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# Gender Differences in Human Capital and Personality Traits as Drivers of Gender Gap in Entrepreneurship: Empirical Evidence from Nigeria

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## **Author's contribution**

*This work was carried out by the author FTM. The author FTM designed the study, performed the statistical analysis, managed and reviewed the literature searches, wrote the manuscript, proof read the manuscript and the analyses of the study; then, made the necessary and appropriate suggestions and corrections; hence, the author read and approved the final manuscript.*

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## **ABSTRACT**

Female entrepreneurs are important for economic progress and have an important contribution to employment creation and GDP. They also have value through increasing entrepreneurial diversity. In addition to the growing number of female entrepreneurs across the globe in the last few decades there has been an increase in the number of studies on female entrepreneurship.

**Aims:** This study (i) examines different human, financial and social capital related factors that may determine the success of women entrepreneurship (ii) find out if there are relationships between personality traits like locus of control, achievement motivation, creativity, risk propensity and entrepreneurial success.

**Study design:** A survey design was adopted for study.

**Place and duration of study:** Department of industrial relations and public administration Lagos State University, Lagos Nigeria, between July and September 2012.

**Methodology:** A field survey of 200 entrepreneurs of the 1062 registered entrepreneurs randomly selected across six local government areas of Lagos.

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**Results:** Response rate was 180 (90%) consisting of 102 (57%) men and 78 (43%) women. The rate of women's entrepreneurship is lower than that of men. Six hypotheses were tested using  $\chi^2$  at 0.05 level of significance and df 4.  $\chi^2$  (cal.) 33.94 indicates significant gender differences in control orientation.  $\chi^2$  of 56.37 implies a significant difference in male and female level of competitiveness.  $\chi^2$  (cal.) 2.71, implies no significant difference in male and female in the level of achievement motivation.  $\chi^2$  (cal.) 61.16, implies a significant difference between male and female in risk propensity.  $\chi^2$  (cal.) 12.62, shows a significant difference in the level of human capital.  $\chi^2$  (cal.) 51.28 indicates gender differences in social capital.

**Conclusion:** The study posits that gender differences in competitiveness and some other personality traits is due to nature, nurture or a combination of both. The similarities between successful entrepreneurs of both genders imply that under the same conditions both can be successful entrepreneurs. Intervention efforts should focus on encouragement, technical, social and financial support, capacity building, experience, and well-developed professional networks for women entrepreneurs both to improve their numbers and to increase the success rates for existing ones.

*Keywords: Gender; differences; human capital; personality traits; drivers; gender gap.*

## 1. INTRODUCTION

The global economic recession and financial crisis has added impetus to the increased interest in entrepreneurship as an important part of national economic development and growth. Notwithstanding that equal rights of men and women are guaranteed by law in most economies, women's disadvantage in labour markets is still an issue. Women are less likely to climb the career ladder and their salaries are often lower than those of men even in the same or similar jobs. Again, there is strong empirical evidence for a gender gap in entrepreneurship.

A higher proportion of men engage in entrepreneurial activities as compared to women in both developing and developed economies. Men are more likely to be engaged in the creation of new businesses and women are outnumbered by men in established business ownership. Entrepreneurs, both male and female, are a diverse group running firms of various sizes, in different industry sectors and with varying success rates. There are also significant differences in the characteristics of male and female entrepreneurs. For instance women-owned businesses tend to be smaller, cluster in consumer oriented sectors and generate lower sales turnover than those owned by men. Women generally use a smaller capital base than men to start their businesses, tend to have lower ratios of debt financing, and are much less likely to use private equity or venture capital.

The Organization for Economic Cooperation and Development OECD [1] observes that in recent years female entrepreneurship has attracted a considerable amount of attention in academic research and many governments have taken measures to support it. However, the reasons for the gender gap in entrepreneurship are still not fully understood. The link between entrepreneurship and economic growth has been established by several scholars and emphasis is on the importance of entrepreneurship and innovation to be developed in particular by small and medium-sized enterprises (SMEs) to achieve competition and a dynamic knowledge-based economy.

Entrepreneurial activities by women have attracted a considerable amount of interest among policy-makers who have recognized the potential of female entrepreneurship for increasing economic growth and job creation. While the gender gap in entrepreneurship seems to have narrowed during the past decades, the share of female entrepreneurs engaged in venture creating activities is still comparatively low especially in developing economies like Nigeria. Nigeria is one of the countries in West Africa sharing land borders with the Republic of Benin in the West, Chad and Cameroon in the east, and Niger in the North. Nigeria is the most populous country in sub Saharan Africa and is also termed the ninth most populous country in the world.

According to the World Bank report [2], Nigeria has a population of about 144.7 million. The population growth (annual %) is 2.4 while the GNI (current US\$) is 100.7 billion. The GNI per capita, atlas method (current US\$) are 620.00 (Source: World Development indicators).

