportunities focused on environmental concerns (Keogh and Polonsky, 1998). Scholars use different terms to describe this phenomenon, such as enviropreneurship, environmental entrepreneurship (Hendrickson & Tuttle 1997; Keogh & Polonsky 1998) green entrepreneurship (Walley & Taylor 2002), or sustainable entrepreneurship (Shepard and Patzelt, 2011). Regardless of the label, this kind of venturing activity is "an existential form of business behavior committed to ecological sustainability" (Isaak, 2002, p. 81).

Ecopreneurship has gained increasing interest in the last decade from scholars and practitioners. Research focusing on ecopreneurship has moved progressively from niche, academic outlets specializing in environmental management (Cohen, 2006; Schaltegger, 2002) to more mainstream and entrepreneurship journals (Cohen and Winn, 2007; Hall, Daneke and Lenox, 2010).

Since ecopreneurship stresses both ecological equity and economic performance, this research aims to identify if gender socialization and contextual motivations influence an entrepreneur to select ecopreneurial initiatives versus other forms of venturing, such as commercial entrepreneurship. Drawing on theories of gender socialization, this study investigates if women are more likely to be ecopreneurs since they are more likely socialized toward caregiver roles (Blocker and Eckberg, 1997). Following Aldrich's (1989) argument that women hold a different view of reality that emanates from social structures, Brush (1992) argues for an integrative view of gender and entrepreneurship. Women, she argues conceive of their business as "cooperative networks of relationships rather than primarily as a separate profit-making entity." Taken together, these socialization agents serve to negatively shape preferences for traditional jobs among women in favor of non-traditional jobs (Scherer, Brodzinski, Wiebe, 2000). Thus, women may be predisposed to prefer ecopreneurship because it represents an alternative form of non-traditional venturing (Bruni, Gherardi, and Poggio, 2004; Marlow and Strange, 1994).

Both entrepreneurship and individuals are embedded in different contexts (Hughes et al., 2012; Welter, 2010), therefore it is necessary to investigate the role of national culture in shaping value creation goals within and between different gendered value systems. Specifically, this study investigates the cultural force concerning post-materialism, the extent to which a national society emphasizes autonomy and self-expression in shaping venture value creation objectives, can impact selection into ecological venturing. Specifically, we argue that the cultural values associated while post-materialist societal norms incorporate many of the socialized values associated with the traditional caregiver role inherent to women through gender socialization.

Accordingly, this study takes a dialectical view between "structure" and "agency, which contends that the impact of structures (e.g., gender socialization and culture) and human agency (e.g., venturing) are important in the explanation of social life and organization (Bourdieu, 1977; Giddens, 1984) (see Figure 1). Therefore, individuals are partly socialized agents that are influenced by emergent social structures. This perspective integrates micro and macro, or voluntarist and determinist dimensions of human activity. Since entrepreneurship is embedded in a social context, it most certainly involves and draws on society; despite entrepreneurship being a guided by the forces of individual agency.

Literature Review and Hypotheses Development

Socialization theory posits that individual behaviors are influenced by normative societal gender expectations. Since women are socialized to be caregivers, it is likely that they might also engage in pursuits that take care of the environment, such as ecopreneurship. Scholars argue that women's social roles as caretakers have led them to be key players in environmental organizing (Hamilton, 1990). Moreover, women naturally are perceived as guardians and enforcers of ethical

conduct (Merchant, 2014; Slote, 2007); hence, protectors of the environment (Braun, 2010), which implies that they might indeed be more likely to pursue in environmental ventures than men.

There is considerable evidence to highlight that this phenomena is global. Several studies have found that gender socialization in most societies encourage differential socialization between the sexes, where girls and boys encouraged to pursue gendered activities, and are treated differently (Block, 1983; Lewis and Weinraub, 1979; Williams and Best, 1990). These patterns of gender socialization might influence environmental behavior, such as ecopreneurship, as men are socialized to dominate the environment (Davidson and Freudenburg, 1996; McStay and Dunlap, 1983), and women are socialized to maintain and nurture life, relationships, and the community (McStay and Dunlap, 1983).

