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Unmasking the contributing factors of entrepreneurial activities among men and women in Ghana

Peter Quartey
Department of Economics/ISSER, University of Ghana, Accra, Ghana
Michael Danquah
Department of Economics, University of Ghana, Accra, Ghana
George Owusu
Department of Geography and Resource Development/ISSER, University of Ghana, Accra, Ghana, and
Abdul Malik Iddrisu
Department of Economics, University of Ghana, Accra, Ghana

Abstract

Purpose – Using the 2010 Global Entrepreneurship Monitor (GEM) survey data, the purpose of this paper is to investigate the contributing factors of entrepreneurial propensity among males and females in Ghana.

Design/methodology/approach – Using a measure of entrepreneurial propensity that takes into account individuals who are involved in starting a new business (nascent entrepreneurs) as a dependent variable and socio-demographic characteristics, and perceptual variables as explanatory variables, the study adopts robust empirical estimation techniques to examine how these variables influence the probability of starting a new business among men and women in Ghana.

Findings – The probability of being a male nascent entrepreneur is significantly dependent upon a wide range of factors including demographic, economic, perceptual and contextual elements, albeit with important variations across gender. An individuals' subjective assessment of fear of failure in starting a business and of having the requisite entrepreneurial capabilities; the age of the individual; gender of the individual; work status and contextual factors matters for entrepreneurial propensity in Ghana. However, important differences exist in the drivers of entrepreneurial propensity for males and females with females' entrepreneurship attributed largely to conditions of necessity relative to their male counterparts.

Originality/value – The main value of this paper is to use the GEM survey (which is nationally representative) for Ghana to analyze the contributing factors of the entrepreneurial propensity among men and women in Ghana.

Keywords Ghana, Entrepreneurial activity, Perceptual variables, Socio-demographic factors

Paper type Research paper

1. Introduction

Across the world and in particular developing countries, promotion of entrepreneurship has become a key policy focus as it is widely viewed as a means of creating jobs, reducing poverty and enhancing the overall welfare of individuals and households (Chigunta *et al.*, 2005; Garcia and Fares, 2008; Minniti and Naude, 2010). Indeed the vigorous efforts to promote entrepreneurship have close affinities with the increasing interest in private sector development and the neo-liberal economic development agenda. In the pursuit of entrepreneurship development in developing countries, two groups of people have come into focus, namely, the youth and women. Both the youth and women are largely viewed as vulnerable, particularly in terms of employment and income. Therefore, promoting entrepreneurship among these two groups of people is largely viewed as widening their

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employment opportunities as well as other life opportunities (Africa Commission, 2009; Institute of Statistical, Social and Economic Research, 2012).

Less attention has been paid to the propensity toward entrepreneurship across gender, although recent studies have found that the rate at which women are forming businesses has increased significantly (Center for Women's Business Research, 2004). In spite of this increase, important differences still exist in the levels of new firm creation across genders, and studies have shown that the number of women involved in starting a business is significantly and systematically lower than that of men (Delmar and Davidsson, 2000; Minniti, 2010). According to Dzisi (2008) and Yankson *et al.* (2011), in many parts of the world, especially in developing countries, varying societal views, attitudes and opinions about working women, largely shaped by culture, religion, childcare and the levels of education, and socio-development tend to weigh more heavily against women than men entering the world of business. Yankson *et al.* (2011) have argued that while there is a growing literature on entrepreneurship in Sub-Saharan Africa, relatively little is known about the forms and characteristics of entrepreneurship across genders in specific countries as well as the continent in general. More importantly, analyzing the entrepreneurship landscape across the world (including ten countries from Sub-Saharan Africa) based on the Global Entrepreneurship Monitor (GEM) survey, Kelley *et al.* (2011) argued that there is a considerable gender gap in entrepreneurial activity worldwide, with significantly more men than women being in the process of starting a business or operating new businesses.

