

Modelling the influence of Culture on Entrepreneurial Competencies and Business Success of Women Micro-entrepreneurs in the Informal Sector of the Economy

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ABSTRACTS

The study examines the effect of culture on the relationship between the dimensions of entrepreneurial competencies and business success of informal women micro-entrepreneurs in northwest geopolitical zone of Nigeria. The study involves both descriptive and inferential statistics. With a random sample of 361 respondents, collected from a population of women micro-entrepreneurs, through the use of questionnaire, the obtained data were analysed with a variance-based structural equation modelling, PLS-SEM. Findings revealed that opportunity, relationship, strategic, and organising competencies all have a positive significant impact on business success of the informal women micro-entrepreneurs in Northwest Nigeria. Also, culture was found to moderate the relationship between relationship competencies and business success of the of informal women micro-entrepreneurs. These findings shows that any developmental programmes geared towards enhancing the performance of informal women micro-entrepreneurs in northwest Nigeria should focus on improving their entrepreneurial competencies, and it practically illustrates the importance of interpersonal relations, such as, social interactions and networking activities in the business success of informal women micro-entrepreneurs.

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INTRODUCTION

Microenterprises are veritable engines of economic dynamics which ensures a sustainable economic survival among the low-income based households in the world. In most developing countries, the operations of informal microenterprises, such as home business, road-sides, or farm based, have played a crucial role in the socioeconomic development of vulnerable families (Al-Mamun, Saufi, & Ismail, 2016).

Competency refers to the application of different sets of skills, knowledge, and mind-sets in a given professional context (Lan, Verstegen, & Mulder, 2011), while the use of use of such knowledge, skills, and ability by the entrepreneurs to achieve growth and success in businesses is term as entrepreneurial competencies (Oyeku, Oduyoye, Asikhia, Kabuoh & Elmo, 2014; Dermol, 2010).

Culture has been reputed to play a central role in field of entrepreneurship, as most behaviours exhibited by entrepreneurs are bounded by it (Hayton, George, & Zahra, 2002). Hence, the cultural orientation of every individual is very crucial in development of their competencies (Sajilan, & Tehseen, 2015). Chaibabut, (2013) asserts that the individual cultural values and beliefs that triggers the human activities which stimulates their competencies.

Although previous researchers (e.g., Sanchez, 2011; Noor, Hasliza & Siti, 2010; Man et al; 2002; Nasuredin, Halipah, & Shamsudin, 2016) have reported high level relationship between

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entrepreneurial competencies and firm's performance, but only few of these studies revealed the effects of entrepreneurial competencies on business success, among the women-led businesses. While most empirical researches on entrepreneurial competencies-performance relationship on women-led businesses were carried out in Europe (e.g, Schneider, 2017; Mitchelmore, Rowley, & Shiu, 2014; Mitchelmore & Rowley, 2013), and in some Asian countries (e.g., Al-Mamun, Fazal, & Zainol, 2019a; Al-Mamun, A. A., Muniady, R., Fazal, S. A., & Malarvizhi, C. A., 2019b; Zainol, Mamun, Ahmad, & Simpong, 2018; Lans, Vertegen & Mulder, 2011), only few of researches were conducted in the sub-Saharan African context (Okpara & Wynn, 2007). Even, if there exist any such previous studies that had examined such relationship among female-led businesses, the effect of the disaggregated entrepreneurial competencies on business success of women-led business is yet to be fully explore in the sub-Saharan African context.

In view of dearth of studies among the female-led businesses in the sub-Saharan African, this paper proposed to examine the disaggregated effect of the entrepreneurial competencies on business success of the informal women micro-entrepreneurs in the Nigeria. In addition to this, this paper further contend that, even if there exist any of such previous studies, their findings are inconclusive, which signifies the need for a potential moderator to further explain such relationship between the constructs. Hence, the paper further examines the moderation effects of culture on these dimensions of entrepreneurial competencies on the business success of the informal women micro-entrepreneurs in the Northwest geopolitical zone of Nigeria. This study has by so doing, projects the recommendations of Hughes, Jennings, Brush, Carter, and Welter (2012), on the need to further explore researches on women entrepreneurship, so as to ensure more business participation and success among women entrepreneurs in the emerging economies, particularly, in sub-Saharan African.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Concept of Business Success

The term 'success' or 'performance' in the context of business research, are two different words that are often used synonymously to connote same meaning. Gill and Biger (2012), interchangeably used the term 'success', 'performance', and 'growth' as having same connotation, while no distinction was made between the terms 'success' and 'performance' by Komppula (2004). However, the use of either of these terms in business research, is content specific, as both terms are determined using same criterion of financial or non-financial measures.

The financial measure focused on the use of hard economic measures, such as using revenues, sales turn-over, profitability, return on investment, and employee's number (Simpson, Padmore, & Newman, 2004) to measure performance, while the non-financial measure focused on the use of motivation, achieving one's personal goals, and aspirations (Gorgievski, Ascalon, & Stephan, 2011). Nevertheless, at micro business level, both measures of performance are subjectively determined (Laguna, Wiecheteck, & Talik, 2012) through self-reported perceptual data obtained from the entrepreneur (Richard, Devinney, Yip, & Johnson, 2009). However, studies have shown that the non-financial subjective data often form the basis for assessing the business success of women entrepreneurs (Ahmad, Wilson & Kummerow, 2011; Walker & Brown, 2004).

