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THE ROLE OF INNOVATIVE BEHAVIOUR IN THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CAPITAL AND SELF-EMPLOYMENT AMONG GRADUATES IN NIGERIA

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ABSTRACT :*This study investigates the mediating role of innovative behaviour in the relationship between psychological capital and self-employment among graduates.A questionnaire survey of 338 self-employed graduates was utilized. Structural equation modelling analyses were performed to test the hypotheses and the mediating effect.Results show that innovative behaviour has a significant bootstrapping mediating effect on the relationship between psychological capital and self-employment among graduates. Specifically, result found partial mediation, meaning it has direct and indirect relationship. A survey questionnaire was employed in this study, suggesting that follow up interviews which would have informed us of the reasons why the respondents held certain views were not undertaken. Future studies might benefit from a mixed methodology. Differences across types of business were not considered, yet could have a bearing on psychological resources and self-employment. Other studies could benefit from testing the*

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sectoral differences. This study was cross sectional and therefore did not capture changes in attitudes over time. This may necessitate follow-up studies in a longitudinal design to capture the trend of results. The education system/curriculum needs to be revisited to incorporate action learning in order to prepare graduates for self-employment at an early stage in school. In addition, government should take keen interest in developing programs that build and shape mind-sets of individuals.This study contributes to the dearth of evidence of self-employment among graduates literature by investigating the mediating role of innovative behaviour.

KEYWORDS: Self-employment; psychological capital, Innovative Behaviour

INTRODUCTION

Innovation and creativity is a critical aspect that every nation's economy must pay attention to. This is because, it is key to increasing business activities in terms of market share, profitability, employment creation, revenue generation, gross domestic product (GDP) and to minimise bankruptcy (Dodgson Gann & Salter, 2005; Bear & Frese, 2003). Innovative behaviour is related to improvement in knowledge and technology that leads to better living such as health, education (West & Altink, 1996) and is crucial for attainment of success (Christensen, Raynor & McDonald, 2015; Unsworth &Parker, 2003). Innovative behaviour involves creation and improvement of new product, services or ways of adding value (De Brentani, 2001) Business conditions, whether structural, psychological or social affect the creative process (Kanter,1988) whereby innovative behaviour enhances creativity and future oriented mindset are becoming essential for business change (Frese et al 2015; Rank, Pace & Frese, 2004) Innovative behaviour emerge as a results of creative ideas that are developed by risk takers (Janssen, Vliert & West, 2004). In a related development this is the reason why micro, small and medium business enterprises need to investigate on innovative process with focus on personal ability and contextual factors to enhance innovative behaviour among business owners (West, 2002; West & Altink, 1996).

More still, research on innovative behaviour does not end on just technological aspects of the business but it also includes social and psychological capital (Bos-Nehles, Renkema & Janssen, 2017; Luthan, 2007; West & Altink, 1996).Those who venture into business must understand innovation from all aspect of life and the reason for individuals going into innovative activities in business. Similarly, innovative work behaviours is a process which involves sharing of knowledge and teamwork (Kanter, 1988). The study of innovative behaviour and what are its antecedents in business places should not be left at the technical level but a holistic approach for the betterment of the entire process of the enterprise. However, some studies found mediating relationship between the implementation of innovative work behaviour (IWB) and Business Process Reengineering (BPR), Total Quality Management (TQM), Just-In Time and others in-terms of performance (Bear & Frese, 2003).Furthermore, one other reason that might be lacking from critical antecedents that complement method of innovative behaviour in business enterprises include structures, operational culture and climate (Mothe, Nguyen-Thi & Nguyen-Van, 2015;Bear & Frese, 2003; Douglas & Judge, 2001). Looking at the review literatures, potential antecedents of innovative behaviour have very insufficient attention (Rank et al., 2004). A number of investigations highlighted the importance

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of positive psychological resources to the success of innovative behaviour leading to business objectives, arguing that such research has been given less attention (Rank et al, 2004; Bear & Frese, 2003). Studies established, positive psychological resources has been found to predict business venture performance better than other types of capital such as social capital, human capital and the conventional financial capital business are used to (Bouncken, Pesch & Kraus, 2015; Ganter & Hecker, 2013; Hmieleski & Carr, 2008). Given these facts, this should attract the attention of scholars to investigate more on the power of "positivity" (self-efficacy, hope, optimism and resilience) to cause a significant positive change in self-employment among graduates, it must have first build up innovative Behaviour that will possibly lead to business success. More so, few studies found a linked positive psychology or POB constructs to innovative work behaviour or creativity (e.g., Wirtschafts- and Sozialwissenschaften 2015;Vinarski-Peretz, & Carmeli, 2011; Baas, De Dreu, & Nijstad, 2008). The relationship between positive organizational behaviour (POB) constructs like positive Psychological Capital and innovative behaviour has been neglected especially from this context. Innovative behaviour whether technical like new products, services and administrative procedures like new ways of recruiting employees needs all sorts of innovative ideas for business success (Christensen, Raynor & McDonald, 2015;West & Altink, 1996). Individual business owners and organisations required to have innovative business behaviour to enable them bring improvement in their businesses, not just to generate ideas.

Therefore, it is essential that researchers start focusing more on what is it that leads to the implementation of new ideas and innovative behaviours of business owners. The study is aimed at this investigation in three folds. Firstly, to determine the role of innovative behaviour in fostering self-employment among graduates. Secondly, to examine the role of positive psychological capital in enhancing graduates innovative behaviour. The third is to examine positive psychological capital on self-employment among graduates.

The paper makes the following contributions to the literature. First, we demonstrate that innovative behavior cannot easily influence self-employment in the presence of psychological capital; but rather it serve as a conduit in which psychological capital can cause a change in self-employment. Second we provide evidence showing that psychological capital has a significant bearing on graduates' decisions to become self-employed. Specifically, we argue that individuals with high level psychological capital are likely to become self-employed than those with low levels. Thirdly, the study found that graduates with innovative behaviour can easily create ideas that can improve business activities and create value. Clearly, the design of this study allows for the consideration of more than simply the mediating roles of innovative behaviour on the relationship between psychological capital and self-employment; by including the causal effects of psychological capital on innovative behavior. Thus, allowing for a more accurate and more detailed description of how and when innovative behavior affects self-employment in this investigation.

The remainder of this paper is structured as follows. Section 2 reviews the literature on innovative behaviour, psychological capital and the mediating role of innovative behaviour followed by the development of the hypotheses. Research design and methodology and results in Section 3. Then results and discussion of the findings are presented in Section 4.

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LITERATURE AND HYPOTHESES DEVELOPMENT

Theoretical considerations

Psychological capital theory

Psychological capital is largely drawn from the theory and research in positive psychology applied to the workplace (Peterson & Seligman, 2004; Snyder & Lopez, 2002 Seligman and Csikszentmihalyi, 2000; Sheldon & King, 2000). It has been defined as 'the study and application of positively-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace. (Luthans, 2002b, p. 59). Luthans, et al., (2007) further operationalize psychological capital as an individual's positive psychological state of development that is characterized by: first, having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; second, making a positive attribution (optimism) about succeeding now and in the future; third, persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and lastly, when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. Empirical studies since then have provided evidence in support of positive relationship between psychological capital and either individual or organisation performance (Dina, Paul & Harms, 2015; Azimi, 2014; Peterson et al., 2011; Sweetman et al., 2011)

Hypotheses development

Psychological Capital and Self-Employment

The influence of psychological capital has been investigated in various disciplines and perspectives and found to be a significant predictor of attitude/behaviour/action. For instance, Luthans, Avolio, Walumbwa and Li (2005) studied psychological capital of Chinese workers, exploring the relationship with performance within the context of two private owned and one state owned factories (n=422). The results indicated that each of the positive organizational behaviour states of hope, optimism, resiliency, and, (when combined) psychological capital, are positively associated with the performance outcomes of the sampled Chinese factory workers; implying that changes in psychological capital are associated with changes in work performance.

