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The Mediating Role of Innovation on Access to Finance and Business Performance of Women Entrepreneurs

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Abstract
This research examines the innovation as a mediator on Access to Finance (AF) and Business Performance (BP) of women entrepreneurs in Nigeria using Innovation (I) as a mediator in order to improve the performance of Women which at the long-run contribute positively towards the increase of Nigeria GDP. Data required for the study was collected from the Women Micro, Small and Medium Enterprises (MSME’s) operating in the North-Western Nigeria using a survey design using a systematic random and stratified disproportionate sampling. A designed questionnaire has been distributed across the target population of 576 through self-administration. In order to evaluation the proposed data, the study has adopted the Partial Least Squares-Structural Equation Modelling (PLS-SEM). The findings revealed that AF and Innovation are important strategic for the performance of women MSMEs in Nigeria. The findings also revealed that women MSME performance depends on the degree of AF of the business performance. However, innovation was found to mediate on Access to Finance and Business Performance of Women Entrepreneurs. The results of the study will provide important insights to women owner/managers of MSMEs, policy makers and researchers to further understand the influence of AF and Innovation on women MSME performance. Women MSMEs should also be encouraged to improve their AF and I which may increase their performances.

Keywords: Access to Finance, Innovation, Women Business Performance and Micro Small and Medium Enterprises (MSMEs)

INTRODUCTION
The importance of MSMEs in influencing the economic growth and development of a country is recognized all over the world as their performance is unanticipated (Ibrahim & Rosli, 2016; Ali, Hilman & Gorondutse, 2017; Gorondutse, Ali, Abubakar & Naalah, 2017).

The level of SMEs contribution to the Nation’s Gross Domestic Product (GDP) and employment which indicate their low performance (Naala, Nordin & Omar, 2017). This lead many researchers and
practitioners to give so much attention to their significant contributions to the economic growth and the development in both developing and developed nations (Gorondutse, Ibrahim, Abdullwahab, & Naalah, 2018; Naala Nordin & Omar, 2017; Naala, 2016; Eniola, 2014).

Women entrepreneurs, particularly in developing countries, have difficulty in accessing financial facilities for entrepreneurial activity and this lead to low business performance compared to men counterparts, While, the participation of women in informal sector of the economy is higher than males (Ike, 2017; Momoh, 2013). Women entrepreneurs in developing countries, Nigeria inclusive, are particularly saddled with certain peculiarities that hinder their ability to have access to finance within the society. Their cultural practice characterizes these impediments, for example, early marriage, male influence in every sphere, and low formal education they regard as an obstruction to women because the husbands are too busy to help at home even when the need arises. Furthermore, the male does not allow their wives to go out because of the strong religion and culture fact that limit women movement only with their husbands (Idris & Agbim, 2015).

In other words, women activities specifically in business empower them economically and enable them to contribute to the general development of the nation. Yet, women in the most parts of the developing world (including Nigeria) continue to face various forms of discriminations, which limit their opportunities to develop to their full potentials and they also face some difficulties in pursuit of enterprise success (Koko, Maishanu & Hassan, 2017; Abubakar, 2013). Women entrepreneurs are indeed innovative by nature in an attempt to create economic value and satisfy family needs, they create businesses and exhibit entrepreneurial acumen. Indeed their contributions to the sustenance of families and economy of their respective communities are enormous. Furthermore, Ogujiuba, Fadila and Stiegler (2013) Koko et al. (2017) and Koko (2014) express the needs and relevance of encouraging women's access to finance as well as improving economic diversification and growth. The authors also stated that the empowerment of women could encourage and inspire development in a community.

The current study used innovation as a mediator to probe the effects of access to finance on business performance of women entrepreneurs. More so, it is significant to note that it will be very difficult to evaluate the link between access to finance and business performance of women entrepreneurs without analyzing the mediating variable of innovation, and how they affect each other under what? Condition of indirect effects (Baron & Kenny, 1986; Hayes, 2009). Therefore, based on the literature review, this study have intends to investigate if innovation mediates between access to finance on business performance of women entrepreneurs in the North-Western Nigeria.