2.2 Entrepreneurial Competencies

Entrepreneurial competencies refers to entrepreneurs' traits such as knowledge, motives, capabilities that lead to the firms' success (Solevik, 2012). It is one of the important factors that determines the success or failure of micro enterprises. A study by Sanchez (2012) of SMEs reveals that entrepreneurial competencies have both direct and indirect influence on firm's performance in Spain. Ahmad, Ramayah. Wilson, and Kummerow (2010) also has found entrepreneurial competencies as strong predictors of business success of SMEs especially in a

dynamic and hostile environment. Man and Lau (2000) have identified six competencies areas of entrepreneurial competencies, namely, strategic, relationship, opportunity, organising, commitment, and conceptual competencies. All these competencies areas have been shown to have either direct or indirect effects on SMEs or business performance. Hence, the onus of this study is a focused on these six competencies areas identified by Man and Lau (2000).

2.2.1 Opportunity recognition competencies

Opportunity recognition competency is one of the six competency area identified by Man and Lau (2000). As an important attribute of a successful entrepreneur, opportunity recognition competencies entails the identification and selection of the right business opportunity (Santandreu-Mascarell, Garzon, & Knorr, 2013; Man, Lau, & Chan, 2002). It focus on entrepreneur's ability to search, develop, and evaluate various superior opportunities that are existing in the market place (Man & Lau, 2000). Entrepreneurs who are endowed with this form of competencies are perceived as being insightful in their discovery of new ways and new solutions to business problems by due to the critical ways they analyse business problems with a view to preventing risk of business failure (Ulhoi, 2005). However, such entrepreneurs must be on watch out for any possible opportunity and must possess the ability of integrating such opportunities that they have (Tang, Kacmar, & Busenitz, 2012).

Zainol, et al. (2018) have found opportunity recognition competencies to positively impact the performance of the inform women microenterprises in Ketatan. Also, Nasuredin, et al. (2016) found a significant positive relationship between opportunity competencies and business performance of SMEs in Malaysia. On this note, this study proposed that following hypothesis: **H₁: Opportunity recognition competencies have positive effect on business success of the informal women micro-entrepreneurs**

2.2.2 Relationship competencies

Relationship competencies relate to the interactions between the entrepreneurs and different categories of people, such as the employees, customers, suppliers, stakeholders, competitors, and even the government, in the course of business operations (Man, et al., 2002). It also relates to a form of interactions or cooperation existing between the entrepreneurs and the environment in which the business is located. Such forms of interactions, which may takes the form of building trust and cooperation between a person-to-person or between an individual a group, or involves making connections, as in communication, persuasion, or use of interpersonal skills or relations to influence others and gain their support (Kaur & Bains, 2013; Man, et al., 2002).

Relationship competencies such as interactions between entrepreneurs and their customers, employees, family, or friends, are very crucial to successful entrepreneurship, especially at the micro level of business operation (Ratten, 2013). Relationship competencies have been found to have positive effect on business performance of women microenterprises in kelantan (Zainol, et al., 2018). Studies have shown that entrepreneurs skilled in relationship competencies stands a better chance of achieving favourable results in their businesses than those devoid of it (Baron & Markman, 2003). Based on the above discussion, the following hypothesis was postulated: **H₂: Relationship competencies have positive effect on business success of the informal women micro-entrepreneurs.**

2.2.3 Strategic competencies

Strategic competencies has to do with the processes involved in the establishing, implementing and evaluating the strategies of a firm (Man, et al., 2002). It is an entrepreneurial ability of developing a sound vision for the business. Studies on entrepreneurial competencies have shown that an entrepreneur's ability to have vision for their business is correlated to strategic management (Baum & Singh, 1994). Hence, entrepreneurs that are endowed with strategic competencies have the tendency of achieving high performance in their business. Thus, strategic

competencies enables entrepreneurs to plan and implement several tactics and strategies, which are capable of influencing the competitors and customers in the market, and are likely to be proactive in creating their own growth potential (Sparrow & Makram, 2015). Thompson and Richardson (1996) opined that an alteration in the management component of strategic competencies could result in competitive success for firms operating in a highly competitive environment. Strategic competencies have been found to impact positively on the business performance of SMEs in Malaysia (Nasuredin, et al. 2016). Thus, the study hypothesised as follow:

H₃: *Strategic competencies have positive effect on business success of the informal women micro-entrepreneurs.*

2.2.4 Organising Competencies

Organising Competencies has to do with the way of determining how business performs or carries out its operations. This encompasses the management of the daily affairs of the business operations, which involves planning, the acquisition and allocation of resources, act of delegating, and establishing rules and regulations, as well as leading and motivating the employees (Al-Mamun, 2019b). Organising competencies ensures smoothness in the daily operations of the business and a sustained high performance (Man, Lau, & Chan 2002). Nasuredin et al. (2016) report a significant positive relationship between organising competencies and SMEs business performance in Malaysia. Based on this, the study proposed that:

H₄: *Organising competencies have positive effect on business success of the informal women micro-entrepreneurs*

2.2.5 Commitment Competencies

Commitment Competencies is one of the attribute of entrepreneurs who struggles to achieve long-term goal with strong devotions, by taking personal initiative, and possessing strong entrepreneurial attitude (Man, Lau, & Chan, 2002). Commitment competencies serve as a strong demonstration of the entrepreneur's motivation to compete and see their business through to its fruition (Chandler & Jansen, 1992). Entrepreneurs that possesses commitment competencies make personal sacrifices where necessary, like maintaining a level high energy, working for long hours, and are motivated (Kozan et al., 2012). Commitment competencies serves as an instinct which drives the entrepreneurs to forge ahead in their businesses despite all odds.