However, in Ghana, the GEM survey in 2010 indicates that Ghanaian women are more entrepreneurial than men – a condition which is rare across all the GEM countries. In fact, in 2010, Ghana was the only country among the GEM surveyed countries where female entrepreneurial activity measured by a key GEM indicator, the "total early stage entrepreneurial activity" (TEA), exceeded that of men. The TEA rate for Ghana was estimated at almost 60 percent for the females and 42 percent for males. In other words, unlike other countries, in Ghana (across gender) there are fewer men than women starting businesses (see Kelley *et al.*, 2011). Indeed, the GEM study confirms the conclusions of other studies which have concluded that the number of female entrepreneurs in Ghana far outweigh the number of male entrepreneurs (IFC/World Bank, 2007; Dzisi, 2008). Nevertheless, the GEM studies are significant as they provided more conclusive results based on a representative sample of the adult population surveyed aged 18-64 years in terms of the number of female engaged in entrepreneurial activities *vis-à-vis* their male counterparts.

This paper utilizes the 2010 GEM survey data on Ghana to investigate the contributing factors of entrepreneurial propensity among males and females. Using a measure of entrepreneurial propensity that takes into account individuals who are involved in starting a new business (nascent entrepreneurs) as a dependent variable and socio-demographic characteristics, and perceptual variables as explanatory variables, the study adopts robust empirical estimation techniques to examine how the explanatory variables influence the probability of starting a new business. We estimate both a pooled model and a gender disaggregated models for men and women. The paper, therefore, contributes to the understanding of what factors influence the propensity to start new businesses among men and women in Ghana. Overall, our findings suggest that female entrepreneurs in Ghana are motivated largely by "push" factors relative to males. In other words, female entrepreneurship in Ghana can be described as being necessity driven rather than opportunity driven as in the case of men.

The remainder of the paper is structured as follows: Section 2 provides a brief overview of the literature on motivation to start business. Section 3 presents the methodology and description of data. Sections 4 and 5 look at the empirical results and conclusions of the study, respectively.

2. Motivation to start a new business

Researchers in several disciplines have focused on a variety of factors potentially contributing to an individual's propensity to start a business (see Gartner, 1985). Generally, most of the studies (see Arenius and Minniti, 2005; Langowitz and Minniti, 2007) propose grouping factors influencing entrepreneurial decisions into three main groups: socio-demographic factors, perceptual variables and contextual factors. With respect to socio-demographic characteristics, existing studies have centered on how variables like age, income, employment status, education and knowing other entrepreneurs determine the propensity to start new businesses. For instance, Levesque and Minniti (2006) have shown the existence of an inverted U-shaped relationship between age and involvement in starting a new business. For both men and women, the most entrepreneurially active period has been shown to be between 25 and 34 years of age and declining thereafter. No clear evidence, however, exists on the relationship between education and entrepreneurship (see Blanchflower, 2004). Some empirical evidence can also be found albeit in developed countries on the connection between entrepreneurship and incomes (see Evans and Jovanovic, 1989; Smallbone and Welter, 2001; Carter and Rosa, 1998; Carter *et al.*, 1997), and employment status (see Blanchflower and Oswald, 1998). On the importance of knowing other entrepreneurs, Langowitz *et al.* (2006) have found networks and role models to be particularly appreciated by both men and women involved in various stages of the entrepreneurial process.

Perceptual variables capturing the subjective assessment of entrepreneurs about themselves and their entrepreneurial environment have often been included in most studies. There is general agreement that opportunity perceptions, risk tolerance and self-confidence are all highly correlated to the decision to start a new business (Arenius and Minniti, 2005; Koellinger *et al.*, 2005). Several studies have focused on the relationship between alertness to existing opportunities, fear of failure and the subjective belief of having adequate skills and knowledge and the propensity to start new businesses. Most researchers agree that opportunity represents the most distinctive and fundamental entrepreneurial behavior (see Eckhardt and Shane, 2003). With regards to risk tolerance, there is some evidence supporting the idea that women have low risk tolerance when making financial decisions than men. In a study of the gender differences in risk behavior, Powell and Ansic (1997) point out that gender differences in risk propensity exist, and are related with differences in decision strategy resulting from an underlying differences in motivation. Powell and Ansic (1997) argue that females have lower propensity to taking risk, and tend to focus on strategies which avoid the worst outcomes and maintain their security. Similarly, Watson and Robinson (2003) argue that relative to males, female-controlled small- and medium-sized enterprises have significantly lower risk. Some studies have also shown that individual self-confidence, defined as individuals' belief in their capability to perform a task, influences the development of both entrepreneurial intentions and actions or behaviors (see Boyd and Vozikis, 1994).