Indeed, research confirms that women tend to express higher level of concerns toward the environment than do males (Blocker and Eckberg, 1997; Davidson and Freudenberg, 1996; Dietz et al., 2002; Hunter et al., 2004; Mohai, 1992; Schultz, 2001; Tindall et al., 2003). In addition, there is strong evidence that women also enact more environmentally oriented behaviors than men (Brun, 2012; Rickinson, 2001; Autio and Heinonen, 2004; Zelezny et al., 2000). This suggests that gender socialization pushes females to have a stronger "ethic of care" orientation by being considerably more nurturing, compassionate, and concerned with the needs of others (Eagly, 1987; Gilligan, 1982). This socialization in turn influences choice of occupation, family roles, helping behavior, and altruism (Dietz et al., 2002; Hochschild and Machung 2012; McStay and Dunlap, 1983) and by extension, a special kind of helping, such as pro-environmental behavior (Blocker and Eckberg, 1997).

Considering gender, the likelihood of engaging in ecopreneurship may also be dependent on cultural values. Culture acts as a schema, or generalizable or transposable procedures applied in the enact-ment of social life (Sewell, 1992). Furthermore, the aggregate trait hypothesis specifies that the collective set of a society's values (Schwartz, 2006) will considerably influence the behaviors of individuals within that society (Davidsson and Wiklund, 1997). As a result, an individual who is socialized in a given culture learns various patterns of interaction that are based on the norms, rules, and values of his/her society. Consequently, culture is a type of the social structure that impacts individual behavior because the ideas that constitute culture "comprise dynamic systems of meaning with a certain inner logic of their own" (Hays, 1994, p 68).

H1: Compared to male entrepreneurs, female entrepreneurs are more likely to be environmental entrepreneurs.

A large body of prior research establishes that national cultural context influences entrepreneurial activity (Beugelsdijk and Maseland, 2010). Findings suggest that culture can both hinder and facilitate the expression of certain business values by founders (Powell et al., 2002; Wu et al., 2008). Therefore, is reasonable to conclude that culture is a dominant force that can influence the kinds of ventures entrepreneurs create (Berger, 1991). However, the majority of this work has predominantly focused only on drivers of commercial entrepreneurial activity. Given that normative cultural values affect entrepreneurship (McGrath et al., 1992; Mueller and Thomas, 2001; Tiessen, 1997), one would like to know precisely which normative values could affect ecopreneurship most strongly. Drawing from work focused on social entrepreneurship (e.g., Stephan et al., 2014), suggests that post-materialist normative values should be considerably linked to ecopreneurship.

The concept of post-materialism is rooted in the modernization theory (Inglehart and Baker, 2000, Inglehart and Welzel, 2010; Marx and Engels, 1973). According to modernization argument, the industrialization and the post-industrialization process produce widespread social and cultural consequences in normative national values from rising educational levels to changing gender roles (Ingelhart, 1997). Industrialization is linked with values of materialism and an emphasis on wealth maximization by economic growth at any cost. According to Bell (1973; p.

147), it is "a game against fabricated nature," a bureaucratic rationalized process which aims at creating and dominating the environment. However as publics of affluent societies move towards post-industrialization, individuals begin to place an increasing emphasis on environmental protection, free choice, autonomy, and quality of life. The rise of the post-industrial society leads to a growing emphasis on self-expressive normative values, which are the foundation of post-materialist values (Ingelhart and Welzel, 2010).

H2: At the national level, higher levels of post-materialist values are positively associated with environmental entrepreneurship.

Cultural values at the national level can attenuate or intensity the expression of socialized values between genders, which may or may not coincide with the traditional socialized gender expectations across societies (Sagiv and Schwartz, 2000). Venturing occurs in a web of beliefs about the acceptable characteristics, roles and behaviors that are congruent with societal norms about men and women. Gender role prescriptions are deeply rooted in the cultural ideologies of society and can impact several aspects of women's daily lives.