Man, Lau, & Snape (2008), found a direct significant relationship between commitment competencies and business performance of small and medium enterprises in Hong Kong. Zainol et al, (2018) also report a direct positive statistical significance effect of commitment competencies on business performance of women micro enterprises in Kelantan. Furthermore, study on entrepreneurial competencies of female entrepreneurs in developing countries have found commitment competency as one of a critical element in the business success of women entrepreneurs (Permarupan, et al., 2016). Based on these findings, commitment competencies is predicted to have significant relationship with business success. Hence, the below hypothesis was postulated:

H₅: *Commitment competencies have positive effect on business success of the informal women micro-entrepreneurs*

2.2.6 Conceptual competencies

Conceptual competencies refers to a set of not easily identifiable human behaviours that are often considered as significant and essential in entrepreneurial success. Conceptual competencies can be perceived as the outward reflection of an entrepreneur's mental capabilities (Chandler & Jansen, 1992), which often reflects in the entrepreneur's behavioural ability to automatically make informed decisions about business opportunities, as well as

absorbing and understanding complex information for business development (Man, et al., 2002).

Conceptual competencies enables the entrepreneurs to think analytically, and to successfully cope with environmental uncertainties (Bird, 1995). This analytical thinking ability helps the entrepreneurs in terms of analysing complex business problems (Man, et al., 2002). According to Man and Lau (2000), conceptual competencies entail an entrepreneur's ability to assess risks, innovate and think intuitively to stimulate new set of ideas and concept (Michalko, 2000). High conceptual competencies have been found to equip entrepreneurs, especially those operating at the micro business level and are faced with numerous challenges that requires quick decisions, with the ability to analyse and solve these problems by taking sound decision under condition of uncertainties (Gupta, 2010).

H₆: *Conceptual competencies have positive effect on business success of the informal women micro-entrepreneurs*

2.3 Culture and Business success

Culture is conceived as an embodiment of basic set of fuzzy assumptions, shared motives, values, and beliefs which in turn, influences the behaviour of every individual member in its interpretation of behaviours of other people (Spencer-Oatey, 2008). As a behavioural conventions that is shared by group of people, culture has greatly impact on all level of entrepreneurship in any given society (Kreiser, Marino, Dickson, & Weaver, 2010). For instance, a meta-analytic study of previous empirical results has reveal how culture significantly impact on the relationship between entrepreneurial orientation and business success (Frank, Keßler, Fink, 2010).

Defined as collective programming of the mind which helps to distinguish each member of one group or a category of people from another Hofstede (2001), culture affects the entrepreneurial competencies development and behaviours of the entrepreneurs (Tehseen, Sajilan, Ramayah, & Gadar, 2015). As conceptualised by Hofstede (1980), culture is multidimensional construct comprising power distance, uncertainty avoidance, femininity/masculinity, and collectivism/individualism.

Power distant refers to the extent to which an individual accept that their superior enjoys power than them (Clugston, Howell, & Dorfman, 2000; Hofstede, 2001). Uncertainty avoidance is the extent to which people feels threatened and tried to prevent uncertain condition by establishing formal rules and opposing contrary views and behaviours (Ergeneli, Gohar & Temirbekova, 2007). Femininity-masculinity in culture refers to the way people embraces ambitious career aspirations by becoming firm, assertive, competitive and aggressive in their opinions (Hofstede, 2001), and the dimension of individualism-collectivism refers to the extent to which individuals are willing to sacrifice their welfare for the group or vice versa (Wong, & Tjosvold, 2006). Based on the existing literature, the study proposed that:

H₇: *Culture have positive effect on business success of the informal women micro-entrepreneurs*

2.3.1 The moderating effect of culture

This paper disaggregated the six entrepreneurial competencies areas identified by Man and Lau (2000), namely, opportunity recognition, relationship, organising, strategic, commitment, and conceptual competencies, to predict the business success of informal women micro-entrepreneurs in the northwest geopolitical zone of Nigeria. In addition, the study incorporated culture as a contingent variable that moderates the relationship between these disaggregated competency areas to impact business success of the informal women micro-entrepreneurs. Following Baron and Kenny's (1996), the study proposes that culture moderates the relationship between these competency areas and business success and then, hypothesised as follows:

HM₁: *Culture moderates the relationship between opportunity competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

HM₂: *Culture moderates the relationship between relationship competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

HM₃: *Culture moderates the relationship between strategic competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

HM₄: *Culture moderates the relationship between organising competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