In Ghana, the increasing presence of particularly women in business is regarded as the outcome of economic reform programs in the mid-1980s (Owusu and Lund, 2004; Danquah and Osei-Assibey, 2016). The reforms ushered in an era of rising prices, decline employment of male partners, decline real income and other economic shocks. According to Robertson (1995), under these conditions, the income-generating activities of women as supplementary and/or supportive income for the household became a necessity and imperative to family survival. Following the study by Mumuni *et al.* (2013), the myriad of reasons that motivate or drive men and women to engage in entrepreneurship could be simply classified under the labeling of necessity and opportunity driven. In this direction, Mumuni *et al.*'s (2013) categorizations of no choice, by chance and forced entrepreneurships could be classified as necessity-driven entrepreneurship while informed and pure entrepreneurships could fall under opportunity-driven entrepreneurship.

There is, however, lack of studies examining the factors explaining the relatively higher levels of entrepreneurship activities among women compared to males in Ghana. This paper contributes to the empirical literature on entrepreneurship in Ghana by using a blend of socio-demographic, perceptual and contextual variables that potentially motivate men and women to start new businesses to robustly examine what factors influence the entrepreneurial propensity of women compared to their male counterparts in Ghana.

3. Methodology and description of data

3.1 Data

In this study, we use the first wave of the GEM survey data collected in 2010 in Ghana. In accordance with GEM sample size standards, a sample size of 2,426 was used for the 2010 survey in Ghana. This sample size was nationally representative in terms of geographical spread as defined by the ten administrative regions. Yankson *et al.* (2011) noted that GEM data are reflective of entrepreneurial intent and capture the informality of entrepreneurship which is especially important in developing countries such as Ghana. The GEM data contain information on respondents' demographic profiles such as household income, gender, age and educational attainment as well as information on their entrepreneurial experience.

The measure of entrepreneurial propensity from the GEM data set takes into account individuals who are in the process of starting a business (nascent entrepreneurs). The survey instrument asked respondents about "whether at the time of interview, they were trying to start a business either alone or with others including any self-employment or the sale of goods and services to others." Respondents whose answers were in the affirmative were then asked if, over the past 12 months, they had done anything to help start a business (such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money or any other activity that would help launch a business) and whether they would personally own all, part or none of this business. These follow-up questions make it possible to identify individuals who were truly committed to a new business as well as allowing the separation of managers from entrepreneurs. Essentially, only respondents who responded "yes" to the first follow-up question and "all" or "part" to the second follow-up question were coded as nascent entrepreneurs. Hence, for the purpose of our empirical estimation, a nascent entrepreneur is defined as a person who is in the process of starting a business, has committed resources to it, and expects to own at least part of it. We use, therefore, as a dependent variable TEA (defined as involved in Total early-stage Entrepreneurial Activity).

The dependent variable *TEA* is a dummy variable and it takes a value of 1 if individual "*i*" is involved in total early-stage entrepreneurial activity and 0 otherwise. The set of regressors includes a vector of demographic, economic, contextual and perceptual variables. The demographic, economic and contextual variables include: age (*agegroup*), educational attainment (*gemeduc*), work status (*gemwork*), household income (*gemhhinc*), region (*region*) and whether the respondent knew other entrepreneurs at the time of the survey (*knowent*). Perceptual variables capture the subjective assessment of the respondents about themselves and their entrepreneurial environment. They include dummy variables to capture the respondent's subjective assessment of one's own skills, knowledge and ability with respect to starting a new business (*suskill*), the respondent's subjective assessment of the existence of business opportunities (*opport*) and the respondent's assessment of whether fear of failure would prevent them from starting a business (*fearfail*).