Maklu, waswa, Bageri and Abaho (2018) examined the extent to which an improvement in psychological capital, as a personal resource, might enhance self-employment among graduates. A cross sectional survey quantitative design (pre-test and post-test) was used to conduct this study using 338 self-employed graduates in north central Nigeria.Using structural equation model method of data analysis, their findings showed that in both the pre-test and post-test stages, there was a significant relationship between psychological capital and self-employment among graduates.

Mishra et al., (2017) in their study, examined the relationship between bi-directional work–family enrichment, psychological capital, and supervisor support in promoting innovative work behaviour; using a sample of 398 service-sector employees. Among other findings, they established that positive changes in psychological capital are associated with positive changes in innovative work behaviour.

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In health studies, Rabenu and Yaniv (2017) conducted a study aimed to explore the role of positive psychological resources (optimism, hope, self-efficacy and resilience). They tried to implement different strategies to cope with stress in terms of change, acceptance, or withdrawal from a source of stress in an organizational setting. They used 554 sample size drawn from employees of different organizations representing a wide range of jobs and positions. The structural equation modelling results showed that psychological resources (optimism, hope, self-efficacy and resilience) were positively related to coping by change and by acceptance and negatively related to withdrawal.

Hmieleski and Carr (2007) in a study intervention to enhance the role of psychological capital and well-being of 144 sample drawn from founders of new ventures established a positive relationship and concluded that development of psychological capital within entrepreneurs may help them to build resistance against the wide range of psychological stressors that they inherently face while leading their new ventures. Besides, psychological capital may be a key factor empowering entrepreneurs to be able to achieve their financial goals while sustaining high levels of psychological well-being and job satisfaction.

Other existing literature on psychological capital shows that reasonable number of studies support a positive relationship between psychological and performance/attitudinal outcomes (Rabenu and Yaniv 2017; Mishra et al, 2017; Costantini, De Paola, Ceschi, Sartori, Meneghini, and Di Fabio, 2017; Luthans, Avolio, Walumbwa and Li, 2005 and Hmieleski and Carr (2007). However, the relationship between psychological capital and self-employment among graduates has not been given adequate attention. Nonetheless, from the previous studies, we hypothesise:

H_1: There is a positive relationship between Psychological capital and self-employment among graduates.

Psychological capital and Innovative Behaviour

Yu and Liu (2016) investigated the role of psychological capital and innovative Behaviour and salience Behaviour of Technical innovation personnel in strategic emergency industry. Through the regression analysis of 350 sample size questionnaires drawn, our results showed that psychological capital had positive effect on their innovation behaviour. The result revealed that in order to better motivate employees innovation ability, corporations should take supportive policies and improve employees' psychological capital.

Ahani, Rezaii, Koochmeshki and Parsa (2017) conducted a study to see the effects of sustainable and flexible human resource management for innovative organizations of 136 sample size, the problem statement is to find the relationship between psychological capital, HR flexibility and sustainable HRM in innovative organizations. Findings do not reject any of four hypotheses, so it is concluded that psychological capital and HR flexibility have positive and meaningful effect on sustainable HRM; and in addition, psychological capital has positive and meaningful effect on innovative sustainable HRM.

Chitsazan, Bagheri and Yusefi (2017) explored the moderating effect of Intellectual, Psychological, Social Capital and Business Innovation: The sample of Organizational Culture out of the respondents knowledge-based and high-technology businesses located in Science and Technology Parks in Tehran, 126 sample

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were selected using the stratified random sampling method. A questionnaire method was administered for the data collection and the study employed the Structural Equation Modelling and PLS for the analysis. The findings revealed that intellectual, psychological, and social capitals significantly affect business innovation. More still, the results show organizational culture moderated the impact of intellectual and psychological capital on business innovation.

Lebedeva, Osipova and Cherkasova (2013) in a study intervention to enhance the relationship between Values and social capital as predictors of attitudes towards innovation. The respondents of 1238 were asked to fill in a questionnaire, which included the Schwartz value survey SVS-57, a self-assessment scale of innovative personality traits [Lebedeva, Tatarko, 2009], and a method of assessing social capital [Tatarko, 2011]. The correlation analysis results revealed a positive correlation between values of Openness to Change and a positive attitude to innovation. More so, the study also found that the components of social capital (trust, tolerance, perceived social capital) positively correlated with attitudes to innovation. Structural equation modelling was used to confirm the hypotheses tested and this demonstrated positive impact of the values of openness to change and social capital on attitudes towards innovations in Russia.

Bos-Nehles, Renkema and Janssen, (2017) conducted a study aimed to explore the role of HRM and innovative work behaviour: a systematic literature review. The authors carried out a content analysis on 27 peer-reviewed journal articles. The study findings show that, the best human resource management practices for enhancing Innovative Work Behaviour are training and development, reward, job security, autonomy, task composition, job demand, and feedback. The findings of this study established practical information for HRM professionals aiming to develop an HRM system that generates innovative employee behaviours that might help build an innovative climate.

Sweetman, Luthans, Avey and Luthans (2010) investigated the role of positive psychological capital and creative performance. The sample size drawn for this study included 899 working adults from a wide cross section of organizations, levels, and jobs. The results revealed that psychological capital and each of its components related positively to creative performance.

Mishra et al., (2017) conducted a study to see the effect of bi-directional work–family enrichment, psychological capital, and supervisor support in promoting innovative work behaviour; using a sample size of 398 drawn from service-sector employees. Among other findings, they established that positive changes in psychological capital are associated with positive changes in innovative work behaviour.

Review of extant literature on psychological capital provides support for a positive relationship between psychological capital and performance outcomes as seen (Sweetman, Luthans, Avey and Luthans 2010; Yu and Liu 2016; Bos-Nehles, Renkema and Janssen, 2017; Chitsazan, Bagheri and Yusefi 2017). However, the relationship between psychological capital and innovative Behaviour among graduates has not been given adequate attention. Nonetheless, from the previous studies, we hypothesise:

H_2: There is a positive relationship between psychological capital and Innovative Behaviour among graduates.

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Innovative Behaviour and self-employment

Eskiler, Ekici, Soyer and Sari1 (2016) examined the relationship between organizational culture and Innovative Work Behavior for Sports Services in Tourism Enterprises. The questionnaire consists of 26 questions that were answered on the 5-point Likert scale. The study employed SPSS 17 Package Program to analyze the data. Descriptive statistics, Pearson's correlation analysis, and regression analysis were used to analyze the data. The stepwise regression analysis technique was used as a regression test in order to discover whether sub-dimensions of organizational culture predict IWB. From the findings, IWB is crucial for the enhanced performance and success of any organization, organizational culture should be organized in order to encourage employees in terms of IWB.

Williamson, Battist, Leatherbee & Gish (2018) conducted a study to see the effect of the antecedent of an entrepreneurs' a day level innovative behaviour. Drawing from a sample size of 2,420 data points from a 10-day experience sampling study with 121 entrepreneurs, we find that sleep quality is a precursor to an entrepreneurs' subsequent innovative behaviour, in accordance with the effort-recovery model. More still, the study used a multilevel structural equation model which indicates that high-activation positive moods mediate the relationship between sleep quality and innovative behaviour on a given day.

