

Gender Influence on Access to Innovation Resources in Nigeria

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Abstract

Studies have indicated that men are more innovative than women in every aspect of business. In an attempt to unravel the reasons for such a scenario, this study investigated empirically gender influence on access to innovation resources among women and men-owned Small and Medium-sized Enterprises (SMEs) in Lagos State, Nigeria. Five innovation resources which include education, finance, skilled workforce, extension and support services and partnership were examined in relation to gender. The data collected via questionnaires were analyzed using percentages, Analysis of Variance (ANOVA) and regression analysis. The results indicated that women are discriminated against in access to finance and skilled workforce but are not discriminated against in access to education, extension and support services and partnership. It was also found that access to four of the innovation resources identified in the study and gender have significant impact on innovation performance. Access to extension and support service has no significant impact. It was therefore recommended that policies and schemes targeting SMEs especially with respect to finance should be gender friendly so as to invigorate the otherwise dormant potential in women to innovate.

Keywords: Gender influence, women, men, SMEs, innovation resources, discrimination

1. Introduction

Globally, Small and Medium-sized Enterprises (SMEs) constitute the majority of enterprises, and as a result, they face the most severe competition. In order to gain competitive advantage and survive, they have to be innovative (Ramadani and Gerguri, 2011). Nations worldwide are driving innovation in their SMEs sector (NTWG 2009) by encouraging them to be innovative. This is necessary because innovation impacts positively on performance and growth. In recent years, the connection between innovation and gender has attracted increased interest among researchers (Crowden, 2003; Kingiri, 2010; Johansson and Lindberg, 2011; Danilda and Thorslund, 2011). It has been observed that women are few as innovators compared to men and that men-dominated occupations are more innovative than women-dominated ones. Nyberg (2009) stated that being an innovator is not regarded as a feminine trait since the image of the innovator is not easily compatible with the image of being a woman. Sanditov and Verspagen (2011) reported a study by Koellinger (2008) which found that innovative entrepreneurs are mostly males. This has brought about segregation and hierarchical notions of gender, constructing men and certain masculinities as being more relevant to innovation and growth than women and certain femininities.

Blake and Hanson (2005) highlighted how gender is a relevant factor in such an appraisal, primarily prioritizing men as innovators and envisioned masculine areas of innovation. Nahlinder, (2010) argued that the innovativeness of women is hampered by low self-confidence and low prioritization of work issues over family or household issues. In another view, Crowden (2003) stated that “men are more likely to radically innovate than women because of their personal and social characteristics, thus business cycles initiated by radical innovations can be deemed male-based”. In addition, Kingiri, (2010) citing World Bank, FAO and IFAD stated that gender inequalities occur in innovation due to unequal or constrained access to resources and new technologies and access to information, poor social networks, and literacy level.

The innovation studies, however, have not taken into account the views of women about their access to innovation resources and have not considered empirically if access to innovation resources could be one of the reasons why women and men’s contributions to innovation differ. In Nigeria, the federal government has been striving to promote equality of men and women in accordance with constitutional provisions. This commitment was exemplified by the signing of the National Policy on Women in July 2000 after the failures of previous administrations. The policy provides an opportunity and anchor for present and future initiatives to address the barriers that limit the full participation of Nigerian women in various aspects of life. Also, government at various times and at various levels has initiated and implemented credit schemes to empower marginalized entrepreneurs like women (Eriki and Okafor, 2003; Nwoye, 2011). The efforts of the government to promote gender equality and women empowerment is complemented by the work of vibrant NGOs, women groups and coalitions that have sprung up to address the needs of women. Gender equality works toward ending discrimination by providing equal opportunities or ensuring equality of conditions for men and women. Equality is considered to mean that everyone receives the same benefit, share or treatment regardless of their situation and circumstances. Therefore, the purpose of this paper is to advance knowledge as to the relationship between access to resources and innovative ability in a country where efforts are being made to promote gender equality. This has important implications for the understanding of the resources that promote and drive innovation. The specific objectives that motivated this study include:

- i. To ascertain if men entrepreneurs are actually more innovative than women entrepreneurs in Nigeria.
- ii. To investigate if disparities exist between women and men entrepreneurs in accessing innovation resources in Nigeria.
- iii. To determine if gender has a higher significant impact on innovation performance than innovation resources.

