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Understanding entrepreneurship behaviour among the youth: a behavioural change theory perspective

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Abstract: The aim of the study is to integrate the theory of planned behaviour and transtheoretical model to predict youth entrepreneurship behaviour in Ghana. The study employed questionnaires to collect data from 600 unemployed youths using purposive and convenience sampling techniques. The hypothesised relationships were analysed using structural equation modelling. Findings reveal that attitude and PBC strongly influence entrepreneurial intention whilst entrepreneurial intention, attitude and subjective norms have significant influence on youth entrepreneurship behaviour. By integrating two behavioural change theories to understand the entrepreneurial intention of the youth, the study contributes to knowledge by providing a deeper theoretical understanding of the phenomenon from a developing country context. Although the two theories were able to predict youth entrepreneurship behaviour, the mediation effect of self-reevaluation only explained 38% of the variance in actual entrepreneurship behaviour. Future studies could explore the mediation or moderation roles of other environmental factors.

Keywords: entrepreneurship; behaviour; behaviour change; attitude; subjective norms; perceived behavioural control; PBC; intention; theory; perspective; understanding; post intentional behaviour change activities; PIBCA.

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1 Introduction

Youth unemployment is a global problem that has dire consequences on the political, social, security and economic growth of countries worldwide. Globally, there are significant variations in youth unemployment rates across countries (Gontkovičová et al., 2015). In Africa, out of the nearly 73 million jobs created between 2000 and 2008, only about 21.9% of the youth was employed (ILO, 2008) making youth unemployment phenomenon more acute on the continent (Caporale and Gil-Alana, 2017). The situation is not different in Ghana as youth unemployment continues to escalate unabated. Although, there are inconsistencies in youth unemployment rate in Ghana, Amankra and Burggraaff (2012) argue that the rate could well be in the region of 60%. The World Bank (2018) presents similar statistics stating that out of the estimated 1.2 million unemployed people in Ghana, about 48% are youth. The effect is seen in the formation of such outrageous associations as the Unemployed Graduate Association (Adom, 2015) in Ghana and rise in social vices (Dzisi, 2014). These raise concerns and lead many to argue that youth entrepreneurship behaviour might offer a solution (Owusu-Ansah and Poku, 2012; Awogbenle and Iwuamadi, 2010). Consequently, past and present governments in Ghana have initiated youth entrepreneurship programmes by investing huge sums of money in policies such as youth enterprises support and school enterprise initiatives

(Obeng and Blundel, 2015). Recently, the government devoted Sixty million Ghana Cedis as seed money for the implementation of a presidential pitch to support youth entrepreneurs in Ghana (Graphic Online, 2018). Additional support comes from agencies such as the Microfinance and Small Loans Centre (MASLOC) and the National Board for Small Scale Industries (NBSSI) (IBIS-Education for Development, 2014) and National Entrepreneurship and Innovation Programme (NEIP) (Graphic Online, 2018). Furthermore, considerable attention has been paid to entrepreneurship education as academic institutions develop curricula and pedagogical approaches to equip and motivate youth entrepreneurship (Buame, 2010).