We believe that the national culture that an entrepreneur is embedded in will influence the likelihood of pursuing an ecopreneurial venture, and particularly so for female entrepreneurs. Emerging research suggests that compared to males, females' entrepreneurial activities might be more strongly affected by cultural forces. For instance Elam and Terjesen (2010) find that institutionalized norms and practices have a significant affect on the prevalence of female entrepreneurship. According to Elam and Terjesen (2010) men and women seem to respond differently to institutional factors when deciding to engage in venturing activity, and the extent to which male and female entrepreneurs respond differently to institutional context might depend on aspects of national culture. Bullough, Renko, and Abdelzaher (2014) provide comepelling evidence for this argument. They find that women's business ownership is strongly affected by the degree of societal in-group collectivism and institutional collectivism, such that countries that exhibit the lowest levels of women's business ownership are societies in which societal in-group and institutional collectivism are high. Furthermore, Santos, Azan, Roomi, and Liñan (2014), find that among students', women's' entrepreneurial intentions and perceptions were more strongly affected by the cultural context than those of men. But, when men's attitudes were compared across cultures, no significant differences are found. Indeed, it appears that women face strong role expectations that can impact their involvement in the business sector (Minniti, 2010; Minniti and Nardone, 2007).

H3: Culture moderates the relationship between gender and environmental venturing, such that the positive association of being a female and pursuing an environmental venture will be stronger form female entrepreneurs than male entrepreneurs in countries with higher levels of post-materialism.

Methods

Taken together, this study employs multi-level logistic modeling to investigate the following questions: Does an entrepreneur's gender explain his/her preferences for engaging in ecopreneurship? Do post-materialist cultural values differentially impact the likelihood of entrepreneurs pursuing environmental, and non-environmental ventures? And finally, do national level post-materialist cultural values influence the relationship between gender and the likelihood of pursuing ecopreneurship? Results indicate that female entrepreneurs are significantly more likely to select into environmental entrepreneurship when compared to male entrepreneurs in societies that maintain strong post-materialist values. Conversely, if a society has weak post-materialist values, male entrepreneurs are more likely to engage in ecopreneruship than female entrepreneurs, which suggests that normative culture does indeed play a important role in selecting into environmental venturing, particularly for women.

To test our research questions, this study utilizes the Global Entrepreneurship Monitor (GEM) Adult Population Survey (APS), the World Values Survey (WVS), the Happy Planet Index (HPI) and World Bank (WB). GEM data is generally recognized as a premier source of entrepreneurship data (Economist, 2007, 2009) and has been used in over 500 published studies of entrepreneurship.

The sample is drawn from all business owners identified by GEM in 47 countries in 2009 that had completed the full interview schedule and provided complete information to our key variables of interest (n=19,584). We use the 2009 sample because there was a special research protocol implemented to identify the economic, social and environmental values goals of organizations for the special interest topic of social entrepreneurship during this sampling cycle. We used the responses to the following question to measure our dependent variable of environmental venturing: "Please allocate a total of 100 points across these three categories as it pertains to your goals." Respondents then assigned points to economic, social, and environmental value creation goals. Based on what their highest response to the goals question (e.g., economic, social, or environmental), entrepreneurs are categorized as environmental entrepreneurial participants or non-environmental entrepreneurial participants.[1]

Table 1 provides a list of the items used to operationalize this variable, in addition to all the other variables in this study, with the corresponding database where the items were derived from. The sample includes only those individual who can be classified as owners of a business, which include nascent entrepreneurs (actively involved in a the creation or development of a venture who have yet to experience positive cash flow, and will be owners), baby business owners (whose new venture are less than 42 months old and have a positive cash flow), and established business owners (those who own a venture that is older than 42 months and has positive cash flow) in year 2009. The sample is weighted according to the adult population for the respective countries. Detailed descriptions of the methods and sampling frame used to generate the GEM database are reported in Reynolds et al. (2005).