The paper is classified into five segments, the introductory part, literature review, while the third and fourth segments include the methodology as well as the result and discussions, respectively. Lastly, the paper provided a conclusion.

LITERATURE REVIEW

Lee, Sameen, and Cowling (2015) studied the influence of access to finance and financial crisis of innovative SMEs using a sample of over 10,000 UK SMEs employers. Survey data were collected using questionnaires and regression analysis was conducted for data analysis. Finding indicated that low access to finance have restricted the growth of innovative firms. The use of limited information on the quality of both innovation and firm was highlighted as the limitation of the study. Likewise,
Lee, Dedahanov & Rhee (2015) studied the role of innovation performance on financial performance. The data was collected from 352 organisations in South Korea using hierarchical regression analysis. The outcomes shown a positive significant influence on the relationship between the innovation performance and financial performance.

Lu, Zhu and Bao (2015) investigated the High-performance human resource management and firm performance on the mediating role of innovation in China. A sample of 150 pre-survey Chinese manufacturing industries in Beijing, Changchun, Harbin, Shanghai, Shenzhen, and other cities using questionnaire and PLS-SEM for data analysis. The results revealed that innovation has a significant positive impact of high-performance on HRM and firm performance. The researchers suggested future study to expand innovation scope as a variable to various enterprises. Additionally Camisón and Villar López (2010) examined the mediating role of innovation on the relationship between manufacturing flexibility and firm performance with a sample of 159 Spanish firms using questionnaires and personal interviews for data collection while PLS-SEM for data analysis. Findings revealed that the mediating variable have a significantly positive influence on the organizational performance.

Helm, Mauroner and Dowling (2010) exploded entrepreneurial orientation and spin-off venture performance and the mediating role of Innovation using questionnaire for data collection with a sample of 350 entrepreneurs in high technology spin-off companies in Germany with structural equation modelling for data analysis Findings revealed that innovation have a significance influences on the entrepreneurial orientation and new venture performance. Further studies should consider the use of multi-source data.

Sharma, Davcik and Pillai (2016) investigated the role of mediating product innovation in influence Research, Development expenditure of brand equity on marketing performance with a sample of 10,282 data of Bureau van Dijk Electronic and ACNielsen Italy’s report on household’s financial statement of food purchase database using regression for data analysis. Findings showed a Research, Development expenditure and Brand Equity showed a significance positive relationship on marketing performance of product innovation. Recommend future study to use product innovation as a moderator in influencing marketing performance.

Therefore, on the ground of the above literature reviewed this present study suggests the following hypotheses:

\( H_1 \): Access to finance has a significance positive effect on business performance of women entrepreneurs in the North-Western Nigeria.

\( H_2 \): Innovation has a significance positive effect on business performance of women entrepreneurs in the North-Western Nigeria.

\( H_3 \): Innovation mediates the effect of Access to finance (AF) on business performance of women entrepreneurs in the North-Western Nigeria.
This study employed the Resource-Based Theory (RBT) and Pecking Order Theory for enhancing and supporting the framework. The RBT encapsulates the focus of the study by taking into consideration the relations among the variables. In this study, the Resource-Based Theory (RBT) is adapted to explain the effect between dependent variable, and mediating variable business performance of women entrepreneurs as the dependent variable and lastly the mediating role of innovation as it exploited the strengths and weaknesses of the businesses, which may leads to outperformance on businesses. In this study, access to finance is selected as the independent variables. While the development of the Pecking Order Theory was motivated by lack of asymmetric information regarding financial markets as well as external financing transaction costs (Vasilou, Eriotis & Daskalakis, 2009). The theory affirms that managers are often the sole custodian of a significant part of the information related to the conditions and prospects of their firms, compared to the external investors from outside. The focus of the study is primarily on how businesses generate and achieve their performances. The Pecking Order Theory suggests a hierarchical order in choosing the available financing source. Thus, Pecking Order Theory (POT) suggested that those women entrepreneurs facing problem regarding shortage of fund will seek to obtain fund through friends, relatives, families, retained profits to preserve assets, debt and agencies to improve their performance.