The world is undergoing a global economic crisis and since women often face greater difficulties in obtaining capital than men, the economic crisis has a greater effect on them. This study examines the influences of factors like access to resources, accumulation of human capital, achievement motivation, risk propensity and creativity on entrepreneurial ability.

The paper aims to (i) examine different human capital related factors that may determine the success of women- as compared to men-owned businesses (ii) find out if there are relationships among the some factors like access to resources, accumulation of human capital, achievement motivation, creativity and entrepreneurial ability and success.

## **2. LITERATURE**

### **2.1 Entrepreneurship**

Entrepreneurship is a concept that is not easy to capture. The Webster's Third New International Dictionary [3] defines an entrepreneur as "the organizer of an economic venture, especially one who organizes, owns, manages and assumes the risk of a business. Oke [4] views entrepreneurs as individuals who own and operate businesses. Olubodun [5] conceives entrepreneurship as a form of behaviour which encompasses three separate forms of related activities (i) entrepreneurship includes the activities proposed by the independent entrepreneur (ii) intrapreneurship focuses on innovative and path-goal breaking activities within a structural organization and (iii) entrepreneurial organisations are groups behaving in an entrepreneurial fashion. The entrepreneur is an active agent in the business climate.

Schumpeter [6] describes him as an agent of creative distinction. Long [7] suggests that (i) entrepreneurship is concerned with uncertainty and risk (ii) complementary managerial competence and (iii) creative opportunism. Entrepreneurial functions include; direction, control, superintendence, and risk bearing. McClelland [8] affirms that entrepreneurs possess certain characteristics including a strong need for achievement, personal responsibility for performance, preference for moderate task difficulty and the need for feedback and innovativeness. Other entrepreneurial traits according to Daley [9] are assertiveness, achievement orientation, confidence and greater risk propensity. Decisiveness, ambition, and seriousness about career and success are further traits associated with entrepreneurship.

Long [7] listed ten characteristics of entrepreneurs to include (i) a passion for work, (ii) persistence with new business (iii) confidence about businesses and the network (iv) self-determination and self-motivation (v) management of risk (vi) positive outlook about changes, ambiguity and high degree of optimism about future (vii) personal need for achievement (viii) creative innovation about either product or process or both (ix) big picture person and (x) opportunity seeker.

A general approach to the study of entrepreneurship has been to examine the psychological characteristics or traits of entrepreneurs. Some of the characteristics often used to distinguish entrepreneurs includes: (i) self-confidence and ability to influence own future; (ii) belief that opportunities exist for rapid reward, mobility and attainment; (iii) concentration on a goal in order to minimize the chances of success. Other attributes associated with entrepreneurship are aggressiveness, purposefulness and effectiveness.

## **2.2 Female Entrepreneurship**

Entrepreneurial activities of women are still hampered by constraints that often tend to be gender specific, such as social conventions, legal and institutional frameworks, unequal employment opportunities, work-life balance and restricted access to finance. Researchers have addressed gender differences in entrepreneurship with respect to venture creation, growth aspirations [10], innovation [4], and new venture performance in terms of survival [11], growth [12] and profitability [13].

A major explanation for gender differences in entrepreneurial performance is that women entrepreneurs have fewer resources as compared to male entrepreneurs and, therefore, lack important prerequisites to achieve success. This resource gap may be due to different role expectations and associated career paths that influence human as well as financial capital. Gender differences in human capital and entrepreneurial success tends to be universal, but dependent on cultural context. Again, social role expectations have a crucial impact as to how men- and women-led businesses benefit from their founders' human capital. Such social role expectations influence gender differences in human capital as well as its impact on firm performance.

Literature on female entrepreneurship such as Oke [3], Ahmed [11] and growth Eze [12] suggest that women may face more severe obstacles in business creation than men which may hinder their engagement in entrepreneurship. Arising from a survey of the relationship between gender and entrepreneurship, Onadeko [15] concludes that the gender gap in entrepreneurship cannot be explained by explicit discrimination in laws and regulations but can in part be explained by business environment factors. In particular the limited access of women to external finance inhibits business creation, since external financing is an important factor for the creation of a business venture.

Hence, external factors seem to contribute to the gender gap in entrepreneurship. Gender differences exist with respect to the accumulated human capital of entrepreneurs and this influences the success of their firms. Gender differences often occur in respect of human capital itself as well as the relationship between human capital and entrepreneurial success. The study of female entrepreneurship traditionally has been inspired by gender equality issues. Female entrepreneurs were assumed to experience gender-related discrimination and to experience more difficulties when starting up and running a business than their male counterparts. Even when issues such as barriers and obstacles to female entrepreneurs are raised in the gender and entrepreneurship debate, it is usually from the perspective that

female entrepreneurs are an untapped resource and have potential to contribute to a country's economic performance. Even though gender equality is one of the arguments behind support for female entrepreneurs globally, the argument that women possess the potential to contribute to economic performance continues to play a role.