Results and Implications

Using multi-level logistic regression this study finds evidence that suggests that gender has no direct effect on the probability of pursuing and environmental venture among entrepreneurs, and that the level of post-materialism in society has no direct effect in choosing to engage in ecological ventures among entrepreneurs. However, our finding did confirm that the relationship between gender and probability of being an environmental entrepreneurs indeed varies as a function of the level of post-materialist normative values among societies (see Table 2). Specifically, this study finds that the female entrepreneurs in societies with high levels of post-materialism are significantly more likely to pursue ecopreneurial ventures than male entrepreneurs. Conversely, female entrepreneurs in societies with weak post-materialist values appear to be less likely to pursue environmental ventures when compared to male entrepreneurs (see Figure 2). Therefore, our findings suggest that gender socialization and culture appear to play an appreciable role in influencing the kinds of organizations women create. By viewing gender socialization and post-materialist cultural values as structures, it becomes apparent that these "mental schemas" (Bourdieu, 1977) have considerable empowerment on female agency in

[1] We followed the same procedure utilized in the 2009 GEM Social Entrepreneurship report to identify pure and relative-mixed social entrepreneurs, but instead identified pure environmental and relative-mixed environmental entrepreneurial activities (Terjesen, Lepoutre, Justo, Bosma, 2012). Pure ecopreneurial ventures indicated that 100% of the goals were associated with environmental value. If the respondent indicated multiple points across the three value sets, the respondent was categorized as a relative-mixed environmental entrepreneur if environmental was the highest of the three values provided. Additionally, if environmental points were tied with social but outweighed economic (e.g., 40 economic, 30 social, and 30 environmental), the respondent was still classified as a relative-mixed ecopreneur. If points where tied with economic but outweighed social (e.g., 40 economic, 20 social, and 40 environmental), we also classified these respondents as relative-mixed ecopreneurs. However, if cases were tied with economic and environmental, but social and environmental did not outweigh economic (e.g., 50 economic, 0 social, and 50 environmental), the case was categorized as a non-environmental entrepreneurial participant. The logic for the categorization of such cases of non-environmental, pure and relative-mixed environmental entrepreneurs, is that the sum of both social and environmental outweighed the sum of economic, and that social and environmental goals often go hand in hand (Cohen et al., 2009). Subsequently, we identified 2,294 ecopreneurs, 44 represent pure goal oriented ecopreneurs and 2,250 represent relative goal oriented ecopreneurs.

environmental venturing. Moreover, findings from this analysis provide support to the sex-based stereotyping argument, which argues that gender can influence evaluations of male, and female typed venture ideas (Gupta, et al., 2009).

The most striking feature of this analysis is appreciable impact of cultural values on women's engagement in ecopreneurial venturing. Prior evidence has suggested that women might be more susceptible to social norms in the context of entrepreneurship (Bullough et al., 2014; Santos et al., 2013; and Terjesen and Elam, 2010). The findings from this study extend on these conversations to provide compelling evidence to further argue the considerable impact of structural drivers of gender socialization and post-materialist cultural values on embedded agency among female entrepreneurs and the ventures they create.

Overall, this study contributes to the entrepreneurship literature in several ways. First, this study is one of few that investigates ecologically oriented ventures with large-scale empirical data (e.g., Hechavarria et al., 2012; Wagner, 2009). Second, we fill calls for multi-country and multi-level research in environmental entrepreneurship (Terjesen et al., 2013) by utilizing a 47-country dataset. Third, we begin to open the black box of environmental entrepreneurship by investigating the role of gender, seeking to understand if men and women entrepreneurs equally engage in environmental venturing. Subsequently, we respond to calls that request more research at the intersection of gender and environmental entrepreneurship (Jennings and Brush, 2014). Finally, we identify the role of cultural values play in influencing the pursuit of ecopreneurial ventures among entrepreneurs, and in particularly, women.