HM₅: *Culture moderates the relationship between commitment competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

HM₆: *Culture moderates the relationship between conceptual competencies and business success of the informal women micro-entrepreneurial in Northwest Nigeria.*

RESEARCH METHODOLOGY

3.1 Research design and Sample size

The study is cross sectional research in nature. Quantitative data were collected through the random sampling technique, from 384 informal women micro-entrepreneurs operating across four states of the Northwest geopolitical zone of Nigeria. These states include Sokoto, Katsina, Kebbi, and Zamfara state. The respondents for the study were drawn from a pool of 1,443,065 informal women micro-entrepreneurs who are registered with small and medium enterprise development agency of Nigeria (SMEDAN, 2014). The sample size for participants were obtained by applying Dillman's (2011) formula for sample size determination. Thus, a total of 384 women entrepreneurs took part in the survey but only 361 questionnaires were found useable for analysis.

As an exploratory study, the paper employed a variance-based structural equation modelling, which is PLS-SEM estimation as the tool of analysis, with the sole aim of maximising the variance explained of the dependent construct of the model. This method of analysis was adopted due its robustness in allowing for a simultaneous estimation of the both measurements and path coefficients of a model.

3.2 Constructs and Measures

The three constructs in the model are business success, entrepreneurial competencies, and culture. Questionnaire was used as the main instrument of the study and all the measures for the three constructs were adapted from previous researches. Business success, as the dependent construct, was measured on a 5-item instrument adapted from Ahmad, et al. (2011), non-financial measure of business success.

Entrepreneurial competency as the independent construct, is multidimensional construct comprising six dimensions (i.e., strategic, organising, opportunity, commitment, conceptual and relationship competencies). The instrument was adapted from Man, Lau, and Chan (2002). A breakdown of the measure shows that, strategic competencies have 9 items, organising 10 items, opportunity competencies 4 items, commitment 4 items, conceptual 7 items, and relationship 5 items.

Culture, as the contingent construct, is also a multidimensional construct comprising power distance, uncertainty avoidance, femininity/masculinity, and individualism/collectivism (Hofstede, 1980). Nevertheless, this construct was modelled in this paper as a reflective-formative (i.e., type II) of the hierarchical component model (HCM). All the twenty-two items of the instrument were adapted from the individual cultural value scale (CVSCALE), developed by Dorfman and Howell (1988), consistent with Hofstede's (1980) national culture dimensions. All the 22-item measure were modelled as reflective-formative (i.e., type II) of HCM using a repeated indicator approach, which involves a repeat of all the twenty-two items of the dimensions at lower order components (LOCs), on culture at the higher order component (HOC). This is consistent with extant literature on HCM (Becker, Klein, & Wetzels, 2012).

Though, all the four dimensions of culture (Hofstede, 1980) appeared in the model at LOCs, culture is represented in the model at HOC, as a composite variable (Rowe, 2012).

All the adapted from previous researches and are worded in a simple unambiguous expression so as to make it easy for the respondents to answer the questions being asked. All the items were originally written in English, however, to allow for easy response by the respondents, a back-translation (Brislin, 1980) was employed, and this led to the reproduction of an exact Hausa version of the questionnaire. All constructs are measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

RESULTS

4.1 Demographic characteristics

Table 1 presents the demographic characteristics of the respondents. The information presented were extracted from the questionnaire administered on the 361 informal women micro-entrepreneurs operating in the four states of northwest geopolitical zone of Nigeria

Table 1: Demographic characteristics of the respondents

| Categories | Number | % | Categories | Number | % |
|---------------------------------|------------|------------|-----------------------------|------------|------------|
| Age | | | Marital status | | |
| 20 years and below | 51 | 14.1 | Single | 64 | 17.7 |
| 21 to 30 years | 125 | 34.6 | Married | 250 | 69.3 |
| 31 to 40 years | 98 | 27.1 | Divorcee | 16 | 4.4 |
| 41 to 50 years | 66 | 18.3 | Widow | 28 | 7.8 |
| Above 50 years | 21 | 5.8 | Total | 361 | 100 |
| Total | 361 | 100 | Location of Business | | |
| Education qualifications | | | Home based | 204 | 56.5 |
| No formal education | 80 | 22.2 | External based | 157 | 43.5 |
| Primary/Secondary cert. | 141 | 39.1 | Total | 361 | 100 |
| NCE/OND | 72 | 19.6 | Years of operation | | |
| HND/Degree | 49 | 13.6 | 3 to 6 years | 99 | 27.4 |
| Master's Degree | 17 | 4.7 | 7 to 10 years | 171 | 47.4 |
| Medical Doctor | 1 | 0.3 | Above 10 years | 91 | 25.2 |
| Total | 361 | 100 | Total | 361 | 100 |