The European Commission [16] suggests that women face a number of gender-specific barriers to starting up and running a business that have to be tackled as women are considered a latent source of economic growth and new jobs and should be encouraged. Amobi [17] asserts that female entrepreneurs are an engine of economic growth and entrepreneurship is important for economic performance. Mann [18] asserts that women and men continue to be viewed differently with respect to many traits that have long been included in traditional gender stereotypes. The study reports that men are more forceful, assertive, aggressive, confident and independent whereas women are more nurturing, emotional, considerate, dependent, indecisive and submissive.

In addition Daley [19] indicates that current stereotypes of entrepreneurs are heavily suggested towards traits traditionally viewed as "masculine" (e.g. a propensity for risk taking, assertiveness, high achievement orientation etc.) Thus, according to existing gender stereotypes women may appear basically unsuited for these roles. This has potential implication for role perception of women. Daley's findings suggest that by becoming entrepreneurs, women may reduce the tendency of others to view them through the lens of negative gender stereotypes.

After becoming entrepreneurs, women may benefit from attributional augmenting processes that enhance perceptions of their motivation, decisiveness, and abilities and reduce the extent to which they are perceived as stereotypically feminine.

### **2.3 Entrepreneurship Ability**

This paper conceives entrepreneurial ability as possession of abilities necessary for the starting and nurturing to growth of a new enterprise, especially in a competitive environment. Some of these abilities include locus of control, achievement motivation (nAch), creativity and risk-taking propensity. We shall examine these attributes in relationship to entrepreneurship:

#### **2.3.1 Locus of control and entrepreneurship**

Locus of control (L.O.C) shows the degree to which an individual assumes responsibility for success or failure in life rather than feeling that external agents like luck are in control. It emanates from the social learning theory the major thrust of which is the dimensions of choice that individual executes when confronted with situations that present alternative behaviours. L.O.C can influence both the need for achievement and the need for power. It categorizes individuals according to their perceptions of contingencies. Internals perceive the consequences of their lives as resulting from their own actions whereas externals view fate, luck, chance, etc. and manipulation by others as determining their destiny.

Adebowale [20] asserts that internal individuals differ from externals in a variety of ways. Internal persons tend to take more initiative and are responsible in performance situations. Internal persons seek and utilize information more efficiently and seem to be more in touch with external realities. These characteristics are essential factors in enhancing achievement motivation. Externals on the other hand are less likely to persist at a task since they do not

feel that exertion of energy is likely to lead to meaningful results and believe that external determinants, such as fact, luck and powerful others are at work in any situation requiring a need for attainment of goals. Adebowale suggests that internals are higher in achievement motivation than externals.

McClelland [8] affirms that entrepreneurs show responsibility for their actions and are innovative, suggesting a relationship between control orientation and entrepreneurship on the one hand and creativity on the other. Awe [21] commenting on the relationship between locus of control, gender and achievement posits that males are more achievement oriented, energetic, and enterprising than females. This he related to the fact that the female is typed and trained for subordinate roles.

### **2.3.2 Achievement motivation (nAch) and entrepreneurship**

McClelland [8] in the theory of need observes that one of the three types of needs is the need for achievement. The others are the need for power and affiliation. Need for achievement defines the drive to excel, to achieve in relation to a set of standards, to strive to succeed. This drive is described as achievement need (nAch). Robbins [22] observes that some people have a compelling drive to succeed and they strive for personal achievement rather than the rewards of success per se. Their desire to do things better differentiates nAchs. Individuals can be categorized as either high or low in need for achievement.

The studies of McClelland [23] show a relationship between nAch and entrepreneurship behaviour. Sagie, Elizur and Yamauchi [24] differentiate between entrepreneurs and non-entrepreneurs. Task motivation was found to exhibit a substantial relationship to the various indices of firm growth and entrepreneurship skill. Task motivation influences the level of success of an entrepreneur's firm.

Sagie, Elizur and Yamauchi notes gender difference as influencing various dimensions of achievement motivation. The study found highly significant effects of gender on uncertainty, facing difficulty, personal responsibility, calculating risks, solving problems and need for success. McClelland identified four characteristics of individuals with strong need for achievement: a preference for moderate task difficulty, personal responsibility for programme, the need for feedback, and innovativeness.

### **2.3.3 Creativity and entrepreneurship**

Creativity involves using original ideas to solve problems, the development of new theory, technique or approach to solving problems or inventing new and novel ideas, creating new material from old component. Innovation has to do with applying creative solution to problems. Akindele [25] summarizes the personality characteristics of creative individual as; desire to grow, flexibility, originality, divergent thinking, learning, openness to experience etc. These characteristics are typical of entrepreneurs suggesting that creativity and entrepreneurship are related in certain respects.

### **2.3.4 Risk propensity and entrepreneurship**

Robin [22] included as entrepreneurial functions; direction, control, superintendence, and risk bearing. Dresang [26] affirms that an entrepreneur invests resources at his command in an effort to secure increased wealth or status. There is the risk that bad judgment or ill

fortune will result in loss of investment. Rewards can however be high and it is the hope for these rewards that prompts an individual to take risks.