The following hypotheses were examined:

- i. Ho₁: Women entrepreneurs have equal access to all innovation resources as men entrepreneurs in Nigeria.
- ii. Ho₂: Gender has a higher significant impact on innovation performance than innovation resources.

2. Literature Review

2.1 Conceptualizing Innovation

The concept of innovation has been defined in various ways. Ramadani and Gerguri (2011) defined innovation as “a process of transforming new ideas and new knowledge into new products and services”. In the views of Baregheh et al (2009) innovation is a multi-stage process whereby organizations transform ideas into new/improved products, services or processes in order to advance, compete and differentiate themselves successfully in the marketplace. In distinguishing between creativity and innovation, Wehrich and Koontz (2005) defined creativity as “the ability and power to develop new ideas while innovation is the use of these ideas”.

Adeyeye (2008) differentiated between invention and innovation by defining invention as “the act of developing, designing or creating something that has not existed before while innovation is invention and/or application of new knowledge in a particular area”. This means that inventions can be seen as innovations but innovations are not necessarily inventions because innovations may be a long established ideas or products involving a new application. Innovation therefore can be conceptualized as the development and/or application of new products, methods of production, processes and services.

2.2 Why Innovate in Business?

Innovation ensures the sustainability of a business. Successful SMEs can only survive in or shape their business environment by being at the forefront of innovativeness. The increasing dynamism of the market and the opportunities and threats unleashed by the globalization of markets has made innovative behaviour a critical determinant of value creation. These developments have created urgent need for SMEs to be innovative (Nkamnebe, 2011). Innovation in new product is among the most critical activities for the success and even the survival of organizations (McNally and Schmidt, 2011). In order for a business to maintain its market share, it must be innovative. Innovation imposes itself as a determinant factor of business success (Chinonye, 2002; Moreira et al, 2012). A business's ability to create and maintain consumers is directly dependent upon its ability to produce innovative products and/or services.

Isolating the benefits of the various types of innovation, Omachonu and Einspruch (2010) stated that technological innovations present vast opportunities for enhancing internal production processes for goods and services. Product innovation which is the introduction of new types of goods and services to the market is essential to the life of any organization since they provide the most obvious means for generating incremental revenues. Process innovation, improves internal capabilities and quality. Ramadani and Gerguri (2011) reported that in a study carried out in April 2010 using 119 SMEs, it was found that the importance and benefits of innovation are improvement in the quality of products and services offered to customers (27% of the respondents), creation of better conditions at work (18% of the respondents), maintenance of the existing position in the market (17% of the respondents), entering new markets (13% of the respondents), creating flexibility at work (9% of the respondents), improving the ecological environment and diversification of product range (2% of the respondents). Apart from the benefits of innovation to the enterprise, it is also a tool for creating wealth and economic growth which in turn leads to economic development (Danilda and Thorslund, 2011). The emergence of the Eastern Asian Tigers provides strong proof of the power of innovation to bring about development. Their rapid growth owes much of their successes to the favourably structured innovation system of their countries. Innovation is an increasingly important contributor to sustainable economic growth both at the micro-economic and macro-economic levels.

2.3 Theoretical/Conceptual Framework

The theory of gender system which describes the power relation between men and women has significant implications for the gendered aspect of innovation. It is based on two phenomena: segregation (women and men are segregated by law or by other means including informal ones) and hierarchisation (the male is the rule and standard and thereby is more highly valued). This could lead to a situation where men-owned businesses attract resources more than women-owned businesses, which off course has implication for performance according to resource-based view. The resource-based view is a strategic theory for understanding why some firms outperform others. It assumes that each firm is a collection of key resources and capabilities that determines a firm's strategy. With the progress in the research on resource-based view, it has become clear that the resource-based view extends beyond the assets of an organisation and reaches into its capabilities which have more relation with process and activities (Eisenhardt and Martin, 2000). In addition, the feminist theory which analyzes issues that pertains to men and women seeks to provide an understanding of the nature of gender inequality and the promotion of women's rights, interests and issues. This theory assumes that women generally experience subordination and that the treatment of women in relation to men has not been equal or fair (Wikipedia, n.d). These theories sought to explain why women have experienced discrimination, and how this discrimination has placed them in disadvantaged positions in the stratification system. As such, access to resources is assumed to influence innovation performance. The conceptual framework for this study is depicted in figure 1 below:

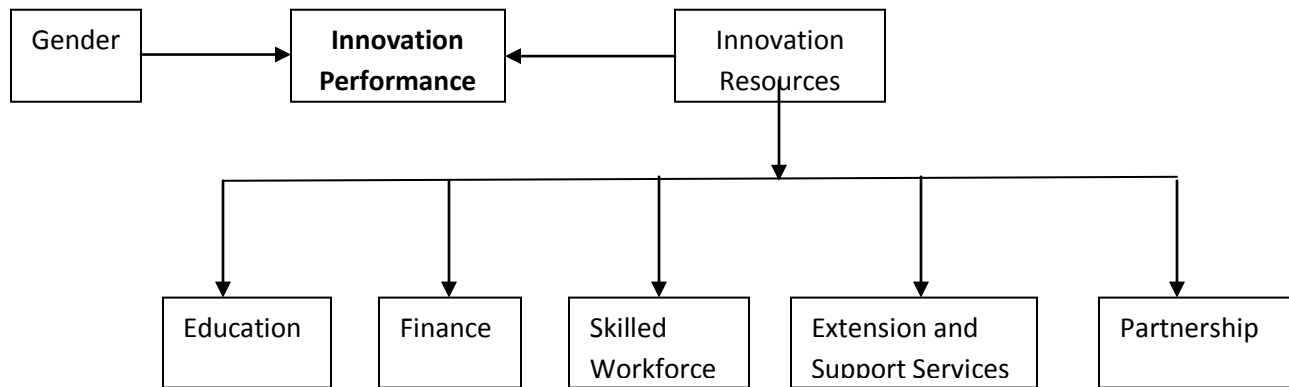
Figure 1: Impact of Gender and Innovation Resources on Innovation Performance

Figure 1 indicates the impact relationship between gender and innovation performance and between innovation resources and innovation performance. A review of the literature on these relationships is discussed below:

2.3.1 Innovation Performance

Brychan, et al. (2011) described innovation performance as statistics that describes the various aspects of innovation. The indicators they cited to measure innovation performance are business expenditure on research and development (R&D), patents, new product innovations, and the adoption of advanced manufacturing technologies. In addition, Ramadani and Gerguri (2011) stated that Joseph Schumpeter identified five innovation activities consisting of introduction of a new product, introduction of a new method of production, opening new markets, finding of appropriate sources of raw materials and establishing a new organization in the industry. Innovation performance could also include new design and packaging of goods and services, new distribution system and new and better sales techniques.

2.3.2 Gender

The literature on gender and innovation posits that gender is a significant factor that affects innovation performance. Some authors are of the view that being an innovator is not an attribute of women because the image of the innovator is not compatible with the image of being a woman (Nyberg, 2009). Consequently, men are assumed to be highly innovative while women are not (Blake and Hanson, 2005).

2.3.3 Innovation Resources

Innovation holds out the hope of large rewards but it usually requires significant resources either alone or with others. Innovation resources are assets, facilities or services that propel and drive innovation. According to Saranga and Beine (2011) innovation resources and capabilities have been found to be essential to climb up the value chain in most industries. However, development of innovation resources and effective deployment of these resources requires significant investments on a sustained basis, which is a difficult task for domestic firms in many developing economies. Innovation can only be enhanced in an entrepreneur who possesses the fund necessary to test out ideas, is well trained to bring modern knowledge to bear in his/her tasks and that can easily get in touch with like-minded entrepreneurs (Chinonye 2002). In this paper, five innovation resources that are relevant to the Nigeria situation were identified. They include education, finance, skilled workforce, extension and support services and partnership.