Source: Author(s) compilation

The demographic profile of the 361 respondents employed in this study as depicted in Table 1, shows that the respondents' age falls within the following age brackets. The highest number of 125 (34.6%) respondents are within the age bracket of 21-30 years. This was followed by 98 (27.1%) respondents, who are in the age bracket of 31-40 years, with 66 (18.3%) of the respondents falling within age 41 to 50 years. 51 (14.1%) respondents are below 21 years, with the least respondents 21 (5.8%), falling above 50 years of age. In terms of marital status, 64 (17.7%) respondents are single, while the highest number of respondents, 250 (69.3%), were married. 28 (7.8%) respondents are widow, and 16 (4.4%) are divorcee. In relation to the educational qualifications, a total of 80 (22.2%) respondents are without formal education, while 141 (39.1%) respondents are having either primary or secondary qualification, with 72 (19.6%) possessing certificate in either education or national diploma. Only 49 (13.6%) are degree holders, while master degree holders are 17 (4.7%) and only 1(0.3%) possessing degree in medicine. In terms of the location of the business, majority of the respondents 203 (56.5%) operate home-based businesses, while 157 (43.5%) operates outside their homes. In terms of years of business operation, 171 (47.4%) respondents have been operating their business for a

period of 7-10 years, while 99 (47.4%) have spent between 3-6 years in the business, with only 91 (25.2%) respondents operating for over 10 years.

4.2 Analysis of direct relationship

A SmartPLS–SEM software version 3.0 was used in analysing the data obtained from the respondents. The analysis of the direct relationship between the dimensions of entrepreneurial competencies and business success was done in two parts, consistent with Henseler's et al. (2009) two-step approach to path modelling. The first part consists of an analysis of the measurement model, which comprises an examination of the item's reliability of every individual construct, internal consistency reliability, convergence, and discriminant validities of the constructs. The second part is the structural model, is an assessment of the significance of the path coefficient of the direct relationship between the exogenous and endogenous constructs, and an estimation of the R^2 of the model.

4.3 Moderating effect of Culture

The assessment of the moderating effect of culture on the relationship between the dimensions of entrepreneurial competencies and business success follows Baron and Kenny's (1986) three-step approach to moderation, with first step involving an assessment of the direct relationship between the exogenous and endogenous construct, followed by the effect of contingent variable (moderator) on the exogenous variable, and lastly, the interacting effect between the exogenous and moderating constructs on the endogenous construct.

Measurement Model

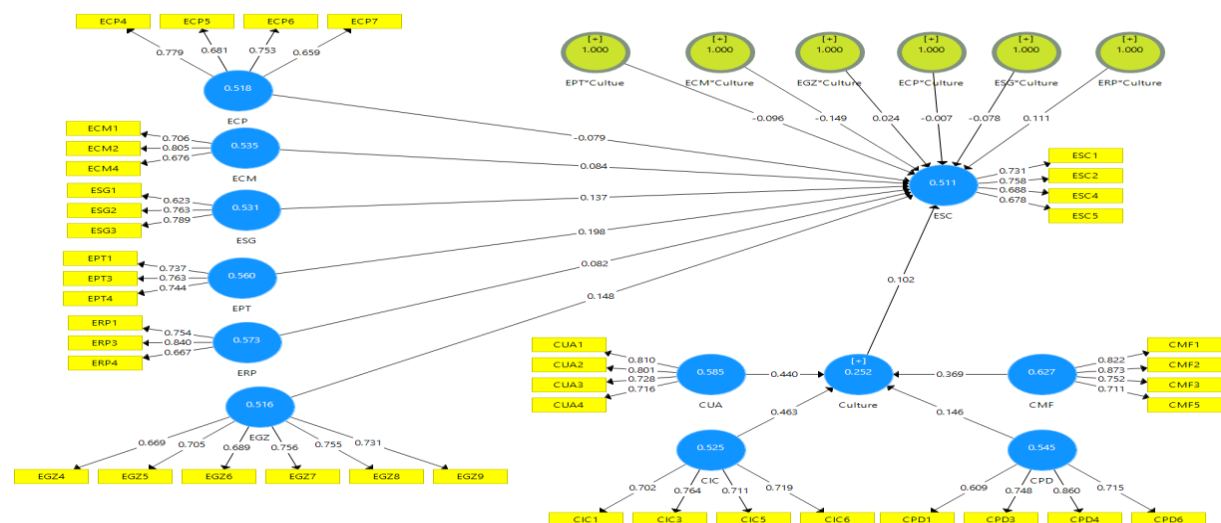


Figure 1: Assessment of the measurement model

Table 2: Convergent Validity

| Convergent Validity | | | | | |
|---------------------|-------|----------|-----------------------|----------------------------------|-------|
| Constructs | Items | Loadings | Composite Reliability | Average Variance Extracted (AVE) | R^2 |
| ESG | ESG1 | 0.623 | 0.771 | 0.531 | |
| | ESG2 | 0.763 | | | |
| | ESG3 | 0.789 | | | |
| ECM | ECM1 | 0.706 | 0.774 | 0.535 | |
| | ECM2 | 0.805 | | | |
| | ECM4 | 0.676 | | | |
| ECP | ECP4 | 0.779 | 0.810 | 0.518 | |