The age of the respondents is captured as a categorical variable. It is classified into seven categories with the "age group 25-34" as the reference category. Educational attainment of respondents is classified into four categories with "no education" as the reference category. Work status as captured by the variable *gemwork* is categorized into

three groups with "not working" as the reference category. Household income (*Gemhhinc*) is a binary variable – i.e., it assumes a value of 1 if a household's total annual income is above 1,000 cedis and 0 otherwise. Households with annual incomes less than 1,000 cedis are the reference category. Regional dummies used to capture contextual effects are categorized into ten groups with Upper West Region as the base group. Perceptual variables included in the model are all captured as dummy variables with 1 for "yes" and 0 otherwise. Table I shows the descriptive statistics of the regression variables.

From Table I, we observe that about 35 percent of the study sample are involved in total early-stage entrepreneurial activity while only 9.3 percent of households have annual incomes above 1,000 cedis and about two-fifth of the sample are males. Over 32 percent of the sample are aged between 25 and 34 years while about one-quarter of the sample are not working. About 37 percent of the sampled individuals have no schooling record.

Variable	Description	Observations	Mean	Min.	Max.
Dependent variable (TEA)	Involved in Total early-stage Entrepreneurial Activity	2,447	0.3526767	0	1
Age					
Age_group1	0-17 age group	2,440	0.0008197	0	1
Age_group2	18-24 age group	2,440	0.192623	0	1
Age_group3	25-34 age group	2,440	0.3241803	0	1
Age_group4	35-44 age group	2,440	0.2540984	0	1
Age_group5	45-54 age group	2,440	0.1467213	0	1
Age_group6	55-64 age group	2,440	0.0811475	0	1
Age_group7	65-99 age group	2,440	0.0004098	0	1
Work status					
Gemwork1	Working full/part time	2,435	0.7326489	0	1
Gemwork2	Retired or student	2,435	0.0250513	0	1
Gemwork3	Not working	2,435	0.2422998	0	1
Gemhhinc	Household income dummy	2,006	0.0927218	0	1
Educational attainment					
Gemeduc1	No education	2,436	0.3780788	0	1
Gemeduc2	Some secondary education	2,436	0.3575534	0	1
Gemeduc3	Secondary education	2,436	0.2241379	0	1
Gemeduc4	Post-secondary education	2,436	0.0402299	0	1
Knowent	Knows an entrepreneur	2,384	0.517198	0	1
Suskill	Entrepreneurial capability	2,411	0.7333057	0	1
Opport	Existence of a business opportunity	2,140	0.7635514	0	1
Fearfail	Fear of failure at start-up	2,402	0.123647	0	1
Male	Male	2,447	0.4115243	0	1
Region					
Greater Accra	Greater Accra region	2,447	0.2018799	0	1
Eastern	Eastern region	2,447	0.086228	0	1
Volta	Volta region	2,447	0.0800981	0	1
Central	Central region	2,447	0.0735595	0	1
Western	Western region	2,447	0.1054352	0	1
Ashanti	Ashanti region	2,447	0.1961586	0	1
Brong Ahafo	Brong Ahafo region	2,447	0.091132	0	1
Northern	Northern region	2,447	0.0984879	0	1
Upper East	Upper East region	2,447	0.042501	0	1
Upper West	Upper West region	2,447	0.0245198	0	1

Table I.
Description of regression variables

3.2 Method of empirical analysis

The dependent variable is a binary variable which takes a value of 1 if individual "*i*" is involved in total early-stage entrepreneurial activity and 0 otherwise.

We assume an unobserved/latent continuous response variable, N_i^* and thus, the natural regression model for N_i^* is the index function model:

$$N_i^* = \alpha + S_i^{/}\beta + E_i^{/}\lambda + P_i^{/}\delta + C^{/}\gamma + \varepsilon \tag{1}$$

where N_i^* is the latent variable that depicts the *i*th individual's involvement in starting a business (nascent entrepreneur), S_i denotes a vector of socio-demographic factors associated with individual "*i*", E_i is economic factors related to individual "*i*", P_i represents perceptual variables associated with individual "*i*" and C is contextual variables. β, λ, δ and γ are vectors of parameters of explanatory variables, α is the intercept term, and ε is the standard vector representing the stochastic error term.