Nonetheless, interest in entrepreneurship among the youth in Ghana is pathetically low. There seems to be no evidence that government's entrepreneurship interventions are yielding desired responses. More discouragingly, the majority of young people continue to seek non-existing white-and blue-collar jobs (Ackah-Baidoo, 2016). Additionally, virtually no effort has been made to understand the lack of motivation of the youth to engage in entrepreneurship activities or influence their attitude and behaviour toward entrepreneurship. This is surprising in view of the fact that entrepreneurship is a behavioural change activity that requires change in people's attitude and behaviour (Fayolle and Liñán, 2014). Even when government is progressively removing barriers to entrepreneurship (e.g. providing financial support), other forms of employment (vulnerable and under employment) seem more appealing and enticing (Adeniran et al., 2020). This study posits that understanding behavioural and psychological mechanisms can lead to better and more effective youth entrepreneurship interventions, and attract more youth into entrepreneurship. Hence, applying behavioural change theories is relevant now than ever before. Behaviour change theories has seen a lot of diversity in their applications and succeeded in influencing both health related and pro-environmental behaviours (Venturini, 2016; Tweneboah-Koduah et al., 2020). In Ghana, behaviour change theories has been successfully applied in malaria prevention (Tweneboah-Koduah et al., 2012); HIV/AIDS (Tweneboah-Koduah, 2014); tax payment behaviour (Tweneboah-Koduah, 2017); waste disposal behaviour (Tweneboah-Koduah et al., 2020) and breast cancer protective behaviour (Tweneboah-Koduah, 2018). However, there is paucity of literature using behavioural changes theories to elicit youth entrepreneurship behaviour. Studies on entrepreneurship behaviour have mainly focused on intention, motivation, and education (Karim and Venkataiah, 2016; Al-Jubari et al., 2018). Scholars call for the integration of behavioural change and psychological theories to improve understanding of entrepreneurial behaviour (Jebarakirthy and Thaichon, 2015). Behaviour change experts indicate that adopting behaviour change theories optimise the effectiveness of interventions (Thackeray and Neiger, 2000). This study therefore, utilises the theory of planned behaviour (TPB) and transtheoretical model [processes of change (POC)] to predict entrepreneurship behaviour among unemployed youth in Ghana. The use of TPB is attributed to a number of reasons. First, the theory has been very successful in predicting a wide range of behaviours and behavioural intentions (Armitage and Conner, 2001). Second, Zhao et al. (2005) intimate that venture creation is not an inadvertent occurrence but an intentional process. This study further postulates that the TTM (POC) elements could be conceptualised as post intentional behaviour change activities (PIBCA) to complement TPB, and serve as intervening variables needed to bridge the intention-actual behaviour gap. This follows suggestions that wide gaps exist in the intention-behaviour relationship literature (Sheeran and Webb, 2016).

Integrating the TPB and TTM (POC), the current study provides the empirical basis suggesting that after intention has been formed, the presence of post intentional activities can increase the performance of entrepreneurship behaviour. Moreover, TPB has better predictive power of intentions although criticised for its inability to fully explain actual behaviour change (Liñán, 2008). Jebarajakirthy and Thaichon (2015, p.301) explain that the usefulness of TPB for understanding the effects of attitude, subjective norms and perceived behavioural control (PBC) on behavioural intention is limited in that the theory 'does not reveal the entire process of behaviour change in its own right'. Thus, inasmuch as TPB account for better variances in intention, it does not adequately explain the variances in actual behaviour change (Sheeran and Webb, 2016). TPB is also known to be a complementary theory to TTM because while it explains 'why' people behave, TTM goes further to explain 'how' people change their behaviour (Brennen et al., 2016). The TTM, on the other hand, has been applauded for its 'practicability' in designing Behaviour Change and other behaviour change interventions and has the ability to overcome the limitations of continuum models such as the TPB (Sheeran and Webb, 2016; Schwarzer, 2008). The study thus sought to achieve the following objectives: investigate the extent to which attitudes, subjective norms and PBC predict youth entrepreneurial intention; examine the extent to which attitudes, subjective norms and PBC predict youth entrepreneurship behaviour, examine the relationship between youth entrepreneurial intention and entrepreneurship behaviour and determine the extent to which PIBCA mediates the relationship between youth entrepreneurial intention and entrepreneurship behaviour. The rest of the study is organised into literature review, theoretical background and hypotheses development, theoretical framework, methodology and presentation of results, discussion of findings, research implications and future research opportunities.