In conformity to the RBT, innovation is business’s resource, which is likely to give a sustainable and outstanding performance to the business. For a business organisation to have innovation, it must encourage the introduction of new ideas, creativity, testing and creative response to situations that will result in new products and new ways of doing things (Halim et al., 2014), while innovation is the ability and strength of a business enterprise to initiate new measurement of actualizing the new products and the ideas to produce (Covin & Mille, 2014).

METHODOLOGY

The present study examines whether innovation mediates the impacts of access to finance on business performance of women entrepreneurs in the North-Western Nigeria. The population consists of owners/managers of MSMEs in the North-Western Nigeria.

Employing disproportionate random sampling to determine the amount of sample drawn from the population of MSMEs in each state, a simple random technique of selecting the sample from three states was used (Kano, Kaduna and Sokoto States) which data were finally collected for analysis of this study. Questionnaires were administered to 576 owners/managers of MSMEs who are registered member of Nigeria Association of Micro Small and Medium Enterprises (MSME). only, 452 (78.5%) were returned completely answered while 428 (74.3%) were suitable for final analysis due to removal of ambiguous responses and outliers. Thereafter, SPSS version 25 and the Smart-PLS SEM 3 were used for data analysis (Hair et al., 2017).

The research framework comprises of 3 constructs and multiple items were used to measure each of the variable. The latent construct were measured with uni-dimensional and reflective items and all the constructs were scored on 5-point Likert scale of (1) Agree (2) Strongly Agree (3) Disagree (4) Strongly Disagree (5) Neither Agree/ nor Disagree. The study uses seven items adopted from Suliyanto and Rahab (2012) to measure BP eight items were used for access to finance adapted from

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Bouri et al. (2011) and Innovation 6 with items adapted from (Huhtala, Sihvonen, Frösén, Jaakkola, & Tikkanen, 2014: Vorhies & Morgan 2005).

Common method bias test were conducted because of self-administered questionnaires cross-sectional survey approach (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Additionally, Harman’s single factor test was adapted to study CMV which assumes that, if an amount of CV considerably exist in any single factor or one overall factor that would account for more than half of the covariance in the independent and dependent variables (Podsakoff & Organ, 1986). All indicators in the current study were subjected to principal component factor analysis in accordance with Podsakoff and Organ (1986). And no single factor in this study has the majority of covariance in the independent and dependent variables (Podsakoff, MacKenzie, & Podsakoff, 2012), suggesting the unimportance of CMB that may likely inflate the link between the variables measured in the current study.

RESULT AND DISCUSSION

This study conducted reliability test using values from composite reliability and the values from these measures for each construct has exceeded the recommended figure of 0.70 (Hair et al., 2014) as described in Table 1. The results confirmed that all the reliability was met. As regards the validity, the discriminant validity of cross loadings which is referred to as the item-level (Henseler, Ringle, & Sarstedt, 2016), indicated that item loading on the variable its measures is greater than it loadings on other variable in the model (Chin, 1998). The average variance extracted for all the variables have exceeded the recommended values of 0.50 as revealed in Table 1, thus convergent validity was attained for this study (Fornell & Larcker, 1981; Hair, & Lukas, 2014). However, for discriminant validity and the squared root of AVEs of each variable is greater than inter-construct correlation estimates (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017). This is shown in Table 2. Further confirmation of mediation test and direct relationship after minimum values was achieved as indicated in Table 4 and 5. These indicated that all the constructs of the study attain acceptable level of (Hair et al., 2016).
Fig. 2 PLS Algorithm