| | | | | | |
|-----|------|-------|-------|-------|-------|
| | ECP5 | 0.681 | | | |
| | ECP6 | 0.753 | | | |
| | ECP7 | 0.659 | | | |
| EGZ | EGZ4 | 0.669 | 0.865 | 0.516 | |
| | EGZ5 | 0.705 | | | |
| | EGZ6 | 0.689 | | | |
| | EGZ7 | 0.756 | | | |
| | EGZ8 | 0.755 | | | |
| | EGZ9 | 0.731 | | | |
| EPT | EPT1 | 0.737 | 0.792 | 0.560 | |
| | EPT3 | 0.763 | | | |
| | EPT4 | 0.744 | | | |
| ERP | ERP1 | 0.754 | 0.800 | 0.573 | |
| | ERP3 | 0.840 | | | |
| | ERP4 | 0.667 | | | |
| CIC | CIC1 | 0.702 | 0.815 | 0.525 | |
| | CIC3 | 0.764 | | | |
| | CIC5 | 0.711 | | | |
| | CIC6 | 0.719 | | | |
| CMF | CMF1 | 0.822 | 0.870 | 0.627 | |
| | CMF2 | 0.873 | | | |
| | CMF3 | 0.752 | | | |
| | CMF5 | 0.711 | | | |
| CPD | CPD1 | 0.609 | 0.825 | 0.545 | |
| | CPD3 | 0.748 | | | |
| | CPD4 | 0.860 | | | |
| | CPD6 | 0.715 | | | |
| CUA | CUA1 | 0.810 | 0.849 | 0.585 | |
| | CUA2 | 0.801 | | | |
| | CUA3 | 0.728 | | | |
| | CUA4 | 0.716 | | | |
| BSC | BSC1 | 0.731 | 0.806 | 0.511 | 0.502 |
| | BSC2 | 0.758 | | | |
| | BSC4 | 0.688 | | | |
| | BSC5 | 0.678 | | | |

Note: Business success (BSC), commitment competencies (ECM), conceptual competencies (ECP), organising competencies (EGZ), opportunity competencies (EPT), relationship competencies (ERP), strategic competencies (ESG), power distant (CPD), uncertainty avoidance (CUA), individualism-collectivism (CIC), masculinity-femininity (CMF), business success (BSC)

Source: Author's compilation

4.4 Reliability and validity test

Table 2 above, shows that the average variance extracted (AVE) values obtained for all constructs are above 0.5. This is an indication that sufficient convergent validity has been achieved (Hair, Hult, Ringle, & Sarstedt, 2014). Similarly, table shows that the values of composite reliability of all constructs are above the recommended minimum threshold of 0.7

(Peng & Lai, 2012; Hair, et al., 2014). All this suggest that both convergent validity and composite reliability of the measurement model has been achieved. In assessing the discriminant, the values of Heterotrait-Monotrait Ratio (HTMT) in Table 3, shows that the level of correlation among the constructs, falls below the minimum threshold of 0.9. This is an indication that the study has achieved discriminant validity, as all constructs in the model met the minimum conditions. The R-square value of 0.502 indicates that 50% of the variances in endogenous construct (business success) can be explained by the exogenous constructs (i.e., entrepreneurial competencies and culture)