Traditionally, therefore, risk is associated with entrepreneurship. Risk Propensity involves the probability of receiving the rewards associated with success of a proposed situation, which is required by an individual before he will subject to the consequences associated with failure. The alternative situation provides less reward and less severe consequences than the proposed situation. This type of situation confronts the entrepreneur before he establishes a new business venture for which he is totally responsible for failure or success.

Expectancy theorists, especially Atkinson [27] have stimulated much study of risk preferences. According to him, performance level should be greatest when there is greatest uncertainty about the outcome and this he observed to be true regardless of whether the motive to achieve or the motive to avoid failure is stronger in an individual. Onadeko [15] identifies three levels of risk preferences-low, intermediate or moderate risk takers, though no empirical data was made available by him.

## **2.4 Human Capital and Entrepreneurship**

Human capital is the present value of past investments in the skills of people. The larger part of industrial investment is not from more capital investment but from investment in man and improvements brought about by improved men. Human capital is conceptualized here as the skills and knowledge an entrepreneur acquires during his life, e.g., through schooling, work experience, and training. Studies such as Ogundele [28] and Amobi [17] indicate that human capital of founders is an important resource for entrepreneurial ventures.

Similarly studies by Wey [29] and Awe [21] indicate that the proportion of female entrepreneurs is low compared to male entrepreneurs. Daley [9] affirms that women-owned business ventures have a lower propensity than men-owned ventures to grow and be successful. Awe affirms that a prominent explanation for such gender differences is that compared to male entrepreneurs female entrepreneurs lack critical human and financial resources to start and run a business successfully.

Gender differences in human capital in different cultural settings are due to the fact that expectations in society assign different roles to women and men. In many cultures such as in Nigeria, women are expected to fulfill domestic roles, while men are expected to fulfill career-related roles. Such social role expectancies affect various behaviours, such as educational or occupational choices. Gender differences in human capital and cultural influences on gender differences in human capital may depend on the type of knowledge and skills. In Nigeria while there have been attempts to reform the educational system in favour of girls and women, role expectancies in the labour market have not changed significantly.

Empirical evidence on gender differences in human capital of entrepreneurs is mixed with studies such like Mba [29] reporting that female entrepreneurs have less valuable work, managerial and self-employment experience while others like Amobi [17] posit that female entrepreneurs have similar amounts or even more education than male entrepreneurs. The inconsistencies in empirical results on gender gaps in human capital can be attributed to several factors like focus on different types of human capital and different cultural settings that influence human capital endowments of male and female entrepreneurs.

Becker [30] notes that the human capital theory distinguishes between general and specific human capital. While the former involves general knowledge and skills the latter is the knowledge and skills which are specific to a task. For entrepreneurs, specific human capital involves knowledge and skills that are useful for establishing and running a business. The survival and economic success of new ventures depend largely on the availability of resources. Female entrepreneurs tend to be disadvantaged in the provision of financial capital to their businesses. Women usually have income losses arising from sacrifices they make to take care of their families. Also, differences in pay structure between men and women constrain women's opportunities to accumulate financial capital for starting a business. Moreover, banks and other financial institutions take into account not only the issue of collateral but also the human capital of business owners when deciding on the provision of financial capital.

Human capital provides a signal to lenders and enhances entrepreneurial growth through easier access to other human resources and a decrease in capital constraints. Oke [4] and Mann [17] suggest that negative gender stereotypes play important role. The background to this is the persistent and disturbing disadvantage that women suffer both in the work place and in business circles.

## 2.5 Social Capital and Entrepreneurship

Social capital generally refers to the set of norms, networks, and organizations through which people gain access to power and resources, and through which decision making and policy formulation occur. It has to do with benefits derived from personal and professional networks. Its benefits include advice on legal, financial and accounting issues. It is also often a source of needed financing; and can give specialized counsel crucial to an entrepreneur's particular industry.

Social capital contributes to the success and survival of an entrepreneurial effort. Professional and business networks are very important to the success of entrepreneurial efforts. There is growing empirical evidence that social capital contributes significantly to sustainable development. While various elements of the concept of social capital have been present under different names for a long time, *social capital* is recent in economic analysis. Putnam [31] views it as a set of "horizontal associations" between people: social capital consists of social networks ("networks of civic engagement") and associated norms that have an effect on the productivity of the community. Coleman [32] defines social capital as a variety of different entities, with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors - whether personal or corporate actors - within the structure.

The main thrust of social capital is that networks and the associated norms of reciprocity have value for the people who are in them, and they sometimes have demonstrable externalities. Social capital includes the benefits derived from an individual's personal and professional networks. The people in those networks provide essential legal, financial and accounting advice; are often the source of needed financing; and can give specialized counsel crucial to an entrepreneur's particular industry or firm. Social capital is an essential resource for the efficient conduct of business, and it contributes to the success and survival of an entrepreneur's venture. There is growing evidence that social capital can impact on development outcomes - growth, equity, and poverty alleviation. Social capital contributes to alleviating failures. It does not remove the uncertainty, but it may create mutual knowledge. It may also serve as an enforcement mechanism to ensure that expectations about mutual



behaviour are realized. Tendler and others [33] affirm that the impact of social capital can also be indirect. This impact depends, however, on the nature of the organization.