Table 1: Indicator Loadings and Internal Consistency Reliability

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Standardized Loadings</th>
<th>Composite Reliability</th>
<th>AVE</th>
<th>Item(s) deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Perf.</td>
<td>BP3</td>
<td>0.673</td>
<td>0.818</td>
<td>0.530</td>
<td>BP1, BP2, BP5</td>
</tr>
<tr>
<td></td>
<td>BP4</td>
<td>0.785</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BP6</td>
<td>0.690</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BP7</td>
<td>0.758</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation.</td>
<td>I2</td>
<td>0.637</td>
<td>0.832</td>
<td>0.500</td>
<td>I1</td>
</tr>
<tr>
<td></td>
<td>I3</td>
<td>0.620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I4</td>
<td>0.823</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I5</td>
<td>0.770</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I6</td>
<td>0.664</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to Finance</td>
<td>AF1</td>
<td>0.713</td>
<td>0.861</td>
<td>0.554</td>
<td>AF4, AF6</td>
</tr>
<tr>
<td></td>
<td>AF2</td>
<td>0.846</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AF3</td>
<td>0.693</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AF5</td>
<td>0.721</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AF7</td>
<td>0.740</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Discriminant Validity Fornell-Larcker Criterion
<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>BP</th>
<th>I</th>
<th>AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>0.728</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0.448</td>
<td><strong>0.707</strong></td>
<td></td>
</tr>
<tr>
<td>AF</td>
<td>0.203</td>
<td>0.262</td>
<td><strong>0.744</strong></td>
</tr>
</tbody>
</table>

**Table 3 Cross Loadings**

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Business Performance</th>
<th>Innovation</th>
<th>Access to Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP3</td>
<td><strong>0.673</strong></td>
<td>0.225</td>
<td>0.210</td>
</tr>
<tr>
<td>BP4</td>
<td><strong>0.785</strong></td>
<td>0.399</td>
<td>0.206</td>
</tr>
<tr>
<td>BP6</td>
<td><strong>0.690</strong></td>
<td>0.245</td>
<td>0.142</td>
</tr>
<tr>
<td>BP7</td>
<td><strong>0.758</strong></td>
<td>0.382</td>
<td>0.049</td>
</tr>
<tr>
<td>I2</td>
<td>0.194</td>
<td><strong>0.637</strong></td>
<td>0.121</td>
</tr>
<tr>
<td>I3</td>
<td>0.268</td>
<td><strong>0.620</strong></td>
<td>0.065</td>
</tr>
<tr>
<td>I4</td>
<td>0.421</td>
<td><strong>0.823</strong></td>
<td>0.242</td>
</tr>
<tr>
<td>I5</td>
<td>0.364</td>
<td><strong>0.770</strong></td>
<td>0.263</td>
</tr>
<tr>
<td>I6</td>
<td>0.262</td>
<td><strong>0.664</strong></td>
<td>0.160</td>
</tr>
<tr>
<td>AF1</td>
<td>0.147</td>
<td>0.171</td>
<td><strong>0.713</strong></td>
</tr>
<tr>
<td>AF2</td>
<td>0.214</td>
<td>0.214</td>
<td><strong>0.846</strong></td>
</tr>
<tr>
<td>AF3</td>
<td>0.066</td>
<td>0.136</td>
<td><strong>0.693</strong></td>
</tr>
<tr>
<td>AF5</td>
<td>0.057</td>
<td>0.197</td>
<td><strong>0.721</strong></td>
</tr>
<tr>
<td>AF7</td>
<td>0.199</td>
<td>0.230</td>
<td><strong>0.740</strong></td>
</tr>
</tbody>
</table>

The outcome of the data analysis using Smart-PLS SEM software is shown in figure 2. This paper measured predictive relevance of the model and R-squared values based on the PLS-SEM result of 20.8% and 6.9% of the total variance explained on the independent variable to dependent construct and independent variable to mediator respectively. This suggests that the AF explained 20.8% of variance in MSMEs performance. Cohen (1988) Classified three categories of R-square, 0.02 weak, 0.26 substantial and 0.13 moderate thus based on the R-squared of this study it moderate and weak respectively.
The testing of hypotheses was conducted using Smart-PLS SEM software to determine the direct relationship and the interaction effect (H1 – H3). Statistical model for direct relationship displays the links between AF, I independent latent variables and Business Performance of women entrepreneurs dependent latent variable as shown in figure 3. Table 4 illustrates the outcomes of the direct relationship between independent and dependent variable.