Brunow, Birkeneder and Rodríguez-Pose (2018) investigated the role of innovation and the endowments of creative and science-oriented STEM – Science, Technology, Engineering and Mathematics – workers at the level of the firm and at the city-/regional-level in Germany. The study focus on whether the presence of these two groups of workers has greater benefits for larger cities than smaller locations, hence justifying policies to attract these workers in order to make German cities 'smarter'. The empirical analysis is based on a probit estimation, covering 115,000 firm-level observations between 1998 and 2015. The results revealed a highlight that firms that employ creative and STEM workers are more innovative than those that do not.

Wognum, Caniels and Slagter (2017) conducted a research study to determine the role of goal orientation on innovative work behaviour and the role of organizational learning from error's culture on that relation. The research adds to the body of knowledge about it as it investigated how goal orientations influences innovative work behaviour and whether organizational learning from error's culture moderates this relationship. Specifically, a survey of (187 respondents) spread in a cancer centre, has been used to answer the research questions. Furthermore, the study used statistical analysis and results revealed that goal orientations influence innovative work behaviour by a performance-prove goal orientation or a performance avoidance goal orientation. Similarly, evidence was found that gender and tenure influence the relations of goal orientation with innovative work behaviour. Given this fact, and based on these results, organizations should realize that goal orientation of employees can help them to act innovatively.

Sulistiawan, Herachwati, Permatasari and Alfirdaus (2017) conducted a study aimed to explore the role why employees engage in innovative behaviour even though innovation is a risky behaviour. The relationship between the Antecedents of Innovative Work Behaviour: The Roles of Self-Monitoring. The survey used 350 employees out of which 270 were received, measuring innovative work behaviour. Specifically, a single ordinary least square (OLS) regression in which we regressed expected image gains and expected image risks on the antecedents, respectively. Furthermore, the willingness to engage in innovative behaviour will so much depend on individual differences. Therefore, the authors tried to examine the role of individual differences, drawing from self-monitoring theory. From the results it shows that

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innovative work behaviour have the better weight for expected image gains and expected image risks were both statistically significant.

Li and Zheng (2014) in a study intervention to enhance the Influential Factors of Employees' Innovative Behaviour and the Management Advices. In order to obtain and maintain a competitive advantage on the vagaries of the ecological environment, the organizations must employ and practice innovativeness continuously. There is no doubt that the employees are the brain box for the organizations, and their innovative behaviours are important for innovation performance of a business organization. Therefore, the business enterprises have to take measures to stimulate the innovation willingness of teams and promote their innovation behaviour. The findings revealed that the business organization should focus on the publicity and advocacy of internal innovation culture and business innovation concept.

Wang (2015) in a study examines the influence of institutional (environmental) factors and personal (attitude, human capital) factors on the probability of becoming a self-employed individual. In particular, the study was aimed at making comparison between different types of economies. The data drawn for this study was from the 2011 Adult Population Survey (APS), the 2011 National Expert Survey (NES) of Global Entrepreneurship Monitor (GEM) and the World Bank Database, and covers 32 countries, including efficiency-driven economies and innovation-driven countries. The investigation applies hierarchical logistic regression and uses multilevel modeling for the cross-country, cross-individual dataset. Further, the results suggest that attention should be paid to environmental factors (regulative and normative), attitude factors, and human capital factor for better innovative behaviours. The findings of this study proposed that it will contribute to the further analysis of the GEM database to understanding the diversity of nascent entrepreneurial activities in different contexts.

Bjorklund, Bhatli and Laakso (2013) conducted a research study to determine the role of innovation which lies at the heart of both entrepreneurship and marketing. While studies have long focused on the idea of generation phase at the beginning of the innovation process, ideas need to subsequently be realized through efforts in idea development and implementation. The interviewees produced a total of 147 segments related to idea advancement efforts, identifying antecedents. Seven product developers of an international company were interviewed in-depth based on a critical incident technique. The findings revealed that although personal antecedents were most numerous, interpersonal and work organization antecedents distinguished successful and unsuccessful efforts.

H_3: There is a positive relationship between Innovative behaviour and self-employment among graduates.

Innovative Behaviour as a mediator of psychological capital—self-employment relationship

Rabiee, Hosseini-Amiri, Sarari-Moghaddam, Kafaedmetic and Asiabar (2016) explore the mediating role of innovation, Subjective Well-being and Emotional Intelligence in the relationship between Psychological Capital on Work Activities: The population includes 410 managers and professional employees working in all the hospitals and medical centers of Northern Province of Iran, Mazandaran. The findings show that Psychological capital has the greatest impact on innovation. However, this study proposes insights for managers on how to enhance their employees' capabilities and psychological capital through constant measurement as well as using improvement plans in order to provide higher work activities both directly and through the mediating role of Innovation, subjective well-being and emotional intelligence in hospitals and medical centers.

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Ziyae, Mobaraki, Mohammad Hassan; and Mozhgan (2015) examine the extent to which the Effect of Psychological Capital on Innovation in Information Technology (IT) among branches of Agriculture bank in Tehran, Iran. In terms of objective, this study is considered as an empirical one, and the research methodology is descriptive-correlative type. Population include 132 managers and employees working in Agriculture bank branches in Tehran, among those people 100 individuals were selected to be studied on using Cochran formula and through random sampling method, structural Equation Modelling (SEM) was used for data analysis. The study results revealed that there is significant effect of psychological capital on innovation in Information Technology. Furthermore, the study provided insights for managers on how to promote their employees' capabilities and psychological capital through constant measurement as well as using improvement plans in order to provide better innovation in the enterprises.

Wirtschafts- and Sozialwissenschaften (2015) in a study intervention to enhance Positive Psychological Capital of Adolescents: Measurement and the Role of Life Meaning as an Antecedent and Creativity and Life Satisfaction as Consequences. The study examines whether PsyCap predicts adolescents' life satisfaction and creativity in a sample of adolescents (N = 577). The study used hierarchical regression analysis for the analysis. The results found that Life meaning was established to predict PsyCap and PsyCap in turn was found to predict life satisfaction and creativity. Additionally, PsyCap mediated the relationship between meaning and life satisfaction and creativity.

Nurfaizal, Dwiatmadja and Setyawati, (2018) conducted a study aimed to explore the role of psychological capital as mediation between family support and creative behaviour of 125 SMEs handicraft sector which includes three districts in Indonesia namely Banyumas, Banjarnegara and Purbalingga. The main purpose of the study was to analyse how family support, mediated with psychological capital, can improve creative behaviour. The study used quantitative and simple random sampling approach questionnaires to collect data from the SMEs sector consisting of SMEs owners. Structural Equation Modelling (SEM) was employed as a method of analysis. The results revealed that data analysis show creative behaviour can be increased by family support through psychological capital mediation.

Studies on the mediating role of Innovative behaviour in the relationship between psychological capital and self-employment are rare. From the foregone literature, it is evident that psychological capital and innovative behaviour individually influence the tendency to start and own a business. We also know that individuals differ in their perceptions, attitudes and motivations; these differences are likely to have an impact on self-employment. To this effect, we propose that psychological capital has a causal relationship on innovative behaviour to influence self-employment. For instance, if an individual is oriented toward high levels of self-belief, hope, optimism and resilience at business, then the benefits from this orientation will be greater with innovative behaviour that can generate ideas and bring improvement to add value on business activities, which in turn work together to cause a change in self-employment and vice versa. These observations suggest the hypothesis:

H_4: Innovative Behaviour mediates a relationship between psychological capital and self-employment among graduates.