Watts [34] reports that in Nigeria social capital reduced food insecurity by giving poor people moral entitlements on which to draw during famine years. Studies such as Carter [35], Buttner [36] and Moore [37] suggest, however, that women may have less or different access to social capital than men.

## **2.6 Hypotheses**

The study tested the following hypotheses:

Hypothesis 1: There is no significant difference between male and female in their control orientation.

Hypothesis 2: There is no significant difference between male and female in the level of competitiveness.

Hypothesis 3: There is no significant difference between male and female in achievement motivation.

Hypothesis 4: There is no significant difference between male and female in risk propensity.

Hypothesis 5: There is no significant difference between male and female entrepreneur's level of human capital.

Hypothesis 6: There is no significant difference between male and female entrepreneur's level of social capital.

## **3. METHOD**

The paper reviews studies on gender differences in entrepreneurship. In addition, questionnaires were administered in a field survey consisting of 200 participants that are owner and active managers of the businesses. The sample of 200 participants was selected from the 1062 registered entrepreneurs in the six local government areas of Lagos employed for the study.

Ogundele [28] affirms that there is a qualitative difference between business owners who work alone and owners who have employees. The employment of other people is associated with changes in self-perception, responsibilities and managerial requirements. The response rate was 180 (90%) of which 102 (57%) were men and 78 (43%) were women. The Achievement Motivation Questionnaire (AMQ) devised by Sagie, Elizur and Yamauchi [23] was used. Each item represents one of the possible combinations of facet elements discussed in the definition of achievement motivation. Internal consistency (Cronbach's alpha) coefficient for composite sample for confronting uncertainty (0.74), facing difficulty (0.77) undertaking responsibility (0.83), calculating risks (0.75), solving problems (0.87) and gratifying the need for success (0.86) are considerably high. Wallach and Kogan's [38], [39] choice dilemmas questionnaire (CDQ) which is based on 12 hypothetical choice situation, was used. The CDQ has been most used in risk propensity research with reported reliabilities of 0.53 for men and 0.62 for women. It is capable of generating a score range of 12-120 with lower scores associated with less conservation in risks taking situation. Creativity was assessed using the unusual object uses test which also is one of the most used means of assessing creativity. The test consists of 5-stimulus objects. Subjects are to indicate various ways of using them. The greater the number of unusual uses listed for each stimulus object, the greater the creativity of the subject.

The study used the number of years in education as a proxy for human capital of business owners. The categories include no managerial experience, experience in lower management positions, experience in middle management positions, and experience in upper management positions. Since industry experience can help entrepreneurs to identify opportunities, interact with customers and employers and scan the competitive environment the study used the number of years an entrepreneur has been working in the industry in which he set up the business as an indicator for industry experience. For Entrepreneurial Success the study used the employment growth rate for measuring entrepreneurial success. Because the age of the firm may have a significant impact on firm performance due to liabilities of newness that constrain a firm's potential to succeed. The study included firm age calculated as the number of years between the firm's founding and 2012.

#### **4. RESULTS AND FINDINGS**

Entrepreneurship is an important driver of economic development and growth. Not only is there diversity in entrepreneurial practices, there are significant differences in the characteristics of male and female entrepreneurs. This study focuses on the effect of factors like human capital and the role of personality traits that can be matched to tasks of entrepreneurs to explain the gender gap in entrepreneurship in Nigeria.

The data collected indicates that the rate of women's entrepreneurship in Nigeria is lower than that of men even in spite of the fact that women dominate the informal sector of the economy. The informal sector is the part of an economy that is not taxed, monitored by any form of government, or included in any gross national product (GNP), unlike the formal economy. In developing countries, some 60% of the potential working population earn their living in the informal sector. The sector is the only way to earn a living for people who are self-employed outside the formal economy and not on anyone's payroll. Of the 1062 registered entrepreneurs in the area selected for this study only 389 (36.6%) are women. A previous study by this author, Fapohunda [40] shows that women's participation in the formal sector employment in Nigeria is low. Most of the women live and work in the informal sector because they have no chance to be hired by an employer from the formal sector. However most are simply employees rather than employers or entrepreneurs even in the informal sector where they are dominant.

Again according to the Lagos Chamber of Commerce and Industry LCCI [41] report the rate of success and growth of business ventures set up by women tend to be lower. The women generally have limited access to start-up and working capital, and other resources, such as credit and technology. Hence, they use simple technology, requiring minimal capital investment with the result that both employment rates and entrepreneurship measures are lower for women as compared to men.