2 Literature review

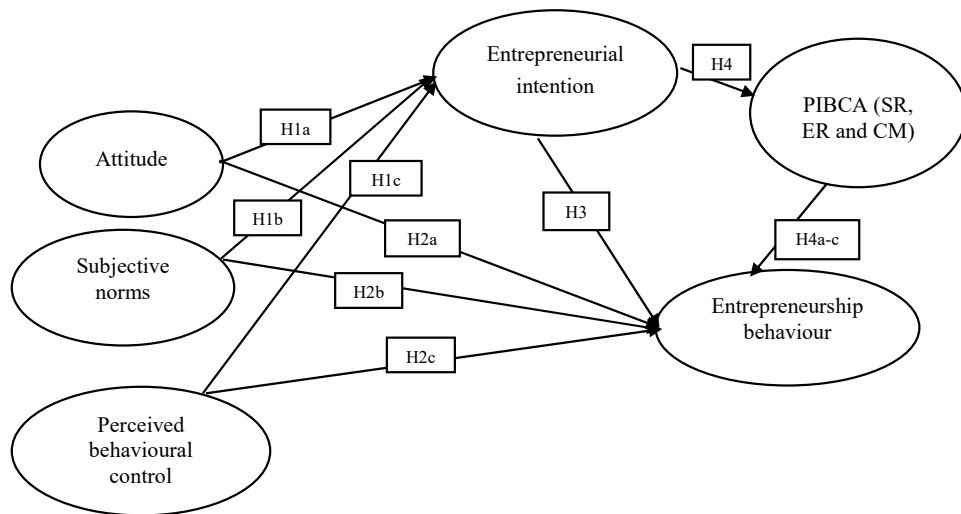
Behaviour Change 'is a practice and framework that lends insight to and supports the development of programmes that change people's behaviours in socially beneficial ways' [Grier and Poole, (2020), p.1]. Behaviour change does this by applying theories to understand, change or sustain positive voluntary behaviours (Wood, 2012). Gordon and French (2019) and Brennan et al. (2016) posit that behaviour change draws on theory, evidence and data to influence peoples' behaviour and that the best and effective behaviour change interventions are theory based, providing strong foundations for explaining, understanding and predicting human behaviour (Manikam and Russell-Bennett, 2016). In the context of entrepreneurship, Karim and Venkataiah (2016) call for the integration of psychological and behavioural change theories to improve understanding of entrepreneurship behaviour. This is against the backdrop that entrepreneurship behaviour is not an inadvertent occurrence (Zhao et al., 2005). In other words, actions that individuals take towards starting businesses are intentional rather than spontaneous and are determined by certain salient beliefs arising from multiple influences (Ajzen, 1991). Therefore, by using the TPB and TTM (POC), the current study provides the empirical basis suggesting that after intention has been formed, the presence of post intentional activities can facilitate the likely performance of youth entrepreneurship behaviour. The study assumes that attitude, subjective norms and PBC effectively predict youth entrepreneurial intention; intention in turn predicts entrepreneurship behaviour. It

is the case, however, that because intention does not always lead to behaviour change, post intentional activities are needed to bridge the gap (Abraham et al., 1998).

3 Theoretical background and hypotheses

Ajzen's (1991) TPB explains how voluntary behaviour is influenced by intentions. The underlining proposition is that people intend to perform a behaviour when they positively evaluate it (attitude), believe that relevant others think they should perform it (subjective norms) and perceive the behaviour to be under their control (PBC). Thus, attitudes towards the proposed behaviour, subjective norm, and PBC influence an individual's behavioural intention, which subsequently influences actual behaviour (Ghani et al., 2013). TPB has been consistently applied in household recycling behaviour (White et al., 2009), physical exercise (Conn et al., 2003) and entrepreneurial intentions (Kautonen et al., 2015). The TTM on the other hand, comprehensively explains three organising constructs for influencing behaviour [i.e., the stages of change (SOC), self-decisional balance and POC] (Prochaska and DiClemente, 1983). The SOC are a set of rubrics that determine the stage of behaviour change an individual is in. Self-decisional balance espouses the costs and benefits associated with a particular behaviour. POC explains ten overt and covert activities that individuals adopt in modifying behaviour. These activities can either be cognitive/experiential (consciousness raising, dramatic relief, environmental re-evaluation (ER), self re-evaluation (SR) and social liberation] or behavioural [counter conditioning, helping relationships, contingency management (CM), self-liberation and stimulus control]. POC has been used to mediate the stages of behavioural change in physical activity studies and HIV prevention (Courneya and Bobick, 2000; Prochaska and DiClemente, 1983). The assumptions in the context of this study are that attitudes, subjective norms and PBC effectively predict youth entrepreneurship intention and behaviour. Entrepreneurial intention in turn predicts entrepreneurship behaviour. It is the case, however, that because intention does not always lead to behaviour change, post intentional activities are needed to bridge the gap (Abraham et al., 1998). This study, therefore, proposes that these activities explained by POC could be examined to close the gaps between intention and actual entrepreneurship behaviour. As such, three elements of the POC (ER, CM and SR) were deemed relevant and operationalised as PIBCA. The three elements used was due to other elements such as consciousness raising, stimulus control, social liberation, self-liberation, helping relationships proffering similar conceptualisations as attitude, subjective norms and PBC (Courneya and Bobick, 2000). Counter conditioning was not considered at all because this study assumes that there are no other alternatives to eradicating youth unemployment than entrepreneurship. Moreover, Prochaska et al. (2008) explain that self-changers who want to adopt behaviour may utilise two or more elements from the POC. We therefore propose in this study that the three elements could complement the TPB constructs by mediating the youth entrepreneurial intention-behaviour relationship in Ghana.