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METHODOLOGY

Design, population and sample

The study used a cross-sectional survey design and confined to self-employed graduates across North-Central Nigeria. The choice of this region was because whereas it is predominantly civil service region, the rate of unemployment among graduates remains a threat. A sample of 338 graduates was drawn from a list of business owners (Industrial Training fund 2016). The participants were selected using stratify random sampling technique; and data were collected through a personal approach which yielded a response rate of 88.7%. The data collection approach was chosen because the limited availability and efficiency of postal and communication services in Nigeria, could not allow questionnaires to be mailed, faxed or couriered to respondents without causing selection bias. 43% of the respondents were between 26-35 years, 55% were male, 64% had bachelor's degree, 67% were sole proprietors, and 64% of the businesses were between 1-5years. Responses were enlisted from manufacturing (14.5% firms), general trade (53.4% firms), hair and beauty salons (18.5% firms), and tailoring/fashion design (18.5% firms).

3.2 Measures and questionnaire

A six point-scale questionnaire, designed to measure the opinion or attitude of a respondent was utilized to obtain self-reported information. The questionnaire design is based on previous scholars and modified to suit the context of this study on self-employment, psychological capital and Innovative behavior. Table 1 presents the details.

Table 1: Operationalistion and measurement of variables

Variable	Dimension	Issues to examine	Measures	Sample qnnr items
Self-employment		Engaging in a day to-day economic activity. (Gielnik et. al., (2015; Linan and Chen, (2009)	Respondents' mean score of the **23 items** included in the questionnaire on a 6 point scale	*'How much effort do you put in mobilising the funds'* *'How much effort do you put in collecting the cash receipts business'*
Psychological capital	Self-efficacy	Graduates' ability, to demonstrate self-belief, confidence and capability to achieve a goal. (Luthan et al., 2004; Hmieleski & carr, 2002).	Respondents' mean score of the **10 items** included in the questionnaire on a 6 point scale	*"I feel confident in analyzing a long-term problem to find a solution"* *"I feel confident that I always accomplish my work/goals",*
	Hope	Conceptualized as a person's willpower to achieve the desired goal Akman and Korkut, (1993)	Respondents' mean score of the **10 items** included in the questionnaire on a 6 point scale	*At present, I am energetically pursuing my work/goals.*

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				I concentrate in achieving the goal set with a plan.
	Optimism	Perceived desire for positive outcome or it could be a persons' way of thinking of the best Luthan et al, (2004) Chang et al. (1996).	Respondents' mean score of the **10 items** included in the questionnaire on a 6 point scale	*"Feel confident in analyzing a long-term problem to find a solution.* *I believe in my ability of doing any job I had never done before*
	Resilience	Examining person's ability to face and bounce back problem (Luthan et al., 2004; Smith, Dalen, Wiggins, Tooley & Benard, 2008)	Respondents' mean score of the **10 items** included in the questionnaire on a 6 point scale	*"I usually manage differences in one way or another in my business",* *"I usually take stressful things at work in advance",*
Innovative behaviour		Behaviour of graduates introducing improve ways to work goals/tasks to add value Li; Li & Liu (2011); Ohly & Fritz (2010).	Respondents' mean score of the **08 items** included in the questionnaire on a 6 point scale	*"In the past 12 months, I have invested resources to improve my (business) tools",*

Control variables – the study predicts self-employment among graduates, and as such, we included age of the respondent, gender and highest qualification in the regression analysis to control for confounding effects associated with them. Age of respondent was controlled using four discrete categories (18-25years, 26-35years, 36-45years, 46years and above). Gender of respondents was controlled using dichotomous scale (male, female). While education level was controlled for using four discrete categories (higher national diploma, bachelor's degree, masters, PhD).

Tests for validity and reliability

To establish convergent validity, an exploratory factor analysis was performed for each variable by running principle component analysis using varimax rotation method. Factor loadings below 0.5 coefficients are suppressed to avoid extracting factors with weak loadings. Specifically, factor analysis was performed on psychological capital (self-efficacy, hope, optimism and resilience). The KMO and Bartlett's (1954) test of sampling adequacy were calculated to assess whether the questionnaire items used yield distinct and reliable factors (Kaiser, 1974). The result shows for psychological capital, KMO=.946 Bartlett test=7617.269, Total Variance Explained=60.11% for Innovative behavior and self-employment in this study were treated as uni-dimensional variables; nonetheless, its items that loaded with standardized coefficients of .5 and above were retained.

Cronbach's α coefficients were computed to determine the internal consistency (reliability) of the scales of the study variables. The standardized Cronbach's α coefficients for all the scales, were all found to be above 0.7 recommended by Nunnally and Bernstein (1994) (psychological capital α=.852, Innovative behavior

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α=.872, and self-employment α=.91). The study went further to employ measurement model which consists of two-steps analysis: the first step is a confirmatory factor analysis (CFA) of the measurement model, designed to assess structure that explain each of the study variable. This can be described by the convergent validity and the discriminatory validity of the study constructs (Anderson & Gerbing, 1988). Also, we employed the use of structural equation model (SEM) to assess the relationship between PSYCAP and SE, PSYCAP and IB, IB and SE and also to examine the influence of IB on the relationship between PSYCAP and SE, and to see whether there is any significant mediating relationship.

Confirmatory factor analysis

The study performed construct validity by using confirmatory factor analysis; with the aid of AMOS version 23 to assess the extent to which operationalization of a construct actually measure what theory purports (Sarantakos, 2005; Anderson & Gerbing, 1998). Since it is said to be a more flexible statistical tool than other multivariate techniques because it allows for simultaneous multiple dependent relationships between the variables (Newman, 2006: pg. 189). In doing this we involved specifying separate measurement models for PSYCAP, IB and SE.

Convergent validity

Convergent validity is when in the presence of other constructs, items measure a particular load on the construct (factor) it purports to capture. In addition, items of a given constructs should be seen to be highly correlated within themselves. Convergent validity can be assessed using AVE. The rule of thumb is that the AVE should be +>.5 to justify using a construct. The results in table 2: confirm convergent validity as reflected by the AVEs above the recommended cut-off of .5 while for reliability of construct is above a recommended cut-off.> 0.7 and above (De Vellis, 2003).

Table 2: Average Variance Extracted (AVE)

Code	Variable	Average Variance Extracted (AVE (≥.5)	Composite Reliability (CR)
PSYCAP	Psychological Capital	.788	0.80
IB	Innovative Behaviour	.715	0.79
SE	Self-Employment	.683	0.87

Discriminant validity

Discriminant validity refers to the degree to which the items among constructs are distinct from one another and measure distinct concepts. In assessing discriminant validity it should be seen that items of a construct load more strongly on the construct itself than other constructs. In this study, discriminant validity was assessed by comparing the squared correlation of a construct with its variance explained. The rule of thumb states that the variance explained should be greater than the squared correlation (Fornell & Larcker, 1981). Table 3: indicated that all squared correlations were less than the squared AVE values, hence suggest discriminant validity (differences) among constructs.

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Table 3: Discriminant validity

Predictor variables	**M**	**SD**	**1**	**2**	**3**
Psychological Capital	4.61	.85	**(.888)**		1
Innovative Behaviour	4.61	.87	.702**	**(.846)**	
Self-employment	3.90	.98	.369**	.292**	**(.826)**

***. Correlation is significant at the 0.01 level (2-tailed)*
**. Correlation is significant at the 0.05 level (1-tailed)*

3.8 CFA measurement model for Psychological Capital

Psychological Capital was measured using self-efficacy, hope, optimism, and resilience. The following items were iteratively removed during the model estimation process - , *self-efficacy items*'sef4', 'sef8', and 'sef10'; *hope items* 'hpe1', 'hpe3', 'hpe7', and 'hpe8', *optimism items* 'opm1', 'opm2', 'opm3', 'opm4', and 'opm7', and *resilience items* 'rsi7''rsi8' and 'rsi9'. Results in table 16 showed that the standardized parameter estimate of the retained items were all significant (p<.001) and the model provided a good fit as indicated by the good fit-indices, even though the chi-square was still significant (.017). According to Anderson and Gerbing (1988), a measurement model can be judged as providing an acceptable fit even though the chi-square value is statistically significant especially with a large sample size (Bagozzi & Yi, 1988). Other assumptions for convergent validity were also met. The composite reliability for psychological capital .80 is within the acceptable level as indicated by Nunnally (1978).