The results indicate that women entrepreneurs tend to own smaller businesses, have lower levels of education, less desire to build wealth or capitalize on business ideas, have reduced access to funding and operate with lower levels of overall capitals, start and manage firms in different industries than men, and the growth rates of their businesses tend to be slower than that of firms owned by men. Entrepreneurial activities are still hampered by constraints that often tend to be gender specific, such as cultural norms, unequal employment opportunities and restricted access to finance for women. The study found several factors that hinder women entrepreneurial activities in Nigeria which include human capital, lack of information about how to start a business, lack of financial support, and administrative burdens all of which are determinants of entrepreneurship.

52(66.7%) of the female respondents indicate these factors as constraints to entrepreneurship by women in Nigeria. Again this confirms the findings of Akindele [25] that women entrepreneurship in Nigeria has been constrained by social, economic and technical factors.

The human capital of entrepreneurs influences the success of their firms. In Nigeria, as in many developing countries, there has been gender gap in terms of access to education for a long time. Females constitute the majority of illiterates in Nigeria at all levels of education. UNESCO [42] reports that girls make up 60% of all out of school children and represent two-thirds of illiterate adults. Most Nigerian females live in rural areas and are either semi-illiterates or non-literate. Odebo [43] reveals that 33.7% of females had no form of education in the North Eastern states of Nigeria. In the North Western States, 87.8% of female had no formal education. The case of the southern states was slightly better. In the South East only 36.2% of females have no formal education. In the South West at least 26.1% of females had no formal education. The Middle Belt states are in between the South and North in terms of average figures of female illiteracy. This shows the extent of gender gap and disparity in formal education.

Finance is another area of challenge. This study found access to finance to be a main concern for the entrepreneurs. While the sources of finance are the same for men and women, women still face higher barriers to access finance. The main reasons for this gender gap are associated with differences in the sector of activity, age and size of female owned businesses, lack of managerial experience, weaker credit history of women, a reluctance to take risks, and women's preference for smaller business size.

Women's access to financial services and resources is further hampered by general limitations to the formal financial infrastructure and sometimes legal and institutional barriers. Even though microfinance has partly compensated for the marked gender bias in access to formal financial services it perpetuates women's prevalence within micro-businesses.

Fapohunda [40] reports that microfinance has had a positive impact on women's income and has also made a difference. However while the microfinance organisations are gradually closing the financial gap, they are grossly inadequate both in number and spread and there is the risk that they can trap businesses in their micro-levels due to credit ceilings. Gender differences in employment and education play a role in gender differences in entrepreneurship. Women's under-representation among employed managers gives them less direct experience of managing businesses compared with men.

Again their lower average earnings give them with fewer saving for starting a business. This is quite significant because undercapitalisation at start-up impacts negatively on the survival rates and growth prospects of a business venture. Occupational segregation also reinforces the concentration of women-owned enterprises in service sectors and jeopardises women's prospects as entrepreneurs in high growth sectors. The limited access of women to external finance is one of the factors accounting for the gender differences existing with respect to accumulated human capital of entrepreneurs and entrepreneurial success.

The study confirms the findings of previous studies like Agomor [44] and Odebo [43] on the use of bank loans and venture capital which indicate that women entrepreneurs have less access to capital than men; a major reason being that women have relatively low access to credit from formal banking institutions because they mostly do not to have

collaterals to offer. The women more often than not resort to obtaining loans from family, friends, microfinance and cooperatives.

Another finding of this study is that women's lower representation in entrepreneurship reflects the stereotype of entrepreneurs having masculine image - assertive, achievement-oriented, risk-taking. However, both men and women entrepreneurs have many similar prospects and challenges and the similarities suggest that, under the same conditions, both men and women can be successful entrepreneurs. Women's potential for greater career flexibility, is a dimension on which female entrepreneurs can be recruited and encouraged. The personality traits that constitute entrepreneurial ability are also a major determinant of male as well as of female entrepreneurship. It provides a strong predictor for the preference of men and women to be self-employed and for the decision to start a business.

Men and women with higher levels of these personality traits related to entrepreneurship will more likely prefer being self-employed and also take steps to start a business. 168 (93.3%) of the respondents opined that their prior industry and work experience was an important factor in determining their entrepreneurial success.

### 5.1 Test of Hypotheses

Hypothesis 1: There is no significant difference between male and female in their control orientation.

**Table 1. Gender differences in control orientation**

Response	SA	A	N	D	SD	Total	$\chi^2$ cal	$\chi^2$ crit	df	P	Rem
	62	46	27	23	22	180	33.94	9.49	4	0.05	S
	(18.78)	(2.78)	(2.25)	(4.69)	(5.44)						

Some individuals have a feeling of lack of control over events in their lives while others have a feeling of ability to control events and assume responsibility over them. The former have external locus of control while the later have internal locus of control.

Entrepreneurs have been found to belong to the latter group.  $\chi^2$  (cal.) = 33.94, df = 4.  $\chi^2$  tab at 0.05 level of significance = 9.49. Since the calculated  $\chi^2$  is greater than  $\chi^2$  table value, we reject the null hypothesis (Ho). This implies that male and female differ significantly in their control orientation. The study found the internal locus of control scores of women significantly lower than those of men. This suggests that this personality trait is important for women's decision to take steps to start a business. 19% of female as opposed to 8% of male entrepreneurs prefer being employees.