The proposed research model shown in Figure 1 theorises that positive attitudes, positive subjective norms and high PBC influence youth entrepreneurial intention and entrepreneurship behaviour directly. Intention directly influences entrepreneurship behaviour and at the same time, influences entrepreneurship behaviour directly and indirectly through PIBCA (SR, ER and CM).

Figure 1 Theoretical framework

3.1 *Attitude, entrepreneurial intention and entrepreneurship behaviour*

Attitude is a multidimensional concept which according to Quine et al. (1998) in Norman et al. (2006, p.77) is ‘a function of behavioural beliefs and the evaluation of a set of consequences for the performance of a given behaviour’. The intention to perform a specific behaviour has been largely found to be predicated by positive attitude. Similarly, actual performance of behaviour is established to be preceded by positive attitude (Kautonen et al., 2015). Kautonen et al. (2013a, 2013b) and Kibler et al. (2014) establish strong relationship between attitude and entrepreneurial intention. Acheampong and Tweneboah-Koduah (2017) also report a significant correlation between attitudes and future entrepreneurial intention. Watanabe et al. (2014) also confirm that attitude is a significant predictor of entrepreneurial intention. In contrast, Fishbein and Ajzen (2010) opine that favourable attitude while influencing intention can also directly influence actual behaviour change. In this study, we conceptualise that positive attitude of the youth toward entrepreneurship will predict entrepreneurial intention and actual entrepreneurship behaviour. We therefore hypothesise as follows:

- H1a There is a positive and significant relationship between youth attitude and entrepreneurial intention.
- H2a There is a positive and significant relationship between attitude and entrepreneurship behaviour.

3.2 *Subjective norms, entrepreneurial intention and entrepreneurship behaviour*

According to Shumba and Naong (2012), subjective norm is the most relevant social construct for behaviours under complete volition of individuals. They indicate that for such behaviours, all a person needs is the approval of the behaviour from significant others. Subjective norm will therefore, be greater when an individual is highly supported

by significant others such as family or friends. In many instances, subjective norm is shown to have strong relationship with intention. Mixed findings have been reported in respect of subjective norms and entrepreneurial intention. For instance, Kautonen et al. (2015) find subjective norm to have the strongest effect on entrepreneurial intention while Tweneboah-Koduah (2014) reveals a statistically significant relationship between subjective norm and intention towards HIV protective behaviour. Hasan et al. (2015) reveal subjective norm to be the strongest predictor of intention. Moreover Engle et al. (2010) also reveal that subjective norms have the strongest effect on entrepreneurial intentions. On the other hand, (Schlaegel and Koenig, 2014; Awan and Ahmad, 2017) find a statistically weak relationship between subjective norms and entrepreneurial intention. Mancha and Yoder (2015) and Rex et al. (2015) suggest that the pressure to perform actual behaviour is dependent on the extent an individual complies with what his referents think about performing the behaviour although Armitage and Conner (2001), in their meta-analysis of 185 studies, point out that subjective norm is very weak in predicting actual behaviour. This study therefore, contends that an individual will form intention and subsequently, venture into entrepreneurship when he/she strongly believes that relevant others are highly supportive of entrepreneurship behaviour. Based on the above, the following hypotheses are formulated.

- H1b There is a positive and significant relationship between subjective norms and entrepreneurial intention.
- H2b There is a positive and significant relationship between subjective norms and entrepreneurship behaviour.