Table 4: CFA-Psychological Capital

Item Label Code	**Standardised regression estimates**	**CR (t)**
Self-Efficacy	.690	1.000
Sef4 I am confident of my ability to undergo pressure/challenging circumstances		
sef8 I always fight for what I want in the face of challenges	.793	12.525
sef9 I feel confident in finding solutions for my most difficult problems	.835	12.933
Hope		
hpe1 At present, I am energetically pursuing my work/goal	.725	1.000
Hpe3 I try better ways to improve my business goal when the performance is less than expected.	.681	11.658
Hpe7 I always think about ways of getting out of a problem in my business	.754	12.862
hpe8 I have a positive influence on most of the customers with whom I transact business	.749	12.771

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Optimism		
Opm1 I am optimistic about what happens to me in the future as it pertains to my business	.758	1.000
Opm2 I always find that every problem has a solution in my business	.823	15.673
Opm3 I believe that all the problems occurring in my business always have a bright side	..841	15.323
Opm4 I believe that in the face of the bad situation, everything will change for the better	.758	14.009
Opm7 I always count on good things happening to my business	677	12.361
Resilience		
Rsi7 I do not give up when things look hopeless	.850	17.671
Rsi8 I put in the best effort no matter what happens	.895	18.561
Rsi9 I like challenges that could improve my business	.815	1.000

Achieved Fit Indices

CMIN/DF	RMSEA	GFI	AGFI	NFI	TLI	CFI
3.380	.091	.902	.862	907	.913	.929

Composite construct reliability .80; AVE = .788

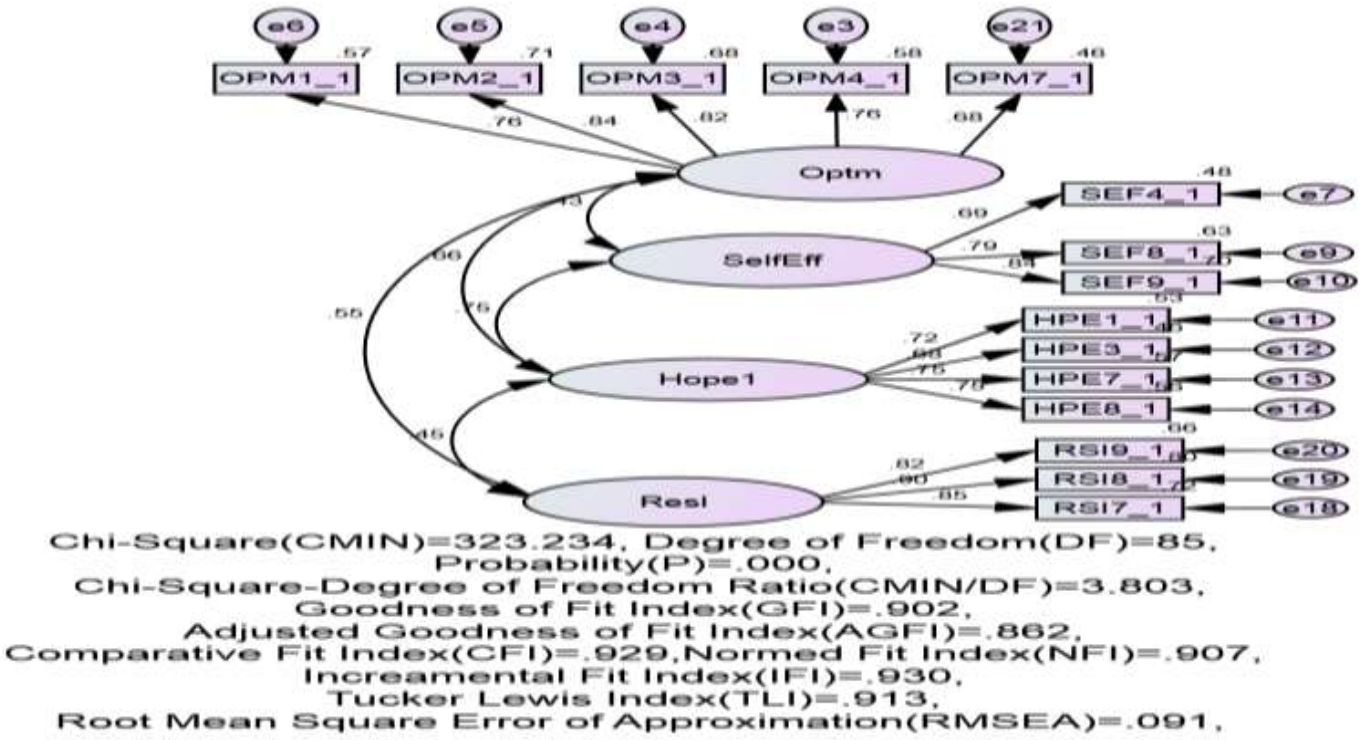

Figure 1: 1: Measurement Model for Psychological Capital

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CFA measurement model for Innovative Behaviour

Innovative behaviour was measured using eight items as a one-factor (uni-dimensional) model. During the model fit process, three items 'inv2' 'inv5' 'inv6'and 'inv8' out of the eight items were removed iteratively. The final CFA results indicated that the standardized parameter estimates of the retained items were all significant (p<.001), the factor loadings were above the recommended level of .50, and the fit-indices were within the acceptable level signifying good measurement model fit. The findings confirmed the validity of the final model as reported in Table5: The composite reliability for innovative behaviour variable was .80, which is above the acceptable threshold as indicated by (DeVellis, 2003 & Nunnally. 1978).

Table 5: CFA-Innovative Behaviour

Item Label Code		**Standardised regression estimates**	**CR(t)**
Innovative Behaviour:			
In the past 12 months I have…..			
Inv1	Invest resources to improve my business premises	.693	1.000
inv3	Introduced products, services that are new to improve the market	.775	10.565
inv4	Invest resources to improve my business tools	.675	9.977
inv7	Used the latest technology equipment for my business	.629	9.669

Achieved Fit Indices

CMIN/DF	RMSEA	GFI	AGFI	NFI	TLI	CFI
(1.119/.2	.019	.997	.994	.994	.998	.999

Composite construct reliability .80; AVE = .702

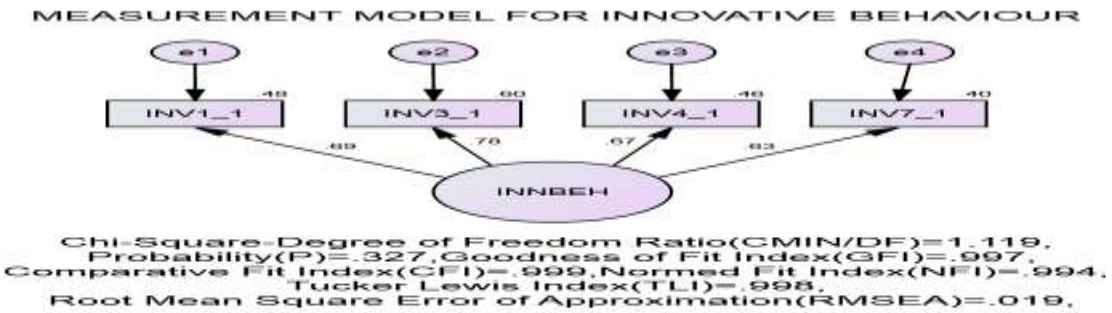

Figure 2: Measurement Model for Innovative Behaviour

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CFA measurement model for Self-Employment

Twenty three items were used to measure a one-factor (uni-dimensional) model of Self-Employment. However, during the CFA, the following items were iteratively removed -'sep1' 'sep4' 'sep16' 'sep3' 'sep6' 'sep7' 'sep13' 'sep14' 'sep18' 'sep15' and 'sep22''sep2', 'sep3', and 'sep23''sep5', 'sep20'. The final CFA results indicated that the retained items were significant and had standardized factor loadings higher than the recommended level of .50 thus, preserving the meanings of the factor. The findings confirmed the validity of the final model with excellent model fit statistics for this construct measure as reported in Table 6. The composite reliability for Self-employment was .87, which is above the acceptable level as indicated by (DeVellis, 2003 & Nunnally. 1978).