2.3.4 Innovation and education

Education is one of the most powerful instruments for innovativeness (Sanditov and Verspagen (2011). Individuals (women and men) who are allowed to develop their full potential will be creative, engaged and willing to take risks (Danilda and Thorslund, 2011). Education provides individuals with the necessary knowledge and skill to be thoughtful, imaginative, creative, resourceful and innovative. It is generally believed that women have less access to education, tend to be less experienced and less assertive to gain experience and training and that they do not have the knowledge, experience and skills necessary to spur innovative activities.

However, majority of women all over the world today are highly educated. According to Nwoye (2011) women are better educated now than before but the level of education of the average woman is still low compared to men and this could have significant implications for innovation.

2.3.5 Innovation and Finance

Finance has been identified as a major challenge to SMEs (CBN, 2003; Eriki and Okafor, 2003; Ojo, 2004; Brychan et al, 2011). There may be good ideas and initiatives but money is the vehicle of transformation into realities. Many innovative ideas of business owners die due to inadequate fund. The Nigerian government having taken access to finance as the most important critical factor for SME promotion has recently embarked on several SME financing schemes and programmes. In reviewing the SME framework in 2000, the Federal government established the Bank of Industry (BOI). It is an amalgam of the former Nigerian Industrial Development Bank, the Nigerian Bank for Commerce and Industry and the National Economic Reconstruction Fund (NERFUND). It was set up with the principal objective of providing credit to the industrial sector, including the small and medium scale enterprises (CBN, 2003). The Nigerian Agricultural Cooperative and Rural Development Bank Limited (NACRDB) which is an amalgam of the former Peoples Bank of Nigeria, Nigerian Agricultural and Cooperative Bank and the Family Economic Advancement Programme (FEAP) was also set up in October 2000, primarily to finance agriculture as well as small and medium enterprises. The Small and Medium Industry Equity Investment Scheme (SMIEIS) was established in 2001. The concept of SMIEIS in Nigeria was the initiative of the Central Bank of Nigeria with the voluntary support and efforts of the Bankers' Committee. The Scheme requires that all banks in Nigeria should set aside 10 percent of their profit before tax annually for equity investments in small and medium industries. Also, the Small and Medium Enterprise Development Agency (SMEDAN) was established in 2003 to facilitate SMEs access to finance and other resources that will ensure that they contribute significantly to the economic development of Nigeria (SMEDAN, 2003). These schemes are intended to eliminate the burden of interest and other charges associated with normal bank lending.

It has also been argued that finance is a particular problem for women-owned businesses. Nwoye (2011) observed that women often rely on personal savings, cooperatives and loans from friends and relations as major sources of finance because banks and financial institutions in Nigeria like other African countries have a negative attitude towards women which is based on the assumption that they are supported by their husbands. Also, the reinvestment of profits is remote in view of the pressure for immediate consumption and the need to guarantee the survival of the family. In a study by Eriki and Okafor (2003) on gender discrimination in micro-credit financing in Nigeria, it was found that women were discriminated against in the disbursement of loan by the Nigerian Agricultural and Cooperative Bank. This prompted them to call for a cultural change in loan administration. Cheston and Kuhn (2010) pointed out that although women's access to financial services has increased substantially in the past 10 years, their ability to benefit from this access is often still limited by the disadvantages they experience because of their gender.

2.3.6 Innovation and Skilled Workforce

The skill and experience of employees of an organization also determines innovative activities. Nahlinder (2010) argued that ideas from employees are indirect measures of innovativeness in business because they are creative solutions to existing problems and that creativity is an essential initial stage in the process of innovation. Employees' commitment to realize the innovative potentials of their ideas is also important. Sanditov and Verspagen (2011) posited that innovation is embedded in organizations and their Research and Development (R&D) personnel and that to tap into that knowledge, a business needs to have appropriate absorptive capacities. Also, the study of Silva and Leitao (2009) confirmed that the qualification of personnel, in terms of higher levels of education has a positive and significant effect on the propensity for firms to innovate. This implies that unskilled employees in a business enterprise could be a major barrier to innovation. According to Nwoye (2011) the extended family phenomenon has been exploited by women as source of labour for their businesses regardless of the quality of the labour. By so doing, they have often forgone quality labour thus, rendering their businesses unproductive and uncompetitive. Eriki and Okafor (2003) argued that lack of cash is the major constraints facing women in the hiring of skilled labour.