Hypothesis 2: There is no significant difference between male and female entrepreneurs in the level of competitiveness.

**Table 2. Differences in the level of competitiveness of male and female entrepreneurs**

Response	SA	A	N	D	SD	Total	$\chi^2$ cal	$\chi^2$ crit	df	P	Rem
	73	44	16	22	35	180	56.37	9.49	4	0.05	S
	(38.02)	(1.77)	(11.11)	(5.44)	(0.03)						

$X^2$  (cal.) = 56.37, df = 4.  $X^2$  tab at 0.05 level of significance = 9.49. Since the calculated  $X^2$  is greater than  $X^2$  table value, we reject the null hypothesis ( $H_0$ ).

This implies a significant difference in male and female entrepreneurs in the level of competitiveness. Competitiveness is major motivation for individual engagement in entrepreneurship. The average score of competitiveness of women is significantly lower than that of men. This suggests that women are less competitively inclined than men.

Previous studies by Onadeko [15] and Daley [9] confirm this position. These results provide empirical evidence for the relevance of gender differences in personality traits that can be matched to tasks of entrepreneurs and in particular for the relevance of gender differences in competitiveness. This study found that women are often less likely to engage in entrepreneurial activities because they are less competitively inclined than man. Average female scores on competitiveness were lower than average male scores.

Hypothesis 3: There is no significant difference between male and female in achievement motivation.

**Table 3. Gender differences in achievement motivation**

Response	SA	A	N	D	SD	Total	$x^2$ cal	$x^2$ crit	df	P	Rem
	43	38	32	41	34	180	2.71	9.49	4	0.05	NS
	(1.36)	(0.11)	(0.44)	(0.69)	(0.11)						

$X^2$  (cal.) = 2.71, df = 4.  $X^2$  tab at 0.05 level of significance = 9.49. Since the calculated is less than  $X^2$  table value, we accept the null hypothesis. This implies no significant difference in male and female in the level of achievement motivation.

McClelland [8] affirms that achievement need (n-Ach) is the most critical for a economic growth and success. He also linked the need to achieve to the entrepreneurial spirit and the development of available resources. This study found that most of the women who choose to become entrepreneurs were motivated by basic factors like a wish to capitalize on their business ideas; the appeal of startup culture; a long-standing desire to own their own company to be able to cope with family responsibilities; and a desire to build wealth.

102(56.7%) of the respondents of both male and female cited these as reasons for going into entrepreneurship. 71 (39%) of the respondents were motivated to start their business simply because they were out of work. One common cause of women's participation in entrepreneurship has to do with life-balance. The desire for a balanced life, fair treatment and improved compensation often encourage women to go into entrepreneurship.

Hypothesis 4: There is no significant difference between male and female in risk propensity.

**Table 4. Differences in risk propensity**

Response	SA	A	N	D	SD	Total	$x^2$ cal	$x^2$ crit	df	P	Rem
	74	33	39	20	14	180	61.16	9.49	4	0.05	S
	(40.11)	(0.25)	(0.25)	(7.11)	(13.44)						

$X^2$  (cal.) = 61.16, df = 4.  $X^2$  tab at 0.05 level of significance = 9.49. Since the calculated  $X^2$  is greater than  $X^2$  table value, we reject the null hypothesis (Ho). This implies a significant difference between male and female in risk propensity. Traditionally risk is associated with entrepreneurship. Robin [22] believes that risk bearing distinguishes the entrepreneur from the manager.

Mancuso [45] asserts that individuals who are considered as entrepreneurs tend to be moderate risk takers or have moderate risk propensities. This study found risk tolerance traits to be present but lower in women as compared to men. Gender differences in the personality traits contribute to the gender gap in entrepreneurship. Women's average personality traits score is lower as compared to those of men and the gender differences in personality traits are a result of gender differences in competitiveness and risk tolerance. In addition, the risk tolerance of men tends to exceed that of women. A lot of the differences in entrepreneurial success can be attributed to differences in competitiveness and risk tolerance.

Hypothesis 5: There is no significant difference in the level of human capital of male and female entrepreneurs.

**Table 5. Differences in human capital of male and female entrepreneurs**

Response	SA	A	N	D	SD	Total	$x^2$ cal	$x^2$ crit	df	P	Rem
	253	39	27	32	29	180	12.62	9.49	4	0.05	S
	(8.02)	(0.25)	(2.25)	(0.44)	(1.36)						

$X^2$  (cal.) = 12.62, df = 4.  $X^2$  tab at 0.05 level of significance = 9.49. Since the calculated  $X^2$  is greater than  $X^2$  table value, we reject the null hypothesis. This implies a significant difference in the level of human capital of male and female entrepreneur. Entrepreneurs play a very important and all-encompassing role in the establishment and growth of a business. This role is enhanced by a high level of human capital.