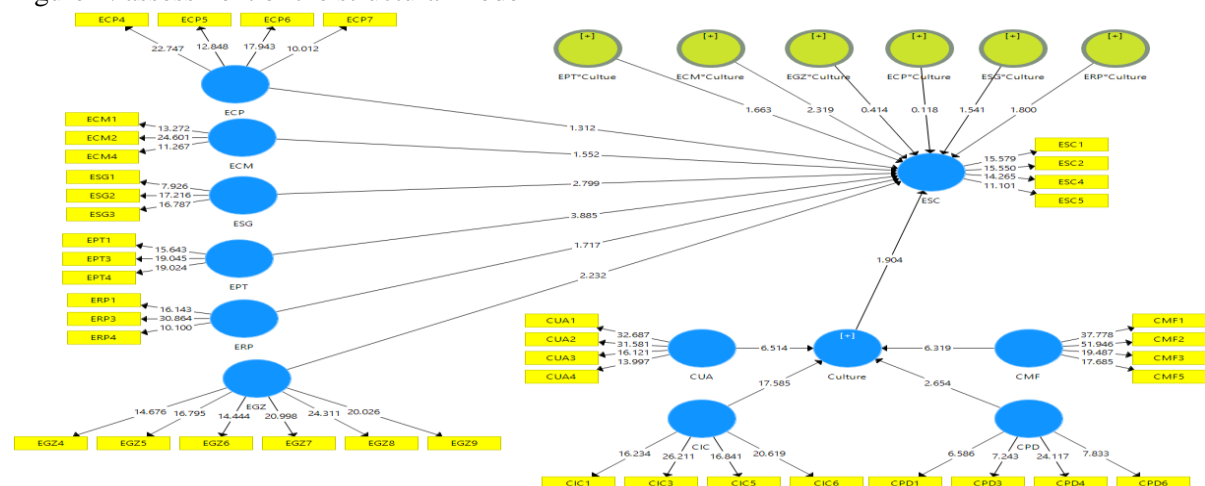
Table 3: HTMT ratio

| Constructs | CIC | CMF | CPD | CUA | ECM | ECP | EGZ | EPT | ERP | BSC | ESG |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| CIC | | | | | | | | | | | |
| CMF | 0.597 | | | | | | | | | | |
| CPD | 0.248 | 0.508 | | | | | | | | | |
| CUA | 0.629 | 0.133 | 0.142 | | | | | | | | |
| ECM | 0.533 | 0.185 | 0.229 | 0.695 | | | | | | | |
| ECP | 0.557 | 0.228 | 0.125 | 0.587 | 0.855 | | | | | | |
| EGZ | 0.565 | 0.165 | 0.145 | 0.656 | 0.762 | 0.704 | | | | | |
| EPT | 0.441 | 0.280 | 0.182 | 0.680 | 0.760 | 0.808 | 0.699 | | | | |
| ERP | 0.572 | 0.281 | 0.183 | 0.686 | 0.820 | 0.746 | 0.762 | 0.747 | | | |
| BSC | 0.620 | 0.157 | 0.112 | 0.674 | 0.814 | 0.619 | 0.669 | 0.829 | 0.705 | | |
| ESG | 0.655 | 0.380 | 0.167 | 0.686 | 0.754 | 0.848 | 0.689 | 0.635 | 0.727 | 0.726 | |

Note: commitment competencies (ECM), conceptual competencies (ECP), organising competencies (EGZ), opportunity competencies (EPT), relationship competencies (ERP), strategic competencies (ESG), power distant (CPD), uncertainty avoidance (CUA), individualism-collectivism (CIC), masculinity-femininity (CMF), business success (BSC)

Source: Author's compilation

Structural model

Figure 2: assessment of the structural model**Table 4:** Result of the Hypotheses Testing

| | Relationships | Std Beta | Std. Error | t-values | p-values | Decision |
|----------------|---------------|----------|------------|----------|----------|---------------|
| H ₁ | ECM -> BSC | 0.084 | 0.054 | 1.552 | 0.061 | Not Supported |
| H ₂ | ECP -> BSC | -0.079 | 0.060 | 1.312 | 0.095 | Not Supported |
| H ₃ | EGZ -> BSC | 0.148 | 0.067 | 2.232 | 0.013 | Supported |

| | | | | | | |
|----------------|----------------|-------|-------|-------|-------|-----------|
| H ₄ | EPT -> BSC | 0.198 | 0.051 | 3.885 | 0.000 | Supported |
| H ₅ | ERP -> BSC | 0.082 | 0.048 | 1.717 | 0.043 | Supported |
| H ₆ | ESG -> BSC | 0.137 | 0.049 | 2.799 | 0.003 | Supported |
| H ₇ | Culture -> BSC | 0.102 | 0.054 | 1.904 | 0.029 | Supported |

Note: Business success (BSC), commitment competencies (ECM), conceptual competencies (ECP), organising competencies (EGZ), opportunity competencies (EPT), relationship competencies (ERP), strategic competencies (ESG).

Source: Author's compilation

4.5 Path coefficients Analysis

As shown in Table 4 above, the results of the path coefficients between the individual dimension of entrepreneurial competencies and business success of the informal women micro-entrepreneurs shows the statistical significance of entrepreneurial competencies (i.e., opportunity, relationship, strategic, and organising) were statistically significant at the 5% chosen level of significance, indicating that they all have positive significant effect on the business success of the informal women micro-entrepreneur in Northwest Nigeria. Specifically, findings revealed that the coefficient value of opportunity competencies on business success (H₁) is positive ($\beta=0.198$), with a (p -values = 0.00), signifying a positive statistical effect on business success of the informal women micro-entrepreneurs.

Consistently, the coefficient value of relationship competencies on business success (H₂) shows positive ($\beta=0.047$) with a p -values of 0.043, indicating that relationship competencies has a positive statistical significant relationship with the informal women micro-entrepreneurs. Similarly, the path coefficient results of strategic competencies on business success (H₃) shows a positive ($\beta = 0.137$) with a statistical significant (p -value = 0.003), confirming a strong significant relationship between the two constructs.

Furthermore, findings revealed that the path coefficient value for organising competencies on business success confirms the hypothesised relationship (H₄) as it revealed a positive ($\beta=0.148$) with a p -values =0.013). This signifies a positive effect of organising competencies on business success of the informal women micro entrepreneurs.

Conversely, the analysed data failed to lend support to two of the hypothesised relationships. These are the commitment and conceptual competencies on business success of the informal women micro-entrepreneurs. Thus, the results of the path coefficient value of commitment competencies (H₅) on business success shows a positive ($\beta = 0.084$) but statistically insignificant (p -value = 0.061), in the same way as the coefficient value of conceptual competencies on business success (H₆), which revealed a negative ($\beta = -0.079$) value, with a statistical non-significant (p -value = 0.095) on business success of the informal women micro-entrepreneurs.

Furthermore, the path coefficient value of the effect of culture on business success (H₇) of the informal women micro-entrepreneurs indicate a positive statistical relationship ($\beta=0.102$, $p=0.029$), implying that culture has an aggregate influence on the business success of the informal women entrepreneurs.

This present findings support the previous literature (Al-Mamun, 2019b; Zainol, et al., 2018; Nasuredin, et al., 2016; and Baron & Markman, 2003), that examines the disaggregated effect of entrepreneurial competencies among micro-entrepreneurs in different contexts.