Table 1. Operalization of Variables in Study

Variable	**Coding**	**Source**
Level 1		
Ecopreneur	Dichotomous variable coded 1 =Yes Environmental entrepreneurs and No=Non-environmental entrepreneur. To classify founders as ecopreneurs the responses to the question: "Organizations may have goals according to the ability to generate economic value, societal value, and environmental value" and then "Please allocate a total of 100 points across these three categories as it pertains to your goals" were utilized. This corresponds to items:	GEM
Age	Continuous variable capturing entrepreneurs' age	GEM
Household income	Household income coded ordinally into thirds: lowest third, middle third, and upper third.	GEM
Education	Harmonized with the GEM coding scheme, coded ordinally into five categories: no educational background, some secondary education, secondary education, post-secondary education, and graduate experience.	GEM
Nascent Businesses	The established business is defined as a binary variable, where 0 = venture or owner/ managers is a business 42 months old or older; and 1 = the venture or owner/ managers is a business younger than 42 months and is nascent stage.	GEM
Number of Owners	Number of owners in the venture.	GEM
Innovativeness	We define ventures on an ordinal scale with a high innovative orientation as 9 and those with no innovative orientation as 0. This additive three item index is based on respondent indication on whether, potential customers will consider this product or service new an unfamiliar (1 = none, 2 = some, 3= many), how many businesses offer the same product (1 = none, 2 = some, 3 = many), how many (potential) customers consider product new/unfamiliar (1 = none, 2 = some, 3 = many).	GEM

Industry	Ecologically oriented industries include agriculture, fishing, hunting, forestry, mining, electric, gas, utilities, transportation, and sanitary services. Non-ecologically industries include real estate, insurance, and finance retail trade, public administration, education, health services, manufacturing, construction, communications.	GEM
Female	Respondent sex, coded Female=1 and Male=0.	GEM
Motivation	Codded nominally using the reason the respondent's answer to why they started this business: (1) to take advantage of a business opportunity represent pull motivations; (2) no better options for work, or dissatisfied with current job represent push motivations, and (3) respondents that indicated both or other, represent mixed motivations.	GEM
Level 2		
Economic development level	Gross domestic product (PPP in international dollars per capita) in US dollars. We also included a squared term for GDP to account for the U shaped relationship between GDP and entrepreneurship.	WB
% GDP Growth	Percent growth in GDP from year 2008 to 2009.	WB
Ecological Footprint	It is a per capita measure of the amount of land required to sustain a country's consumption patterns, measured in terms of global hectares, which represent a hectare of land with average productive bio-capacity.	HPI
Level of Post-materialism	Based on the following question and responses: "There is a lot of talk these days about what this country's goals should be in the next ten or fifteen years. Would you please say which one of them you yourself consider most important in the long-run: a) Maintaining the order of nation; b) Giving the people more say in important government decisions; c) Fighting rising prices; or d) Protecting freedom of speech." Respondents rank the two most important items. Regardless of the order, items a and c correspond with materialist values; items b and d correspond with post-materialist values (Inglehart, 1997). We follow Tranter and Western (2008) in recoding the 4-item post-materialism index based on the aggregate frequencies for post-materialism using *all* WVS/EVS waves of data weighted by population	WVS

Table 2. Multilevel Logistic Regression

	Environmental Null				Environmental Random Intercept Fixed Slope: Control Model				Environmental Random Intercept Fixed Slope: Female Main Effects Model				Environmental Random Intercept Fixed Slope: Interaction Model			
Level and Variable	Estimate	Exp(B)	S.E.	P value	Estimate	Exp(B)	S.E.	P value	Estimate	Exp(B)	S.E.	P value	Estimate	Exp(B)	S.E.	P value
Level 1																
Intercept	-2.512	0.081	0.008	0.000	-2.657	0.070	0.401	0.000	-3.612	0.027	0.020	0.000	-3.825	0.034	0.015	0.000
Age					0.003	1.003	0.003	0.261	0.004	1.004	0.003	0.120	0.004	1.004	0.003	0.119
Education					-0.022	0.979	0.023	0.352	-0.033	0.967	0.026	0.217	-0.035	0.966	0.025	0.170
Household Income					-0.117	0.890	0.031	0.001	-0.135	0.874	0.035	0.001	-0.127	0.881	0.032	0.001
Owners					0.006	1.006	0.002	0.001	0.005	1.005	0.002	0.003	0.005	1.005	0.002	0.002
Nascent					0.216	1.241	0.078	0.001	0.253	1.288	0.098	0.001	0.267	1.269	0.098	0.001
Industry					0.185	1.203	0.090	0.013	0.240	1.272	0.099	0.002	0.261	1.274	1.074	0.001
Innovativeness					-0.007	0.993	0.078	0.927	0.082	1.086	0.094	0.341	0.071	1.080	0.091	0.401
Female									0.061	1.063	1.063	0.381	-0.2480	0.780	0.099	0.050
Level 2																
GDP (per capita)					0.0000	1.0000	0.000	0.000	0.0000	1.0000	0.000	0.568	0.0000	1.0000	3.560E-06	0.235
% GDP Growth					-0.055	0.947	0.007	0.000	-0.068	0.934	0.026	0.015	-0.035	1.150	0.036	0.000