The dependent variable (i.e. N_i) is observed as:

$$N_i = \begin{cases} 1 & if \quad N_i^* > \quad 0 \\ 0 & if \quad N_i^* \leqslant \quad 0 \end{cases} \tag{2}$$

On the basis of the binary measure of the dependent variable, a probit regression estimation technique is adopted to explore how the explanatory variables influence the probability of an individual starting a new business as:

$$\Pr(N_i = 1|X_i) = \Pr\left(N_i = 1\middle|S_i^{/}, E_i^{/}, P_i^{/}, C^{/}\right) \tag{3}$$

where N_i is the dependent variable and X_i represents different set of explanatory variables that capture socio-demographic, economic, perceptual and contextual factors. The estimated model of the factors influencing individual's propensity to start a business is specified as follows:

$$\Pr(N_i = 1|X_i) = \Phi\left(\alpha + S_i^{/}\beta + E_i^{/}\lambda + P_i^{/}\delta + C^{/}\gamma\right) \tag{4}$$

where Φ is a cumulative standard normal distribution function. The inclusion of economic variables – especially, household income – in the model of the determinants of entrepreneurial propensity raises concern of endogeneity in our specification. To deal with the potential endogeneity problem of the household income variable, we estimate, alternatively, a bivariate probit model of the determinants of entrepreneurial propensity. In the bivariate probit model, we test specifically the endogeneity of the household income variable (*Gemhhinc*) since it is plausible to state that household income can be reversely affected by entrepreneurial experience. The bivariate probit model estimates two equations simultaneously. specifically, it estimates a model of the determinants of entrepreneurial propensity as well as a model of the determinants of household income. For brevity we present only the empirical results of the bivariate probit model for the determinants of entrepreneurial propensity. Table II presents the results of the endogeneity test, both for the full sample and the gender-disaggregated samples. From Table II, we find that the error terms of the structural equations are uncorrelated in the full sample estimation and hence household income is not endogenous in the model of entrepreneurial propensity. This is also true for the gender-disaggregated models. This indicates that without accounting for the endogeneity of household income, our estimates are unbiased and hence reliable. Thus, we proceed to provide evidence on the determinants of entrepreneurial propensity within a binary probit estimation

framework. As indicated in Price (2012), we estimate robust standard errors given the possibility of unobserved heterogeneity. Alternatively, we cluster the standard errors within gender groups to account for the sensitivity of the parameters to possible gender-specific differences in entrepreneurial propensities.

4. Results of econometric analysis

Table III presents the marginal effects of the drivers of entrepreneurial propensity. Both full sample and gender disaggregated sample estimations are conducted. Three separate models are estimated using the full sample data: the first two models (Models 1 and 2) utilize a binary probit estimation technique but with alternative methods for reporting the standard errors of the estimated parameters whereas Model 3 utilizes a bivariate probit estimation technique to control for the possible endogeneity of household income. Models 4 and 5 present the gender disaggregated binary probit estimations for males and females, respectively.

The results in Models 1 and 3 corroborate the endogeneity test results (reported in Table II). Broadly, the estimated parameters of both the bivariate probit model – i.e. where the endogeneity of household income is accounted for – and the binary probit model – i.e. where we do not account for the endogeneity of household income – are the same (see Table III, Models 1 and 3). In essence, therefore, we can rely on the binary probit model estimates since no bias is introduced when we do not control for the endogeneity of household income. Also, accounting for gender-specific differences in entrepreneurial propensities (as done in Model 2 of Table III) do not produce different parameter estimates. Given that our results remain largely unchanged across different specifications, we maintain that the findings in this study are robust.