2.3.7 Innovation and Extension and Support Services

It has been acknowledged that SMEs development programmes and assistance should enable them to take advantage of innovations (OECD, 2005). If SMEs are to become a success, current efforts to organize workshops and training programmes for entrepreneurs to improve their skills and capabilities must be sustained (CBN, 2003). According to Nwoye (2011) entrepreneurs need support services especially in the area of training. In the Second National Development Plan (1970-1975), Industrial Development Centres (IDCs) were created by the Federal Government to promote SMEs. They provide extension and support services to SMEs especially as they relate to product development, entrepreneurial training, and technical appraisal of loan applications as well as managerial assistance. Other extension and support services are also provided by the Centre for Management Development (CMD).

2.3.8 Innovation and Partnership

Many SMEs experience difficulties in gaining access to technological resources and it is being suggested that the formation of networks and collaborative arrangements are necessary to stimulate access to these resources. According to Nkamnebe (2011) the involvement of external partners is more likely to yield better and sustainable innovation. This is because such relationships have the potential to spur innovation and increase the speed SMEs can engage in innovation. Ramadani and Gerguri (2011) reported a study by IBM to determine the potential sources of innovations, which was based on phone interviews with over 750 CEOs and business leaders. The study found “that 76% of CEOs ranked business partners and customer collaboration as top sources for new ideas”. Some innovations are achieved through collaboration with other businesses, university-industry interface and public private partnership. Innovative SMEs will usually have relationships with other firms in their network and with suppliers and customers. In Nigeria, there are several business associations for SMEs. The Nigerian Association of Small and Medium Enterprises (NASME), The Nigeria Association of Small Scale Industrialists (NASSI), Manufacturers Association of Nigeria (MAN) and other specific business associations. The creation of innovation and new know-how are examples of positive spillover from existing type of relationships formed through networks.

3. Methodological Issues

3.1 Population and Sample

The population of the study comprised all SMEs operating in Lagos state, Nigeria. The definition of SMEs varies from country to country and from industry to industry but they are usually defined in terms of size of employees, annual sales, working capital and total assets. Small and Medium Industries and Equity Investment Scheme (SMIEIS, 2001) defined SMEs as an enterprise with a maximum asset base of N200 million excluding land and working capital and with the number of staff employed not less than 10 or more than 300. This definition was also adopted by Small and Medium Development Agency of Nigeria (SMEDAN, 2003). For the purpose of this study, we define an SME as an enterprise that has at least 1 employee and a maximum of 300 employees (full-time and part-time).

3.2 Sample and Sampling Technique

The study was carried out in Lagos state. Available evidence shows that the geographical spread in terms of number and value of projects financed by government support agencies is highly skewed in favour of Lagos. Evidence so far shows that Lagos state has access to about 75% of all government support services to SMEs (CBN, 2003). This makes Lagos state the best single choice in Nigeria. SMIEIS (2001) and SMEDAN (2003) classified SMEs into eight (8) categories which include Agro-allied, Information Technology and Telecommunication, Manufacturing, Educational Establishments, Tourism and Leisure, Solid Minerals, Construction and Others. In order to avoid a situation where there is no equal representation of men and women owned-businesses, we sampled only those categories of SMEs that are dominated by women and men, thus, five (5) SME categories which include Agro-allied (poultry and fishery); Information Technology and Telecommunication (computer supply and maintenance firms and cyber cafe); Manufacturing (bakery and confectioneries, table water, fruit juice); Educational Establishments (private primary and secondary schools) and Tourism and Leisure (hotel and restaurant) were used for the study. Lagos state was divided into five zones (Ikeja, Badagry, Ikorodu, Lagos Island and Epe).