Table 6: CFA- Self-Employment

Item Label Code	Standard Regression Estimate	CR (t)
Sep5…developing a business plan?	.686	9.045
Sep9…opening up the business to the public?	.675	8.953
Sep13…taking charge of the daily business activities?	.740	9.438
Sep14…collecting the cash receipt?	.655	8.797
Sep17…analysing daily business performance?	.685	9.033
Sep19…understanding customers?	.639	9.430
Sep21…ensuring smooth operations?	.550	1.000
Achieved Fit Indices CMIN/DF RMSEA GFI NFI 2.864 .074 .968 .95	TLI .953	CFI .969
Composite Construct Reliability.87; AVE=.68		

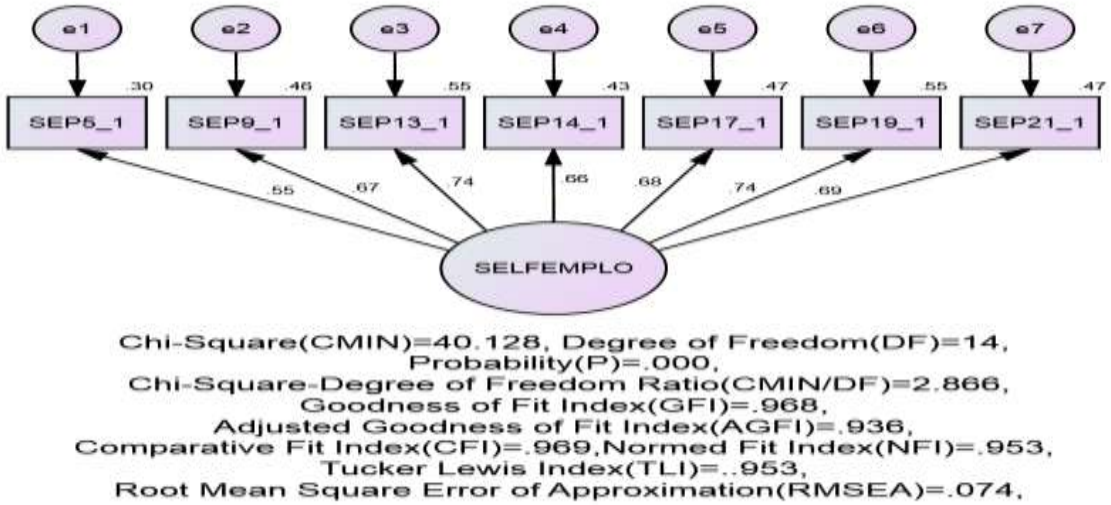

Figure 3: Measurement Model for Self-Employment

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Table 7: Overall Fit Indices for Psychological Capital, Innovative Behaviour and Self- employment Threshold in brackets

Variables	Absolute Fit GFI>(0.90)RMSEA<(0.08)		Incremental Fit TLI>(0.90),NFI >(0.90)		Parsimonious Fit $x^{2/df}$< (5.0)
Psychological Capital (PSYCAP)	.902	.091	.913	.907	3.803
Innovative Behaviour (IB)	.997	.019	.998	.994	1.119
Self-employment (SE)	.968	.078	.953	.953	2.866

Having considered the individual measurement model fits for the study variables, the next step was to specify an overall measurement model to test its adequacy. This was done by examining the covariance structures of all latent variables combined (the dependent, mediating and independent variables). The results showed that model fit statistics were above the acceptable levels (CMIN/DF 1.389, GFI= .996, NFI =.986, TLI= 0.990, CFI =.997, RMSEA= .034), all items loaded satisfactorily on their respective factors and that no cross loading of items onto a factor occurred. Furthermore, the factor loadings were above the recommended cut-off of .50. This results provided evidence indicating that items of each construct converged on their single factor model and that each measure is discriminated from the other side, in the overall model. The overall CFA measurement model was then used to confirm the structural model fit.

The tests for regression assumptions were run to assess the suitability of the data to perform further regression analysis. Specially, normality, linearity, homogeneity and multi-collinearity were assessed using statistical and graphical means. The results showed that all the parametric assumptions were met.

4. RESULTS

Table 8: Correlation results

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Age -1	1									
Gender -2	.146**	1								
Educ -3	.138*	-.021	1							
Self-efficacy -4	.032	-.046	-.024	1						
Hope -5	.116*	-.085	.018	.767**	1					
Optimism -6	.035	-.008	.000	.638**	.675**	1				
Resilience -7	.097	-.032	.023	.660**	.665**	.741**	1			
Psychological cap -8	.079	-.049	.004	.881**	.890**	.869**	.865**	1		
Innovative behav -9	.055	-.007	-.002	.675**	.696**	.699**	.752**	.803**	1	
Self-employment -10	.066	-.007	-.088	.321**	.324**	.303**	.302**	**.357****	**.315****	1

***. Correlation is significant at the 0.01 level (2-tailed)*

**. Correlation is significant at the 0.05 level (1-tailed)*

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The results in table 8: showed that the mean scores of the latent variables range between .032 and .116 on a 6point scale, while the standard deviation ranges between -.007 and -.79. From the standard deviation values are moderate. This is close to the mean, indicating that the statistical mean provides a good fit of the observed data. Further, support provided by the small standard error values suggesting that most sample means are similar to the population mean. The correlation results show a positive and significant association between the study variables for instance (Psychological capital and self-employment => r=.357, p<.05; innovative behaviour and self-employment => r=.315, p<.05).

HYPOTHESES TESTING

The study tested three direct relationships, that is, the relationships between psychological capital and self-employment, psychological capital and innovative behaviour, innovative behaviour and self- employment. One mediation tests was also performed (the mediating effect of innovative behaviour in the relationship between psychological capital and self-employment, this was found to be partial mediation).

Competing models

In this study, two models were specified and the one with the best fit was selected for hypotheses testing, interpretation and discussion. The results of the competing models are presented in table 9:

Table 9: Competing structural model results

Model Elements Model Fits	Model1(Without Mediation Variable)	Model2(with Mediation Variable)
CMIN(χ2)	194.621	2.779
DF	3	2
P-Value	.000	.249
CMIN/DF	64.874	1.389
GFI	.820	.996
NFI	.220	.986
TLI	.573	.990
CFI	.213	.997
RMSEA	.435	.034
Standardized Parametre Estimate		
PSYCAP→ IB	-	.210
PSYCAP→ SE	.210	.216
IB→ SE	.223	.204
AGE→ SE	.059	.057
SMC(R2)	.10%	.15%
% of the Significant Path	67%	75%

In Model 1 (alternate model without the mediated variable), the control variable (age) and independent variables psychological capital was regressed against self-employment without considering innovative behaviour as a mediator. Innovative behavior was added to the equation in Model 2. Examination of the

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statistical results of both models reveals that Model 2 meets the accept/reject criteria suggested Morgan and Hunt (1994). Model 2 results provide better fit indices and it has more number of significant paths. Hence, the study hypotheses were tested using the results in Model 2.