Table 5: Result of the Hypotheses Testing for moderation

| | Path relationships | Std Beta | Std. Error | t-values | p-values | Decision |
|-----------------|--------------------|----------|---------------|----------|----------|---------------|
| HM ₁ | EPT*Culture -> BSC | -0.096 | 0.058 | 1.663 | 0.049 | Not Supported |
| HM ₂ | ERP*Culture -> BSC | 0.111 | 0.062 | 1.800 | 0.036 | Supported |
| HM ₃ | ESG*Culture -> BSC | -0.078 | 0.051 | 1.541 | 0.062 | Not Supported |
| HM ₄ | EGZ*Culture -> BSC | 0.024 | 0.057 | 0.414 | 0.339 | Not Supported |
| HM ₅ | ECM*Culture -> BSC | -0.149 | 0.064 | 2.319 | 0.010 | Not Supported |
| HM ₆ | ECP*Culture -> BSC | -0.007 | 0.058 | 0.118 | 0.453 | Not Supported |

Note: Business success (BSC), commitment competencies (ECM), conceptual competencies (ECP), organising competencies (EGZ), opportunity competencies (EPT), relationship competencies (ERP), strategic competencies (ESG).

Source: Author's compilation

4.6 Moderation effects

In terms of the interacting effects of culture on entrepreneurial competencies, the results of the path coefficients, as shown in Table 5 above, indicates that the moderating effect of culture on the dimensions of entrepreneurial competencies (i.e., conceptual, commitment, organising, opportunity, and strategic) were all above the 0.05% chosen level of significance. This signifies that the effect culture on these competencies are not statistically significant, and as such, hypotheses (HM₁, HM₃, HM₄, HM₅, & HM₆) were not supported.

Conversely, findings confirmed that the interaction effect between culture and relationship competencies ($\beta = 0.111$ and p -value = 0.036) was statistically significant at 0.05%, thus confirming the hypothesised relationship (HM₂), that culture influence the relationship between relationship competencies and business success of the informal women micro-entrepreneurs in the geopolitical zone. This was consistent with the finding of Zainol, et al. (2018) and Baron & Markman, (2003), who confirmed that entrepreneurs with good relationship competencies stand a better chance of achieving positive results in their business than those who are lacking in it.

DISCUSSIONS

Given the widely accepted notion that human beings are embodiment of culture which guides their daily lives, and the significance of entrepreneurial competencies on the success of micro-enterprises, this study examined the moderating effect culture on the relationship between entrepreneurial competencies and the business success of women-led enterprises in Northwest geopolitical zone of Nigeria. From the analysed data, findings on direct effects on individual dimensions of entrepreneurial competencies on business success are in agreement with previous researches (i.e., Zainol, et al., 2018; Nasuredin, et al., 2016; Baron & Markman, 2003), that examines the effects of disaggregated effect of entrepreneurial competencies among entrepreneurs in a similar context.

Consequently, on the aspect of moderation, except for the relationship competencies where culture exerts a moderation effect, in all other identified competency areas among the informal women micro-entrepreneurs in the Northwest geopolitical zone, culture has negative and insignificant moderating effect. The significance of culture on relationship competency confirms the importance of good inter-personal skills, interactions, and networking in the business success of informal micro-entrepreneurs. This findings confirmed the report by previous researchers (Zainol, et al., 2018; Ahmad, et al., 2010; Baron & Markman, 2003) which assert that women entrepreneurs possesses strong abilities in building solid interpersonal relationships, which they achieved through interaction with people in and outside their businesses, and their effective use of networking activities.

IMPLICATIONS AND CONCLUSIONS

This present study on moderating role of culture on the dimensions of entrepreneurial competencies and business success of informal women entrepreneurs have both theoretical and practical implications. On the theoretical side, the paper extends Man et al.'s (2008) competency approach of examining competitive and growth-oriented firms in Hong-Kong, to the examining of the disaggregated effect of entrepreneurial competencies on the business success of informal women micro-entrepreneurs in northwest Nigeria, and by so doing, contributing to the existing body of knowledge. Secondly, the study also provides theoretical evidence on the moderating effect of culture on the relationship between entrepreneurial competencies and business success of the informal women micro-entrepreneurs.

In practical terms, the findings of the study reveals the significance of culture on relationship competencies of the informal women micro-entrepreneurs, thereby validating the importance of interpersonal skills inform of interactions, and networking activities, in the business success of micro-entrepreneurs. Thus, the study calls on government and policy makers, who wants more female owned business start-ups to include trainings on entrepreneurial competencies all entrepreneurship programmes designed for skills acquisition and vocational studies by women folks.

LIMITATION AND FUTURE RECOMMENDATIONS

In term of its limitation, the generalizability of the study is far-fetched, as respondents of the study falls within the confine of informal women micro-entrepreneurs in the Northwest geopolitical zone of Nigeria. Nevertheless, future study may extend the study to cover women entrepreneurs in small and medium enterprises, and those in other geopolitical zones, with different demographic characteristics, so as to determine the convergence validity of these constructs. Secondly, the study merely focused on entrepreneurial competencies at the individual level, future study may consider team level entrepreneurial competencies. Lastly, the data for the study was cross-sectional in nature, hence future study may consider a longitudinal data so that a deep knowledge of the constructs can be referenced.

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