Due to inability to get a comprehensive and up-to-date list of registered SMEs in Lagos state, quota sampling was used to sample 100 SMEs (20 each for the five sectors) from each zone. Thus, a total of 500 SMEs were sampled for the study. Purposive sampling based on a minimum of one (1) employee was then used to sample the respondents.

3.3 Research Instrument

Data was collected using questionnaires which had 4 sections. Section A (5 items) sought for information on the profile of the businesses and their owners such as sex, age, level of education, sector of business, number of employees while section B (10 items) was designed to elicit information on the innovation activities of the respondents using a five-point scale ranging from strongly agree (1) to strongly disagree (5). Section C (19 items) measured access to innovation resources on a five-point scale ranging from strongly agree (1) to strongly disagree (5) while section D (21 items) measured the importance of the five identified innovation resources on innovative ability using a five-point scale ranging from very important (1) to not at all important (5).

The instrument was designed by the researchers. A pilot study was conducted in order to ascertain and detect any ambiguities, questions that were not easily understood or poorly constructed and even those that were irrelevant or scary to the respondents. From the responses, remarks and comments received on the pilot study, the entire questionnaire was refined and improved upon to take care of the observed shortcomings, enhance the validity, and make the questions easier to answer and more response-friendly. Cronbach Alpha was used to determine the internal consistency and reliability of the items. Section B indicated Cronbach alpha of 0.82; section C, 0.79 and Section D, 0.76. They all indicated acceptable construct reliability. A total of 500 questionnaires were administered but 368 useable copies were retrieved and used for the analysis. A total of 196 men owned-businesses and 172 women owned-businesses responded. The table below shows the breakdown of the questionnaires that were used for analysis:

Table 1: Breakdown of Questionnaires used for Analysis

Sector	Men owned-businesses	Women owned-businesses	Total
Agro-allied	41	35	76
Information Technology and Telecommunication	34	20	54
Manufacturing	40	30	70
Educational Establishment	51	39	90
Tourism and Leisure	30	48	78
Total	196	172	368

Source: Authors' Fieldwork, 2012.

4. Results

The presentation of results described below is organized according to the research objectives.

4.1 Innovation Performance of Men owned-businesses and Women owned-businesses

Table 2: Group Statistics

		Total	Agree	Percentage	Mean
I have Research and Development personnel/unit	Men	196	32	16.3%	2.6735
	Women	172	20	11.6%	2.7674
I use ICT/internet in my business	Men	196	109	55.6%	1.6786
	Women	172	71	41.3%	1.9663
I have developed and introduced a new product in my business	Men	196	56	28.6%	2.3571
	Women	172	32	18.6%	2.5930
I have patent in an aspect of my business	Men	196	9	4.6%	2.8490
	Women	172	5	2.9%	2.9884
I use a new method of production that is different from the traditional one	Men	196	16	8.2%	2.7907
	Women	172	12	7.0%	2.8367
I have identified and used an alternative source of raw material	Men	196	40	20.4%	2.5918
	Women	172	30	17.4%	2.6047
I have designed a new and better package for my products	Men	196	46	23.5%	2.5306
	Women	172	58	33.7%	2.2849
I use a unique method of distribution/service delivery	Men	196	8	4.1%	2.9184
	Women	172	15	8.7%	2.8140
I have introduced new uses for my product	Men	196	48	24.5%	2.4244
	Women	172	30	17.4%	2.5663
I have identified new markets for my products	Men	196	10	5.1%	2.8980
	Women	172	4	2.3%	2.9535

Source: Authors' Fieldwork, 2012.

Table 2 shows the innovation activities of men owned-businesses in relation to women owned-businesses. The percentage of the respondents that agreed with the 10 statements that measured innovation performance indicated that on the average, the men are more innovative than the women except for design of new and better packages for products and a unique distribution/service delivery system.