Ecological Footprint				-0.018	0.983	0.036	0.615	0.070	1.073	0.332	0.820	0.140	1.035	0.097	0.000
% Post-Materialism								0.009	1.009	0.010	0.353	0.015	1.015	0.007	0.021
Cross Level Interaction															
Female x Post-materialism												0.0221	1.0223	0.007	0.002
	Estimate	S.E.	P value	Estimate		S.E.	P value	Estimate		S.E.	P value	Estimate		S.E.	P value
Variance Components															
Within-Country	3.290			3.290				3.290				3.290			
Intercept Variance	0.311	0.226	0.000	0.438		0.049	0.000	0.350		0.086	0.000	0.277		0.029	0.000
Additional Information															
ICC	0.086			0.118				0.096				0.078			
-2LL	157,357			5,846				5,259				5,247			
Deviance				151,511				586				12			
N	27,575			22,139				19,584				19,584			

Figure 1. A Model of Environmental Entrepreneurship Antecedents

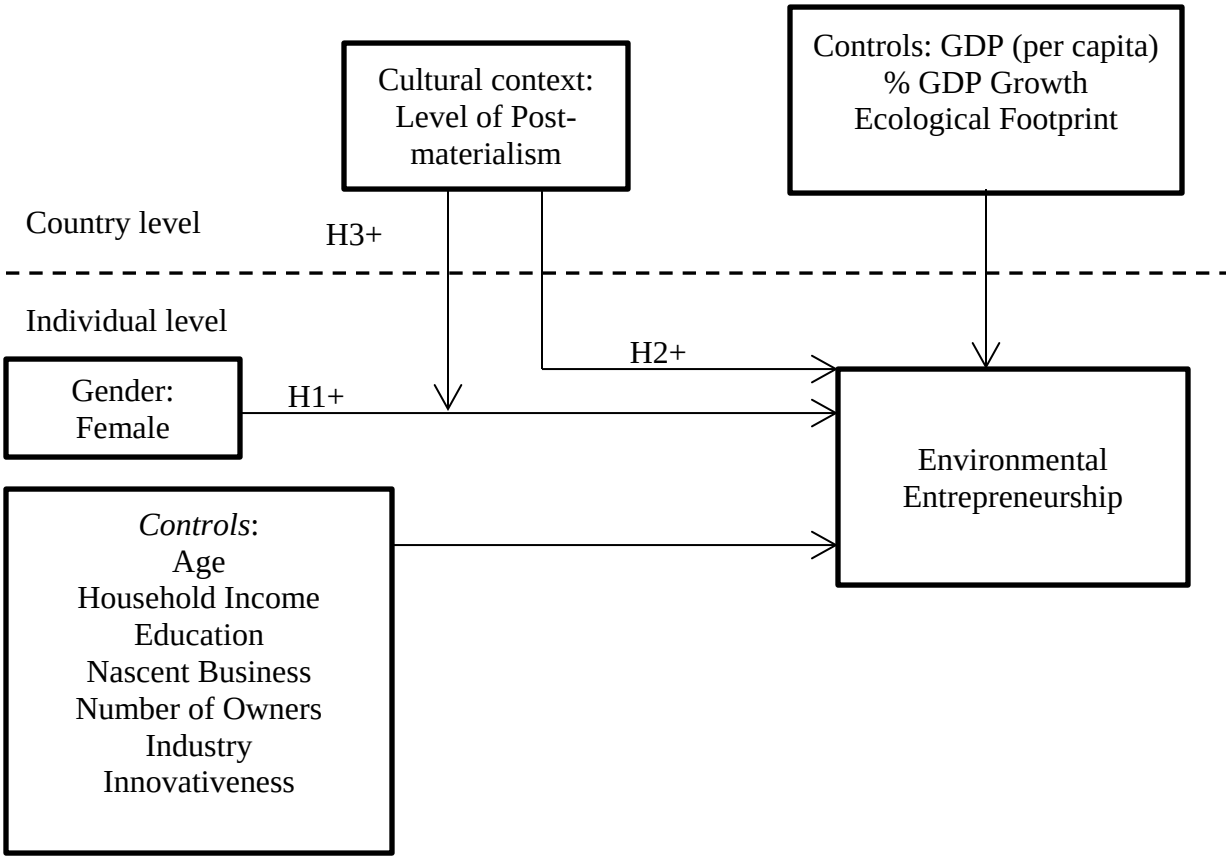
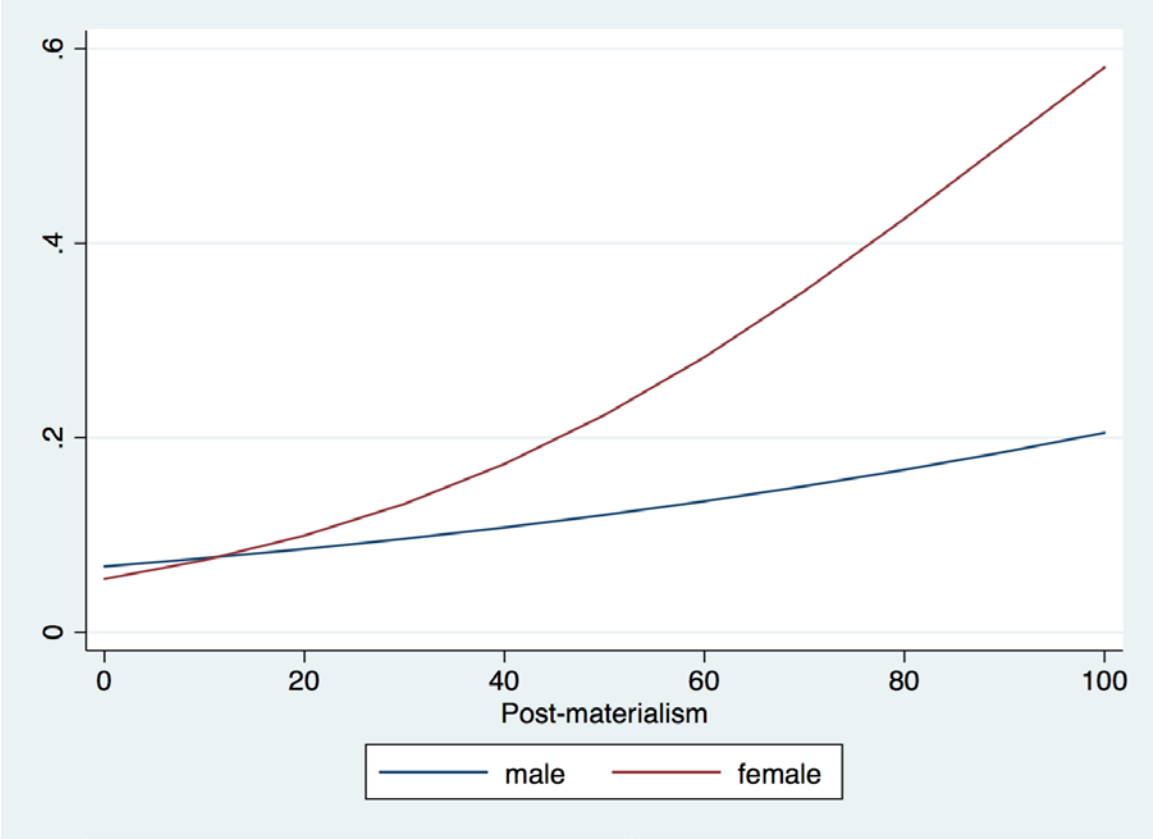


Figure 2. Random and Fixed Effects Probability of Ecopreneurship By Level of Post-Materialism and Gender



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