3.3 *PBC, entrepreneurial intention and entrepreneurship behaviour*

PBC refers to the degree to which a person is convinced of his/her ability to execute successfully a particular behaviour or the belief that the performance of the behaviour is under his or her control (Bandura, 1997). According to Ajzen (1998), PBC is one of the factors that determines intention and explains a person's beliefs about the ease or difficulty associated with the performance of behaviour. These beliefs emerge internally based on information, skills, abilities and emotions or externally based on opportunities and barriers (Brennan et al., 2016). The influence of PBC on entrepreneurial intention is evident in the studies of Acheampong and Tweneboah-Koduah (2017) and Ediagbonya (2013). According to Azjen (1991), PBC does not only predict intentions, but also supports the prediction of actual behaviour. Krueger et al. (2000) posit that PBC or entrepreneurial self-efficacy significantly influences entrepreneurship behaviour. In this study, we conceptualise that the youth are likely to venture into entrepreneurship if they have high control over their intention to pursue entrepreneurship activities, and believe that they have skills to perform entrepreneurship behaviour. We therefore formulate the following hypotheses:

- H1c There is a positive and significant relationship between PBC and entrepreneurial intention.
- H2c The relationship between PBC and entrepreneurship behaviour is positive and significant.

3.4 *Entrepreneurial intention and entrepreneurship behaviour*

Intention, as posited in the TPB is identified as the immediate and important predictor of behaviour (Fishbein and Ajzen, 2010). Kautonen et al. (2013a) in reviewing the TPB, propose that the more an individual has a favourable attitude, positive subjective norm and greater PBC, the stronger the intention to perform actual behaviour. In the end, stronger intention determines the likelihood that a particular behaviour will be carried out. For instance, Pakpour et al. (2014) indicate that strong entrepreneurial intention is likely to lead to performance of entrepreneurship behaviour. Similarly, Aloulou (2018) finds a strong relationship between entrepreneurial intention and behaviour consistent with findings suggesting that intention is the strongest determinant of behaviour (Aloulou, 2018). Entrepreneurial intention is thus conceptualised as all the factors (attitudes, subjective norms and PBC) that come together for an individual to form a conscious plan to perform entrepreneurship behaviour. Thus, a strong entrepreneurial intention can influence the actual performance of the behaviour. We therefore, formulate the following hypothesis:

- H3 There is a positive and significant relationship between entrepreneurial intention and entrepreneurship behaviour.

3.5 *Mediating role of PIBCA*

To understand fully how behaviour change occurs, Fishbein and Yzer (2003) suggest the need to examine some post-intentional processes. Schwarzer (2008) recommends the adoption of distinct processes at the post intentional level to ensure that actual behaviour occurs. Therefore, this study adopts three elements (SR, ER and CM) of the POC to mediate entrepreneurial intention and entrepreneurship behaviour relationship. SR explains the emotional and cognitive reappraisal of values held by an individual concerning the behaviour. Practically, SR happens when an individual realises that behaviour change is an important part of his/her image or identity. Falck et al. (2012) and Kuehn (2016) reveal that performance of entrepreneurship enhances and individual's self-image and personal identity. DiClemente (2018) concurs that SR enhances the aspirational values of individuals. Originally, ER was utilised to assess how one's problem affects the physical environment. In modern times however, ER explains whether the presence or absence of a particular behaviour influences one's social environment. CM uses punishments, rewards or reinforcements to start maintain or reinforce positive behaviours. Generally, reinforcements and rewards are used to support positive behaviours while punishments are used for negative behaviours. Such rewards significantly influence the performance of the targeted behaviour (Prochaska et al., 2008). POC in general has also been found to strongly mediate the stages of behavioural change in physical activity and HIV prevention studies (Courneya, 1995; Prochaska and Velicer, 1997).

The study therefore postulates that the youth entrepreneurship behaviour will be facilitated if the youth undertake these activities when transitioning from intention to entrepreneurship behaviour. We thus formulate the following hypotheses:

- H4a The relationship between intention and entrepreneurship behaviour is mediated by SR.

- H4b The relationship between intention and entrepreneurship behaviour is mediated by ER.
- H4c CM mediates the relationship between intention and entrepreneurship behaviour.

4 Methodology

4.1 Sample

The population of the study was made up of all unemployed youth in the Greater Accra region of Ghana. Greater Accra is a cosmopolitan area and the most populous region in Ghana (Ghana Statistical Service, 2021). The region also accounts for more than a fifth (21.4%) of the total unemployment and more than a third (36.4%) of urban unemployment in Ghana (Ghana Statistical Service, 2014). Respondents aged 18 to 35 years were considered in accordance with the definition of the National Youth Policy (2010). The study employed convenience sampling and a sample size of 815 unemployed youth. The sample size was determined through the cost based and confidence interval approaches (Burns and Bush, 2010). In addition, the selection of the sample size was determined by the availability and accessibility of the sample respondents to provide the needed information. In all, 778 representing 95% of the questionnaires were retrieved. Out of the 778, 600 representing 77% were found usable for further analysis.