4.2 Gender Differences in access to Innovation Resources

In order to test if there is a significant difference in access to innovation resources with respect to gender, Analysis of Variance (ANOVA) test was conducted. The result is shown below:

Table 3: ANOVA Result

		Sum of Squares	Df	Mean Square	F	Sig.
Access to Education	Between Groups	.536	1	.536	2.592	.108
	Within Groups	75.768	366	.207		
	Total	76.304	367			
Access to Finance	Between Groups	1.646	1	1.646	18.139	.000
	Within Groups	33.213	366	.091		
	Total	34.859	367			
Access to Skilled Workforce	Between Groups	3.713	1	3.713	45.958	.000
	Within Groups	29.567	366	.081		
	Total	33.280	367			
Access to Extension and Support Services	Between Groups	.191	1	.191	1.141	.286
	Within Groups	61.276	366	.167		
	Total	61.467	367			
Access to Partnership	Between Groups	.907	1	.907	6.552	.111
	Within Groups	50.648	366	.138		
	Total	51.554	367			

Source: Authors' Fieldwork, 2012.

The result shows that gender difference with respect to access to finance is significant ($F_{cal} = 18.139 > F_{tab} = 11.4$ and $sig = 0.000$) and access to skilled workforce ($F_{cal} = 45.958 > F_{tab} = 11.4$ and $sig = 0.000$) but is not significant for access to education ($F_{cal} = 2.592 < F_{tab} = 11.4$ and $sig = 0.108$), access to extension and support services ($F_{cal} = 1.141 < F_{tab} = 11.4$ and $sig = 0.286$) and access to partnership ($F_{cal} = 6.552 < F_{tab} = 11.4$ and $sig = 0.111$). This indicates that there are no significant differences in access to education, extension and support services and partnership between men and women-owned businesses but there are significant differences with respect to access to finance and skilled workforce. Therefore, we reject the null hypothesis that women entrepreneurs have equal access to all innovation resources as men entrepreneurs in Nigeria.

4.3 Impact of Gender and Access to Innovation Resources on Innovation Performance

In order to determine the impact of gender and access to innovation resources on innovation performance, a regression analysis was carried out. The result of the regression analysis is depicted in the table below:

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.848 ^a	.719	.714	.26659	1.706

a. Predictors: (Constant), Gender, Access to Finance, Access to Partnership, Access to Extension and Support Services, Access to Skilled Workforce, Access to Education

b. Dependent Variable: Innovation Performance

Source: Authors' Fieldwork, 2012.

Table 5: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	65.515	6	10.919	153.638	.000 ^a
	Residual	25.656	361	.071		
	Total	91.171	367			

a. Predictors: (Constant), Gender, Access to Finance, Access to Partnership, Access to Extension and Support Services, Access to Skilled Workforce, Access to Education

b. Dependent Variable: Innovation Performance

Source: Authors' Fieldwork, 2012.

Table 6: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.251	.064		-3.909	.000
Access to Education	.308	.100	.232	3.083	.002
Access to Finance	.568	.075	.351	7.561	.000
Access to Skilled Workforce	.426	.089	.390	4.799	.000
Access to Extension and Support Services	.043	.074	.027	.580	.562
Access to Partnership	-.173	.076	-.142	-2.261	.024
Gender	.094	.032	.095	2.936	.004

a. Dependent Variable: Innovation Performance

Source: Authors' Fieldwork, 2012.

Tables 4, 5 and 6 show the results of the regression analysis. The dependent variable was innovation performance while the independent variables were education, finance, skilled workforce, extension and support services, partnership and gender. From table 4, it can be seen that the R square value for the model showed that 71.9% of the variance in the model can be explained by the independent variables. Table 5 (ANOVA table) indicated that the model is significant (p value = 0.000). Table 6 shows the Beta coefficients that present the contributions of each variable to the model. It could be observed that five of the independent variables (access to education, access to finance, access to skilled workforce, access to partnership and gender) had statistically significant relationship with the dependent variable innovation performance. However, access to finance ($\beta=0.568$, $t = 7.561$ and p value = 0.000) had the highest impact on innovation performance followed by access to skilled workforce ($\beta=0.426$, $t = 4.799$ and p value = 0.000), access to education ($\beta=0.308$, $t = 3.083$ and p value = 0.002), gender ($\beta=0.094$, $t = 2.936$ and p value = 0.004) and access to partnership ($\beta=-0.173$, $t = -2.261$ and p value = 0.024). Access to extension and support services ($\beta=0.043$, $t = 0.580$ and p value = 0.562) had no significant impact on innovation performance. Based on the results we reject the null hypotheses that gender has a higher significant impact on innovation performance than innovation resources.