Table 4: Hypotheses Testing of Direct Relationship

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path</th>
<th>Beta</th>
<th>STDEV</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>AF -&gt; BP</td>
<td>0.418</td>
<td>0.037</td>
<td>11.246</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>I -&gt; BP</td>
<td>0.113</td>
<td>0.045</td>
<td>2.508</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

The findings as shown in Table 4 revealed that Access to finance on business Performance of women entrepreneurs has a significant positive effect and support with $H_1 (\beta = 0.418)$ and $t$ value ($t = 11.246$), and this concurs with the past studies (Sajuyigbe, 2017; Harelimana, 2017; Fowowe, 2017). Similarly, the direct relation between innovation on business performance of women entrepreneurs was also tested and findings shows a positive significant effect among the variables Innovation on Business performance of women entrepreneurs with $H_2 (\beta = 0.113)$ and $t$ value ($t = 2.508$). Access to finance will give women entrepreneurs the ability to eliminate financial gap faced by MSMEs through direct government interventions of credit guarantee which will increase their performance and contribution to GDP. Although it is believe that the size of the firm has a significant factor in accessing finance and it is suggested that small businesses to form association by coming together to form bigger businesses to attract better source of finance and to eliminate financial gap faced by MSMEs.
through a direct government intervention of credit guarantee. Therefore, MSMEs in Nigeria should encourage individuals and government support to Nigerian MSMEs. Although the current performance and the desired performance which could lead to better business performance.

The outcome of the study reveal that majority of the respondents are from the micro small businesses. Women owner/managers are not investing much in the medium enterprises because of the financial restriction and barriers because the finding seems to suggest that credits from banks to traders have both positive and negative influence on MSMEs. This shows that MSMEs that adopt business vision will generate more profit that yield high retained earnings. Drawing upon the notion that support the understanding of several studies that access funding depending on the MSMEs’ strategic activities or vision in Consistent with the POT, business outcome depends on the bundle of business resources.

![Diagram](image)

**Fig. 4: Mediating effect**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path</th>
<th>Beta</th>
<th>STDEV</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₃</td>
<td>AF → I → B P</td>
<td>0.111</td>
<td>0.024</td>
<td>4.548</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

The structural model that shows the mediating relationship of innovation on the effect of AF and BP was demonstrated in figure 4. Table 5 explain the indirect relationship among the two variables AF and Innovation with a (β = 0.111) and t value (t = 4.548).

The finding shows a mediated relationship on the impact of access to finance on business performance of women entrepreneurs where innovation serves as the channel of enhancing business performance of women entrepreneurs. Nigerian women MSMEs in (Kaduna, Kano and Sokoto States) that have access to financing to generate substantial cash flow of both internal and external financial
resources are assumed to have better strategic activities and also more likely to employ more staff, and have investments plans, high sales volume and profit than the others that lack access to finance. The finding helps in filling the gap of literature with regard to the effect/role of innovation as a mediator on AF and business performance of women entrepreneurs, specifically in Nigeria MSMEs context. The effect is assumed to mediate if independent/predictor variable has effects on the dependent/outcome variable through the mediating variable (Baron & Kenny, 1986). Therefore, the results show that AF has an effect on the mediator variable of innovation, and this in turn influences the dependent variable of business performance (Hair et al., 2016).

CONCLUSIONS
In conclusion the performance of women MSMEs will remain an important issues in Nigeria for employees of, academician’s, researchers, political leaders, managers, and community at large. It is believed that the women MSMEs performance will provide a rich backdrop of room for improvement on the GDP if the government provide the right access to finance in generating substantial cash flow of both internal and external financial resources which is assumed to give then better strategic activities in employing different innovative technology and at the same more likely to employ more staff, and have many investments plans, high sales volume and profit than the others that lack access to finance. This study suggests other researchers to expand the scope by considering other variables and looking at other zones or Nigeria as a whole.

REFERENCES