A core task of an entrepreneur and a condition for entrepreneurial growth is the ability to effectively scan the environment and identify opportunities. With a high level of human capital this task can be better performed. A high level of human capital also results in a greater capability to successfully exploit opportunities. Human capital increases the entrepreneur's productivity and brings about higher firm profits. UNDP [46] found education and human capital formation as the most prominent of the several factors constituting barriers to the emancipation of women in Nigeria.

In Nigeria as in other both developed and developing societies, males have been shown to be better educated than females. Human capital formation in women is usually hindered by socio-economic restraints like limited parental resources, early marriages, pregnancy, sexual harassment, high illiteracy among mothers, childrearing etc. Female entrepreneurs in Nigeria are disadvantaged on the level of human capital in terms of education though the situation is gradually improving due to some reforms of the educational systems that allow girls and women opportunities of equal education.

However, though female participation in education has however been on a gradual increase the trend seems to be that as the level of education gets higher, the number of females are

lower. There are relatively more females enrolled in primary, secondary and tertiary levels of education. As the level get higher more tend to drop out.

Hypothesis 6: There is no significant difference in the level of social capital of male and female entrepreneurs.

**Table 6. Differences in the social capital of male and female entrepreneurs**

Response	SA	A	N	D	SD	Total	$\chi^2$ cal	$\chi^2$ crit	df	P	Rem
	65	42	34	19	10	180	51.28	9.49	4	0.05	S
	(23.36)	(1)	(0.11)	(8.03)	(18.78)						

The study found gender differences in accessibility of social capital. Women in Nigeria tend to have less access to social capital than men.  $\chi^2$  (cal.) = 51.28, df = 4.  $\chi^2$  tab at 0.05 level of significance = 9.49. Since the calculated  $\chi^2$  is greater than  $\chi^2$  table value, the null hypothesis ( $H_0$ ) is rejected. This implies a significant difference in the level of social capital of male and female entrepreneur.

Awe [21] and Adekanye [47] indicate that women may have reduced access to social capital as compared to men. This study found that business networking, social support mentorship and encouragement all tend to be more important to women than men. 63(80.8%) of the women as opposed to 32(31.4%) of the men maintained that their professional and business networks are significant to the success of their ventures. Social capital therefore constitutes another key gender difference in entrepreneurship efforts. 48(61.5%) of the women as opposed to 29(28.4%) of the men opined that their access to mentors contributed to their success. Social capital contributes to the success and survival of an entrepreneurial effort.

This study found that social networking is more important to women than men, we also found that women especially benefit from other types of social support and encouragement. Though both genders rated their professional and business networks as very important to the success of their start-ups, women emphasized it more. This is consistent with the findings of studies such as Carter (2000), Buttner (2001) and Moore (2004) which suggest that women may have less or different access to social capital than men. Thus, the role of social capital is another key gender difference, the understanding of which can help inform effective recruitment efforts.

## 5. RECOMMENDATIONS

This study recommends that female entrepreneurship should be supported through the introduction of entrepreneurship training programmes for women. The study posits that gender differences in competitiveness and some other personality traits may sometimes be due to nature e.g. genes and hormones, nurture or a combination of both.

Entrepreneurs with a high level of personality traits important for entrepreneurship prefer to stay self-employed whereas self-employed with a low level of personality traits important for entrepreneurship prefer have a preference for wage employment. The need therefore arises for a change the environment to support the career advancement of women in addition to existing entrepreneurship training programmes which primarily focus on adults but should now be complemented with those targeting socialization of girls from early childhood. Mentoring constitutes a very good method of encouraging women entrepreneurs.

Intervention efforts should focus on encouragement, technical, social and financial support, capacity building, experience, and well-developed professional networks for women entrepreneurs both to improve their numbers and to increase the success rates for existing ones. There is need to create special funds for women and to establish social and business networks for women entrepreneurs. The similarities between successful entrepreneurs of both genders imply that under the same conditions both can be successful entrepreneurs.

This study may have been limited by its geographical scope which is six local government areas in Lagos Nigeria it did not cover the whole six geo-political zones of the country. Again no research can be said to be completely exhaustive. The topic of gender and entrepreneurship however offers a great opportunity to researchers who might want to carry out further research in this area using different locations and samples.

## **6. CONCLUSION**

The study concludes that female entrepreneurs are important for economic progress and contribute to employment creation and GDP. They also increase entrepreneurial diversity. Gender differences in competitiveness and some other personality traits are due to a combination of both nature and nurture. External factors like the business environment, access to finance or work-family as well as internal factors like differences in personality traits account for the gender gap in entrepreneurship in Nigeria.

Under the same conditions both men and women can be successful entrepreneurs. Intervention efforts should focus on encouragement, technical, social and financial support, capacity building, experience, and well-developed professional networks for women entrepreneurs both to improve their numbers and to increase the success rates for existing ones. Women often try to avoid the challenge of competition and this has negative effects on female entrepreneurship.

## **COMPETING INTERESTS**

Author has declared that no competing interests exist.

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