Now, with regards to the full sample estimation, we observe that respondents' perception about their entrepreneurial abilities (*suskill*) significantly influences their desire to start a new business. Indeed, an individual's subjective assessment about his/her skills, knowledge and abilities with regard to starting a new business raises the probability of being a nascent entrepreneur by about 18 percent. This clearly shows the importance of entrepreneurial capability[1] in influencing the probability of being a nascent entrepreneur. However, having a fear of failure in business (as captured by *fearfail*) is negatively and significantly related with the probability of starting a new business. Similarly, the effect of age on entrepreneurial propensity reveals that individuals within age groups higher than the base age group (i.e. 25-34 years) are significantly less likely to become nascent entrepreneurs relative to those in the base age group with probabilities ranging from 34 to 80 percent; this reflects perhaps the stance that entrepreneurship is largely the preserve of the youth who are presumably the class of individuals with relatively higher risk appetite. No significant difference is, however, established regarding the entrepreneurial propensities of individuals who are younger than the base age group and those in the 25-34 years age group. The effect of gender on entrepreneurial propensity is statistically significant at the 1 percent level, indicating the existence of important gender differences in the entrepreneurial propensity. This finding is consistent with the

Table II.
Results of the endogeneity test between entrepreneurial propensity and household income (based on the bivariate probit model)

Correlation between disturbance terms	Full sample		Gender disaggregated samples			
			Male sample		Female sample	
	Coefficient	Robust SE	Coefficient	Robust SE	Coefficient	Robust SE
ρ	−0.378	0.249	0.241	0.559	−0.386	1.387
No. of observations	1,694		748		946	

Notes: ρ tests the presence of correlation between the error terms of the structural equations. If ρ is significantly different from 0, it means that the errors are correlated and hence there is endogeneity

Variables	Full sample (1) Probit	(2) Probit	(3) Bivariate Probit	Gender disaggregated samples (4) Probit (male)	(5) Probit (female)
Knowent	0.065 (0.068)	0.065 (0.124)	0.055 (0.068)	0.211* (0.109)	−0.043 (0.091)
Opport	0.034 (0.082)	0.034 (0.118)	0.001 (0.084)	0.178 (0.129)	−0.073 (0.111)
Suskill	0.179** (0.077)	0.179*** (0.020)	0.189** (0.077)	0.204 (0.130)	0.161 (0.099)
Fearfail	−0.226** (0.103)	−0.226*** (0.055)	−0.211** (0.102)	−0.294* (0.160)	−0.175 (0.142)
Age_group1	0.541 (0.699)	0.541 (0.959)	0.621 (0.691)	–	–
Age_group2	−0.038 (0.093)	−0.038 (0.083)	−0.030 (0.092)	−0.140 (0.151)	0.034 (0.123)
Age_group4	−0.338*** (0.085)	−0.338** (0.148)	−0.337*** (0.085)	−0.181 (0.130)	−0.485*** (0.114)
Age_group5	−0.494*** (0.107)	−0.494** (0.193)	−0.510*** (0.106)	−0.275* (0.159)	−0.674*** (0.145)
Age_group6	−0.797*** (0.153)	−0.797*** (0.187)	−0.795*** (0.153)	−0.602*** (0.197)	−0.997*** (0.251)
Age_group7	–	–	6.725*** (0.189)	–	–
Gemhhinc	0.102 (0.121)	0.102 (0.229)	0.776* (0.441)	0.305* (0.161)	−0.180 (0.184)
Male	−0.274*** (0.070)	−0.274*** (0.049)	−0.294*** (0.070)		
Gemeduc2	0.060 (0.081)	0.060 (0.057)	0.039 (0.082)	0.005 (0.138)	0.122 (0.104)
Gemeduc3	−0.025 (0.094)	−0.025 (0.077)	−0.054 (0.095)	0.045 (0.142)	−0.113 (0.134)
Gemeduc4	0.042 (0.185)	0.042 (0.046)	0.040 (0.178)	0.055 (0.220)	−0.075 (0.369)
Gemwork1	0.798*** (0.088)	0.798*** (0.131)	0.773*** (0.090)	0.651*** (0.144)	0.924*** (0.116)
Gemwork2	0.995*** (0.211)	0.995*** (0.106)	0.973*** (0.212)	1.078*** (0.289)	0.861*** (0.297)
Greater Accra	−0.475** (0.204)	−0.475*** (0.098)	−0.505** (0.201)	−0.373 (0.309)	−0.566** (0.272)
Eastern	−0.267 (0.261)	−0.267 (0.190)	−0.349 (0.265)	−0.540 (0.417)	−0.116 (0.348)
Volta	−0.564** (0.238)	−0.564* (0.308)	−0.689*** (0.244)	−0.297 (0.351)	−0.923*** (0.320)
Central	−0.142 (0.210)	−0.142*** (0.050)	−0.148 (0.207)	−0.117 (0.327)	−0.210 (0.275)
Western	0.059 (0.204)	0.059 (0.070)	0.062 (0.201)	0.118 (0.319)	−0.019 (0.266)
Ashanti	−0.457** (0.199)	−0.457** (0.182)	−0.544*** (0.202)	−0.290 (0.308)	−0.646** (0.262)
Brong Ahafo	−0.361* (0.206)	−0.361*** (0.056)	−0.399* (0.204)	−0.319 (0.319)	−0.431 (0.271)
Northern	−0.059 (0.206)	−0.059* (0.034)	−0.064 (0.203)	−0.036 (0.320)	−0.102 (0.274)
Upper East	−0.576** (0.237)	−0.576*** (0.164)	−0.564** (0.234)	−0.431 (0.352)	−0.740** (0.325)
Constant	−0.529** (0.222)	−0.529** (0.226)	−0.478** (0.221)	−1.086*** (0.362)	−0.302 (0.290)
Prob > χ^2	0.0000	–	–	0.0000	0.0000
Pseudo R^2	0.0898	0.0898	–	0.0717	0.1199
Observations	1,693	1,693	1,694	747	944