4.2 Measures

A survey questionnaire was utilised to measure the relatively large number of variables (Bryman and Bell, 2015). The questionnaire was sectioned into three. The first section solicited information on demographic profile of respondents, followed by variables on attitude, subjective norm, PBC, entrepreneurial intention and entrepreneurship behaviour. The final section contained questions on PIBCA. All questions were anchored on a five-point Likert scale ranging from '1' = strongly disagree to '5' = strongly agree. Seven items adapted from Quine and Rubin (1997) measured attitude. Nine items measured subjective norms and were adapted from Ajzen (2013). PBC was assessed using seven items adapted from Armitage et al. (1999). Entrepreneurial intention was measured with six items adapted from GEM. Entrepreneurship behaviour was self-reported and measured with four items adapted from literature. According to Azjen (1991) the TPB model predicts more of the variance in self-reported behaviours than others. Furthermore, 12 items; ER (4), SR (4) and CM (4) measured PIBCA. The items measuring PIBCA were modified from the processes of change questionnaire (PCQ) developed and validated for physical exercise behaviours (Marcus et al., 1992).

5 Analysis and results

5.1 Descriptive statistics

Data was analysed using SPSS version 21 and structural equation modelling (SEM) Amos version 22. Table 1 presents the means and standard deviations of variables. The

highest mean recorded was 4.33 (I am confident I'll be able to pursue entrepreneurship) while the lowest mean was 2.89 (I consider that engaging in entrepreneurship will benefit Ghana in many ways). The highest mean value indicates that the sampled respondents largely believed that they possess enough confidence to engage in entrepreneurship if given the opportunity. Respondents however do not think that engaging in entrepreneurship is beneficial to Ghana. In all, 45 items measured attitude, subjective norm, PBC, entrepreneurial intention, entrepreneurship behaviour and PIBCA (SR, ER and CM).

5.2 *Confirmatory factor analysis*

Construct validity was assessed by performing a confirmatory factor analysis on 45 items. Scale reliability and validity of the measurement model was assessed using the maximum likelihood estimation. The overall model fit was assessed according to the following criteria: Chi-square (χ^2/df), goodness-of-fit-index (GFI), root mean square error of approximation (RMSEA), normed fit index (NFI), comparative fit index (CFI) and Tucker Lewis index (TLI). The thresholds are 3 and below for Chi-square (χ^2) (Schreiber et al., 2006); 0.90 for GFI, NFI and TLI (Hu and Bentler, 1998). The rest are CFI, 0.90 (Hooper et al., 2008) and RMSEA, 0.08 and below (Hair et al., 2006; Hu and Bentler, 1998).

5.3 *Assessing the measurement model*

The initial results of the measurement model did not provide a good fit ($\chi^2/df = 4.12$; GFI = 0.81; NFI = 0.83; TLI = 0.85; CFI = 0.86; RMSEA = 0.072). Hence, items (ATT 7, SNS 2, 5, 6 and 9, PBC 1, 4 and 7, INT 4, 5 and 6, EBH 2, PIBCA ER 3 and 4, PIBCA CM 4 and PIBCA SR 1) were removed to improve the measurement model's fitness (Bagozzi and Yi, 2012). Based on this, the initial 45 items were reduced to 29 for the measurement model which was significantly improved ($\chi^2/df = 2.85$; GFI = 0.90; NFI = 0.92; TLI = 0.94; CFI = 0.95; RMSEA = 0.056) (see Table 2 and Figure 2).

5.4 *Reliability and validity tests*

Fornell and Lacker (1981) recommend three approaches to assess the reliability and validity of final measurement models. These are:

- 1 item reliability of each measure
- 2 composite reliability of each construct
- 3 average variance extracted.

Hence, factor loadings were used to test item reliability. All factor loadings exceeded the acceptable threshold of 0.6. Composite reliabilities (CR) were all above the 0.7 recommended threshold (Fornell and Lacker, 1981). Cronbach alphas (α) were greater than 0.70 in accordance with Fornell and Lacker's minimum requirement. The average variance extracted also exceeded the recommended threshold of 0.5 (see Table 3) while the square root of the AVEs was more than the correlation coefficients of the constructs, indicating that each construct was unique and demonstrates significant discriminant validity (see Table 4).