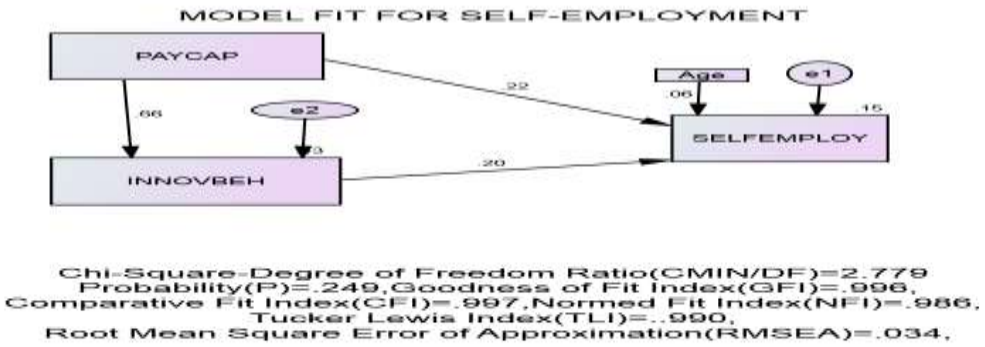

Figure 4: Model Fit for Self-Employment among Graduates in Nigeria
Source: ***Primary Data 2018***

Results in figure 4 show that the psychological capital and innovative behaviour explain 15% percent of the variance in self-employment among graduates in Nigeria.

Testing Direct Relationships

The study results on testing the direct paths between psychological capital, self-starting behaviour, role model and self-employment revealed that one out of five direct hypotheses was found to be non-significant, as reported in table 10.

Table 10: SEM results on direct paths

Paths		**Unstandardized Coefficients**		**Standardized Coefficient**			
		Beta	**SE**	**Beta**	**t-value**	**p-value**	**Decision**
H1	PSY → SE	.728	.045	.659	16.077	***	Supported
H2	PSY→ IB	.233	.077	.206	3.220	**	Supported
H3	IB → SE	.273	.085	.204	3.043	**	Supported

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Hypothesis 1: There is a significant positive relationship between psychological capital and self-employment among graduates in Nigeria.

Hypothesis **H1** tested the relationship between psychological capital and self-employment. The results revealed a positive and significant relationship between psychological capital and self-employment (β=.0.659, t-value =16.077, p-value≤0.05). This implies that any positive changes in psychological capital is associated with self-employment. Thus the hypothesis was supported. This suggests that the more the graduates improve their self-efficacy, hope, optimism and resilience, there is a likelihood of them entering into self-employment. The findings also mean that such graduates will demonstrate persistence to achieve their desired goal. Basing on this result, the study established that individuals with psychological capital could create a business venture to meet basic needs.

Hypothesis 2: There is a significant positive relationship between psychological capital and self-starting behaviour among graduates in Nigeria.

Hypothesis **H2** tested the relationship between psychological capital and self-starting behaviour. The results revealed that a positive change in psychological capital leads to a positive change in self-starting behaviour (β=0.206, t-value=3.220, p-value ≤ 0.05), therefore the hypothesis was supported. This indicates that graduates with psychological capital (strong internal drive), are bold/courageous in expressing self-belief, optimism to start a business and ensure that it survives. It also enables individuals to find solutions for their most difficult problems. More so, they can fight for what they want in the face of challenges. It is reasonable from this empirical finding to say that individuals with psychological capital can start-up business for a living.

Hypothesis 3: There is a significant positive relationship between self-starting behaviour and self-employment among graduates in Nigeria.

Hypothesis **H3** tested the relationship between innovative behaviour and Self-employment. The results indicated that a positive change in innovative behaviour leads to a positive change in self-employment (β=0.204, t-value= 3.043, p-value ≤ 0.05), this provides support for hypothesis **H3,** the findings explained that, when graduates are looking for better ways to do things no matter the chances, they believe in what they want and make it happen. This also implies that, graduates with innovative behaviour lookout for new ways of improving their ideas into reality, by doing it in a different ways from what others have done before. This means they take advantage of innovative and modern technology to improve ways of doing things.

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Table: Total, Direct and Indirect effects (Beta coefficients)

	Psychological Capital		Self-starting behaviour	
Standardized Total Effects				
Innovative Behaviour	.659**		_	
Self-Employment	.350**		.204**	
Standardized Direct Effects				
Innovative Behaviour	.659**		_	
Self-Employment	.216**		.204**	
Standardized Indirect Effects				
Self-Employment	.134**		_	
Bootstrapping Mediation Results				
Paths	**Point Estimate**	**SE**	**P-Value**	**Z-Value**
PSYCAP-→IB-→SE	.134	.049	.006	2.735

H4*:* Innovative behaviour mediates the relationship between a psychological capital and self-employment among graduates in Nigeria.

The bootstrap result on testing the mediating effect of innovative behaviour in the relationship between psychological capital and self-employment (Hypothesis 4) revealed a significant partial mediation (β =.134, p=.006, Z=2.735). Thus, Hypothesis 4 was supported. This means that while the effect of psychological capital on self-employment can be directly transmitted, part of this contribution can be channelled through innovative behaviour. This means that graduates who have self-belief, are optimistic about the future, this can boost their confidence to start up a business, and in the end, they seek to have things done by creating self-employment for themselves. Similarly, the more graduates have high expectations it enables them to persist and refuse to give up in pursuing their goal. These graduates have to undergo challenging circumstances in achieving their set goal with plans and always count on good things happening to their businesses, anticipating positive ways of dealing with difficult situations. Such graduates and other individuals have the high potentials of using their ideas and improve ways of creating employment for themselves.

DISCUSSION

Considering the population of people globally, the number of institutions producing graduates have equally increased. This is a matter of concern to graduates who think of joining 'white collar' jobs. Further, with the technological advancements by many economies in the world, most occupations are replaced by the use of machines and software. With such development a number of people are faced out of their work places and there are more influx of new graduates into the labour market. Given this situation, there are increase in cost of living, high poverty rates and struggle for the limited few jobs available. This result from the inability of most governments to provide sufficient employment for the graduates. As such self-employment is the last resort, if an individual is to make ends meet and survive. To add to the problem, most African

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countries have education systems that prepare graduates only for employment instead of these young graduates creating business ventures for a living. This suggests that if our graduates will be seen earning a living through self-employment, the mindset is very fundamental in this context.

This study found a significant positive relationship between psychological capital and self- employment among graduates. This is true because for an individual to start a venture and achieve a desired goal, the person must demonstrate the ability to mobilize his/her motivation, through reasoning that leads to the course of their action (Maklu, et al, 2018). Individuals who are expectant always have a positive outcomes. This motivate them to pursue their goals wholeheartedly by dealing with difficult situations to succeed in businesses (Rabenu, et al 2017). More still, is the success of getting things done and maintaining some which is a function of the levels of hope. This is demonstrated by individuals grapsping every small work they do to earn a living. The higher individuals are hopeful, the more they are directed towards their goal energy. Such individuals are more likely to exhibit the capacity to develop another pathways to achieve their goals, and nothing can stop them. The way and manner an individual responds when faced with difficult experiences also matters. Individuals with the propensity to bounce back after past negative encounter will not allow failure to hinder their success (Drnorsek, Patel & Cardon, 2016). Such persons are risk takers, which is a quality of an entrepreneur. These results corroborate the findings of previous psychological capital studies (Maklu, et al 2018).