Notes: Standard errors are in parentheses. Models 1, 3, 4 and 5 report robust standard errors while Model 2 report clustered standard errors. Regional dummies are included with the Upper West region as the control group. the control category for respondents' occupation is not working (Gemwork3). The control group for respondents' educational attainment is no education (Gemeduc1). the base category for respondents' age group is *Age_group3* (representing individuals in the 25-34 years age group). The base category for household income (Gemhhinc) is households whose annual incomes are less than 1,000 cedis while the base category for the Male variable is female. *Age_group7* is omitted in all our estimations (except in Model 3) and *Age_group1* is omitted in the gender disaggregated models due to smaller sample observations. *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Table III. Marginal effects of the drivers of entrepreneurial propensity (pooled and gender disaggregated models)

results from the 2010 GEM survey in Ghana wherein women were found to be more entrepreneurial than men in Ghana. From the marginal effects estimates (presented in Table III), it is realized that relative to females, being a man significantly reduces the likelihood of starting a new business by about 27 percent.

Further, relative to individuals who are not working, individuals who are working full/part time or retired/students are more likely to be nascent entrepreneurs. This implies that working part time or full time as well as being a retiree/student serves as an incentive for entrepreneurship in Ghana. We, however, note that the positive association of retired/student with entrepreneurial propensity is largely attributable to retirement as retirees often use entrepreneurship as a way of being actively engaged even on retirement.

Contextual factors also matter for entrepreneurial propensity in Ghana with the Upper West region being the most favorable location for entrepreneurial activity: for instance, living in the Greater Accra region reduces the probability of becoming a nascent entrepreneur by over 47 percent relative to living in the Upper West region, indicating perhaps locality differences – such as the nature and type of business activity and associated capital – in the requirements for establishing a new business.

Important differences are, however, observed in the gender disaggregated models. For example, whereas factors such as knowledge of other entrepreneurs (*knowent*), having a fear of failure in business (*fearfail*), household income (*Gemhhinc*) significantly drive the entrepreneurial propensity of males, they do not matter in the entrepreneurial decisions of females (see Models 4 and 5 of Table III). The probability of being a nascent female entrepreneur is negatively related with being in the above 34 years age groups relative to being in the 25-34 years age group with women in the 35-44 years age group being about 49 percent less likely to start a business compared to their counterparts in the 25-34 years age group; this incidence is, however, not entirely supported in the case of men since no significant difference exist in the entrepreneurial propensities of men in the 25-34 years and 35-44 years age groups, for instance. Knowing other entrepreneurs increases the probability of being a nascent male entrepreneur by about 21 percent, holding all other variables fixed while having a fear of failure in business reduces the probability of being a nascent male entrepreneur by close to 30 percent. This supports the claim that having knowledge of other entrepreneurs influence the perception of entrepreneurial opportunities by providing social clues in the uncertain environment associated with the creation of a new business (Langowitz and Minniti, 2007).