Table 1 Descriptive statistics

<i>Scale items</i>	<i>Item code</i>	<i>Mean</i>	<i>Std. dev</i>	<i>Std. error</i>
Venturing into entrepreneurship will reduce my chances of being unemployed	ATT1	3.73	1.19	0.05
Venturing into entrepreneurship will negatively impact on my general feeling of well-being	ATT2	3.66	1.10	0.05
Entrepreneurship is really not a good alternative to formal employment	ATT3	3.52	1.11	0.05
Pursuing entrepreneurship will improve my quality of life	ATT4	3.59	1.15	0.05
I will not earn a good living by pursuing entrepreneurship	ATT5	3.61	1.14	0.05
Among various options, I would rather not be an entrepreneur	ATT6	3.66	1.14	0.05
Pursuing entrepreneurship does not involve any risks	ATT7	3.53	1.23	0.05
Most people who are important to me will be disappointed if I pursue entrepreneurship	SNS1	4.11	0.95	0.04
My colleagues who are important to me will see me as a failure if I decide to become an entrepreneur after my university education	SNS2	3.93	1.02	0.04
My close friends will approve of me venturing into entrepreneurship	SNS3	3.87	1.03	0.04
My family will not be in favour of my decision to pursue entrepreneurship	SNS4	3.98	1.00	0.04
My partner will oppose my decision to venture into entrepreneurship	SNS5	3.80	1.12	0.05
I've seen my family members go into entrepreneurship and they think I should also start	SNS6	3.94	1.02	0.04
My friends in entrepreneurship are better off than me and they think that should prompt me to try	SNS7	4.04	0.98	0.04
My friends who are engaged in entrepreneurship are struggling and they think I should not make similar mistake	SNS8	3.90	1.04	0.04
When it comes to my engaging in entrepreneurship, I want to do what important people in my life thinks I should do	SNS9	3.78	1.18	0.05
I see myself incapable of being an entrepreneur	PBC1	3.81	1.10	0.04
I lack the skills needed to engage in entrepreneurship	PBC2	3.87	1.06	0.04
I am confident I'll be able to pursue entrepreneurship	PBC3	4.33	0.91	0.04
To engage in entrepreneurship or not is entirely up to me	PBC4	3.76	1.17	0.05
If I want to, I could easily engage in entrepreneurship	PBC5	3.58	1.10	0.04
I find it difficult to get financial support to go into entrepreneurship.	PBC6	3.91	1.18	0.05

Table 1 Descriptive statistics (continued)

<i>Scale items</i>	<i>Item code</i>	<i>Mean</i>	<i>Std. dev</i>	<i>Std. error</i>
The banks will not give me a loan to start my own business	PBC7	4.10	1.21	0.05
I intend to engage in entrepreneurship in the not too distant future	INT1	3.68	1.12	0.05
I will make an effort to engage in entrepreneurship in the next three years	INT2	3.53	1.11	0.05
I intend to engage in entrepreneurship in the next one year	INT3	3.29	1.10	0.04
I do not intend to engage in entrepreneurship because it is not the only alternative source of employment	INT4	3.66	1.08	0.04
I have little intention to pursue entrepreneurship	INT5	3.58	1.10	0.05
I have strong intention to pursue entrepreneurship	INT6	3.74	1.16	0.05
I have currently sought out entrepreneurship opportunities and started my own businesses	EBH1	4.04	0.78	0.03
I have assembled resources and established my own business	EBH2	3.61	1.05	0.04
I have stopped searching for non-existing jobs and started my own business	EBH3	3.80	0.88	0.04
For the past two years, I have been running my own business	EBH4	3.78	0.91	0.04
I consider that engaging in entrepreneurship will benefit Ghana in many ways	PIBCAER1	2.89	1.18	0.05
I will be contributing to the fortunes of Ghana if I engage in entrepreneurship	PIBCAER2	3.61	1.18	0.05
I will not be a better role model to others if I engage in entrepreneurship	PIBCAER3	4.21	0.75	0.03
Entrepreneurship improves the socio-economic development of Ghana	PIBCAER4	4.01	0.91	0.04
I do not expect to be rewarded and praised if I engage in entrepreneurship	PIBCACM1	3.69	0.90	0.04
I will reward myself if am able to engage in entrepreneurship	PIBCACM2	3.75	0.88	0.04
I am committed to entrepreneurship if rewarded or not	PIBCACM3	4.10	0.91	0.04
When I fail as an entrepreneur, it will bother me	PIBCACM4	3.30	1.00	0.04
My self-image will be destroyed if I pursue entrepreneurship	PIBCASR1	3.97	1.09	0.04
I believe that entrepreneurship will enhance my personality	PIBCASR2	3.98	0.91	0.04
I perceive not much progress will be made in my life if I venture into entrepreneurship	PIBCASR3	4.00	0.97	0.04
Entrepreneurship is an important part of my identity	PIBCASR4	4.13	0.91	0.04