5. Discussion of Findings

The results of this study confirmed that men entrepreneurs are more innovative than their women counterparts in similar businesses. It also showed that access to the identified innovation resources except extension and support services are critical for the promotion of innovation and that women entrepreneurs are not less innovative because of their gender alone but also due to limited access to finance and skilled workforce. Based on the results, we contend that to realize the potential for innovation, the education sector should be given adequate attention. As Sanditov and Verspagen (2011) rightly mentioned, education is very important for innovativeness. However, it is important to emphasize that it is not going to school per se that promotes innovation, but having the right education.

As such, the educational system should be tailored towards the stimulation of innovative capabilities through the development of appropriate curriculum, provision of adequate facilities and a conducive environment for learning. This in a way will also help to provide skilled employees that can contribute meaningfully to the innovation process. Although the Federal government of Nigeria has been making efforts to create new universities to increase access to higher education which is very important, the old ones should not be forgotten. The facilities should be upgraded so that the universities can produce innovative students.

In the area of finance, there is need to increase access to needed funds for both men and women entrepreneurs. However, the results of this study have indicated that women entrepreneurs have less access to funds than their male counterparts. This finding is in consonance with that of Eriki and Okafor (2003) which used secondary data. This has made women entrepreneurs to rely on personal savings, cooperatives and loan from friends to finance their businesses.

This according to Nwoye (2011) is because banks and financial institutions in Nigeria like other African countries have a negative attitude towards women which is based on the assumption that they are supported by their husbands. This also justifies why Eriki and Okafor (2003) called for a cultural change in loan disbursement. In this paper, we call for gender friendliness in policies and schemes targeting SMEs financing in Nigeria.

This study has also revealed that despite the efforts of the Nigerian government, NGOs and other institutions interested in the affairs of women to promote gender equality, not much has been accomplished in the ability of women entrepreneurs to adequately hire skilled workforce. Women do not have equal access to qualified and experienced workers in comparison to men. This has made them to rely on extended family members and available labour. This inequality can affect the innovativeness of women because according to Nahlinder (2010) the skill and experience of employees of an organization is one of the factors that determines innovative activities. Government policies need to respond to these variations and develop innovative support networks that are sensitive to the needs of women-owned business.

Partnerships have also been identified to play a crucial role in innovation. The findings have indicated that women are not discriminated against in access to networking and linkages however, there is need to promote them. Partnership especially in the area of university-industry collaboration is highly needed in Nigeria. In addition, training programmes in the use of modern technology and support services should be made accessible to SMEs operators. SME Policy should make specific provisions to complement existing training initiatives with new strategies aimed at facilitating access to training by SMEs. Training must become more sector-specific, focusing on the particular needs and practical problems of SMEs in Nigeria.

6. Conclusion

In this paper, we set out to investigate if some resources have any implication for innovative ability among SMEs. From the findings, four of the identified innovation resources (finance, skilled workforce, education and partnership) and gender have significant impact on innovative ability and the women entrepreneurs claimed that they are discriminated against in access to finance and skilled workforce. We can conclude therefore that women are less innovative than men not because of gender alone but they are disadvantaged in terms of exercising their potential to contribute to the innovation process due to access to critical innovation resources. For a country to achieve the objectives of economic growth and development through SMEs, access to resources that promote and drive innovation must be put in place. Policymakers should strive to create an environment that will foster innovation and its resulting positive benefits. It is also important to focus on how women's role as innovators can be improved upon especially in terms of access to resources. Efforts to engender innovation towards harnessing existing opportunities and identifying gaps for building requisite innovation capacities should be intensified. In addition, encouraging and recognizing women innovativeness is crucial to exploit an important potential for innovation. Therefore, in initiating and articulating policies for SMEs growth and development, they should be gender friendly.

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