Unlike the full sample estimations (except Model 3), we observe that individuals who are from households with annual incomes that are over 1,000 cedis are significantly more likely to become nascent male entrepreneurs by about 31 percent relative to individuals from households with annual incomes of below 1,000 cedis. Strikingly, however, the educational attainment of an individual and individual's subjective belief about the existence of business opportunities does not determine entrepreneurial propensities in Ghana. This evidence contrasts the findings of other studies (see Langowitz and Minniti, 2007) who observe, for example, that the existence of future business opportunities raises the likelihood of being a nascent entrepreneur. This could be attributed to the fact the entrepreneurship in Ghana is largely necessity driven rather than opportunity driven. Being in the two most populous regions in Ghana (Greater Accra and Ashanti regions) significantly reduces the likelihood of being a nascent female entrepreneur in Ghana compared to being in the Upper West region. The effect of regional dummies may be reflective of the important conditions for business creation, nature and type of businesses people engage in and the capital required for a start-up operation.

In sum, the results suggest that entrepreneurial propensity in Ghana is driven by a wide range of factors including demographic, economic, perceptual and contextual elements, albeit with important variations across gender. Comparing Models 4 and 5, it is clear that the entrepreneurial activities among women compared to their male counterparts may be due to the differences in entrepreneurial motivations. Males' entrepreneurship is significantly driven by perceptual factors – such as having a fear of failure – while the same cannot be said about females' entrepreneurial propensities. As well, while household income matters for males' engagement in early stage entrepreneurial activity; females' entrepreneurial propensity is not driven by the level of household well-being. As a matter of fact, contrary to males, the effect of household well-being on females' entrepreneurial propensities is negative, albeit insignificant. Taken loosely, this could mean that unlike males, females' entrepreneurship is not opportunity driven but rather necessity driven with the desire to shore up lower household incomes.

5. Conclusion

In this study, we attempt to examine the factors explaining the entrepreneurial activities among men compared to their female counterparts in Ghana. The study adopts robust empirical estimation techniques to examine how socio-demographic characteristics and perceptual variables influence the probability of starting a new business. Our results show that overall, entrepreneurial propensity in Ghana is driven by a wide range of factors including demographic, economic, perceptual and contextual elements, but with important variations across gender. An individuals' subjective assessment of fear of failure in starting a business and of having the requisite entrepreneurial capabilities; the age of the individual; gender of the individual; work status and contextual factors matters for entrepreneurial propensity in Ghana. Important differences, however, exist in the drivers of entrepreneurial propensity for males and females with females' entrepreneurship attributed largely to conditions of necessity relative to their male counterparts. This is, however, unsurprising as female entrepreneurs are motivated largely by "push" factors relative to males.

The relatively high numbers of nascent entrepreneurs would contribute to the growth of employment thereby enhancing the ability of the Ghanaian economy to provide adequate employment for the growing working age population. However, the high participation rate in entrepreneurial activities in Ghana indicates the need for policies to address the quality of employment generated through entrepreneurship. Employment policies need to be formulated to reduce vulnerable employment associated with entrepreneurship, and promote decent and gainful employment through training, education and compliance of legislation. It is necessary that factors that push men and women into entrepreneurship are addressed through policy. For instance, enhancing the business environment including the ease of business registration process as well as infrastructural upgrades in Ghana would help reduce the people's fear of failure in business and, thus, encourage more people to become entrepreneurs.

Note

1. Entrepreneurial capability is measured by the set of skills, knowledge and ability required to start a new business.

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Corresponding author
Michael Danquah can be contacted at: MDANQUAH@UG.EDU.GH