Nonetheless, going by the result in this study it is a fact to note that the direct effect of psychological capital on self-employment is stronger before introducing the mediating role of innovative behaviour. More so, the result in model 2 indicates a better fit indices, percentage of significant path and explanatory power. Given this fact, it shows that for psychological capital (self-efficacy, hope, optimism and resilience) to cause a significant positive change in self-employment it must first build up innovative behaviour by generating business ideas to improve the value of activities for a living. Specifically, individuals with low psychological capital will need to have innovative behaviour. Doing this requires investing resources to improve their business premises and tools to start and maintain activity for a living. On testing the mediating effect of innovative behaviour, the bootstrapping results suggest a significant positive relationship, meaning innovative behaviour is critical in the relationship between psychological capital and self-employment among graduates. This describes that a self-employed person is his own boss. This implies that to succeed in self-employment, an individual must have the ability to take advantage of modern technology to create more value in the business activities. More still, for one to survive in the aggressive market environment with many players in the industry, a person must be able to work out new/alternative ways of doing things or introduce new products or get new markets. This suggests that for individuals with positive mind set to venture into business, it will also depend on how much ideas they generate to bring improvement on what they want to make ends meet. Most of the previous studies focused on the direct relationships, hence this research study expands on the literature on the current study variables.

6. Conclusion and implication

The study aimed at investigating the mediating effect of innovative behaviour in the relationship between psychological capital and self-employment among graduates. The results of the findings indicate that graduates engagement in self-employment is a matter of an individual's ability to have positive mindset on

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employment by developing and believing in his/her psychological resources coupled with the mentality of improving in the way of doing things differently from others to add value. The study has offered several implications. The first, is from academic point of view, we explore the role of both psychological capital and innovative behaviour in explaining self-employment among graduates in this context. The results show that psychological capital is critical in determining graduates self-employment. There is need for further study to isolate the four dimensions of psychological capital and investigate their contributions and also use the construct as a mediating variable to measure the effect on self-employment. From the perspective of policy, stakeholders should improve on the education system to nurture students at every levels into self-employment to prepare them early enough for self-reliance, with focus on action orientated activities as opposed to theory driven ideas that take place in schools. Similarly, this will enhance the development of graduates' positive psychological resources in thinking for self-employment. Practically, graduates at all levels must have the willingness to adapt to the current situation in the environment and not remain static.

Nevertheless, as a limitation of the study findings, results must be interpreted with caution. First, the study employed a survey questionnaire, there should have been follow up interviews in this study which would have informed us of the reasons why the respondents held certain views that are not captured in the structured questions. We suggest that future studies should use mixed methodology. Secondly, this study did not test for differences across types of business. Sustainability in business after starting is important and other studies should take into consideration. This is because sectoral differences to gain more insights on the relationship between psychological capital, innovative behavior and self-employment may be useful. Thirdly, this study was a cross sectional study and we did not capture changes in attitudes over period of time. This calls for follow-up studies to use a longitudinal design to capture the trend of changes in results. Lastly, looking at the fact that our final model in the structural equation model explains about 15% of the variation in self-employment among graduates, it is evident that subsequent studies should focus more on other factors that account for the remaining 85% of the variance to explain self-employment. In spite of its limitations, this study reliably makes significant contributions as discussed above. In the future, researchers may wish to explore in different contexts.

REFERENCES

Christensen, C.M, Raynor, M.E and McDonald.R., (2015) What Is Disruptive Innovation? Harvard Business Review 93(12): 44–53.

Bouncken R.B, Pesch, R and Kraus, S., (2015) SME innovativeness in buyer-seller alliances: effects of entry timing strategies and inter-organizational learning. Review of Managerial Science 9(2): 361–384.

Ganter A, and Hecker A., (2013) Persistence of innovation: discriminating between types of innovation and sources of state dependence. Research Policy 42(8): 1431–1445.

Mothe C, Nguyen-Thi U.T and Nguyen-Van P. (2015) Assessing complementarity in organizational innovations for technological innovation: the role of knowledge management practices, Applied Economics 47(29): 3040–3058.

Drnovsek M., Cardon M.S and Patel, P.C., (2016). Direct and Indirect Effects of Passion on Growing Technology Ventures. *Strategic Entrepreneurship Journal*, 10(2), 194-213.

Maklu, N, Y., Waswa, B., Bageri, V., and Abaho, E., (2018). The Contribution Effect of the Elements of Psychological Capital on Self-Employment. *European Journal of Business and Management. ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.10, No.30, 2018*

Print ISSN: 2053-4019(Print), Online ISSN: 2053-4027(Online)

Hmieleski, K.M. and Carr, J.C. (2007). The relationship between entrepreneur psychological capital and well-being. *Frontiers of Entrepreneurship Research* 27(5): 1-12.

Luthans, F., Avolio, B. J., Avey, J. B., and Norman, S. M. (2007). Psychological capital: Measurement and relationship with performance and satisfaction. Personnel Psychology, 60: 541–572.

Luthans, F., and Jensen, S. M. (2002). Hope: A new positive strength for human resource development. Human Resource Development Review, 1: 304-322.

Mishra, E. A, Nurvitadhi, J. J Cook, and Marr. D (2017) WRPN: Wide Reduced-Precision Networks. ArXiv e-prints,

Luthans, F., Avolio, B. J., Walumbwa, F. O., and Li, W. (2005). The psychological capital of Chinese workers: exploring the relationship with performance. Management and Organization Review, 1, 249–271.

Peterson, C., Seligman, M. (2004). Character strengths and virtues. New York: Oxford University Press.

Seligman, M. E. P., and Csikszentmihalyi, M. (2000). Positive psychology. *American Psychologist,* 55, 5–14.

Sheldon K, and King, L. (2001). Why positive psychology is necessary. American Psychologist, 56(3), 216–217.

Snyder, C. R., and Lopez, S. (Eds.). (2002). Handbook of positive psychology. Oxford, United Kingdom: Oxford University Press.

Sweetman, D., Luthans, F., Avey, J.B. and Luthans, B. (2011). Relationship between positive psychological capital and creative performance. *Canadian Journal of Administratuive Sciences* 28: 4-13. Universidad de San Buenaventura Medellín, Colombia

Peterson, C., Park, N., and Castro, C. A., (2011). Assessment for the US Army Comprehensive Soldier Fitness program: The Global Assessment Tool. American Psychologist, 66, 10–18.

Rabenu, E. and Yaniv, E (2017) Psychological Resources and Strategies to Cope with Stress at Work. *International Journal of Psychological research.*

Ziyae, B., Mabaraki, M.H., and Saeediyoun, M. (2015). The effect of Psychological Capital on innovative information technology. *Global Entrepreneurship Research*, 5(8), 1-12. doi:10.1186/540497.

Nunnally, J. C., and Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Bartlett, M. S. (1954). A note on the multiplying factors for various x2 approximation. Journal of the Royal Statistical Society, Series B16:296-298.

Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.

Fornell, C., and Larcker, D.F. (1981) Evaluating structural equation models with unobservable variables and measurement error. J Mark Res 1981;18(1):39-50.

DeVellis, R. F. (2003). Scale development: Theory and applications (2nd ed.). Thousand Oaks, CA: Sage Publications.Development, Vol. 38 Iss 8 pp. –

Bagozzi, R., and Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16, 74-94.

Anderson, J. C., and Gerbing, D. W. (1988). Structural equation modeling in practice. A review and recommended two-step approach. Psychological Bulletin, 103, 411–423.

Newman, M., Thompson, C., and Roberts, A.P. (2006). 'Helping practitioners understand the contribution of qualitative research to evidence-based practice'. Evidence-Based

Print ISSN: 2053-4019(Print), Online ISSN: 2053-4027(Online)