Table 2 Fit indices for measurement model

<i>Fit indices</i>	<i>CMin (X²)</i>	<i>Df</i>	<i>X²/df</i>	<i>GFI</i>	<i>NFI</i>	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>
Initial model	2930.72	712	4.12	0.81	0.83	0.85	0.86	0.07
Model 1	986.44	346	2.85	0.90	0.92	0.94	0.95	0.06

Table 3 Final measurement model

<i>Factors</i>	<i>Items</i>	<i>Standardised loadings</i>	<i>T-values</i>	<i>R² values</i>	<i>CR</i>	<i>AVE</i>	<i>Cronbach's alpha (α)</i>						
Attitude	ATT1	0.91***	Fixed	0.82	0.96	0.79	0.96						
	ATT2	0.89***	32.99	0.77									
	ATT3	0.90***	34.94	0.80									
	ATT4	0.89***	34.33	0.79									
	ATT5	0.87***	32.44	0.76									
	ATT6	0.89***	34.00	0.67									
Subjective norms	SNS1	0.75***	Fixed	0.56	0.91	0.66	0.90						
	SNS3	0.77***	19.05	0.59									
	SNS4	0.86***	21.50	0.73									
	SNS7	0.87***	21.88	0.76									
	SNS8	0.82***	20.47	0.67									
Perceived behavioural control	PBC2	0.75***	Fixed	0.56	0.85	0.59	0.84						
	PBC3	0.66***	19.88	0.44									
	PBC5	0.85***	19.43	0.72									
	PBC7	0.80***	18.57	0.63									
Intention	INT1	0.79***	Fixed	0.63	0.85	0.66	0.81						
	INT2	0.84***	20.37	0.71									
	INT3	0.80***	19.54	0.63									
Entrepreneurship behaviour	EBH1	0.71***	Fixed	0.50	0.84	0.64	0.86						
	EBH3	0.84***	18.07	0.70									
	EBH4	0.85***	18.15	0.72									
Post intentional SM activities	PIBCACM1	0.85***	Fixed	0.72	0.87	0.69	0.88						
	PIBCACM2	0.90***	25.20	0.82									
	PIBCACM3	0.74***	20.40	0.55									
	PIBCAER1	0.77***	Fixed	0.59				0.70	0.53	0.73			
	PIBCAER2	0.69***	11.81	0.48									
	PIBCASR2	0.50***	Fixed	0.22							0.91	0.78	0.71
	PIBCASR3	1.00***	3.47	1.00									
	PIBCASR4	1.00***	3.33	1.10									

Note: $\chi^2/df = 2.85$; $GFI = 0.90$; $NFI = 0.92$; $TLI = 0.94$; $CFI = 0.95$; $RMSEA = 0.056$.

Table 4 Discriminant validity of the measurement model

	<i>CR</i>	<i>AVE</i>	1	2	3	4	5	6	7	8
1 Attitude	0.96	0.79	0.89							
2 Subjective norms	0.91	0.66	0.61	0.81						
3 Ent. intention	0.85	0.66	0.37	0.34	0.81					
4 PIBCA CM	0.87	0.69	0.28	0.27	0.17	0.83				
5 PB control	0.85	0.59	0.63	0.54	0.43	0.18	0.77			
6 Ent. behaviour	0.84	0.64	0.34	0.35	0.48	0.59	0.20	0.80		
7 PIBCA SR	0.91	0.78	0.02	0.04	0.20	0.03	0.04	0.14	0.88	
8 PIBCA ER	0.70	0.53	0.41	0.33	0.16	0.45	0.52	0.17	0.17	0.73

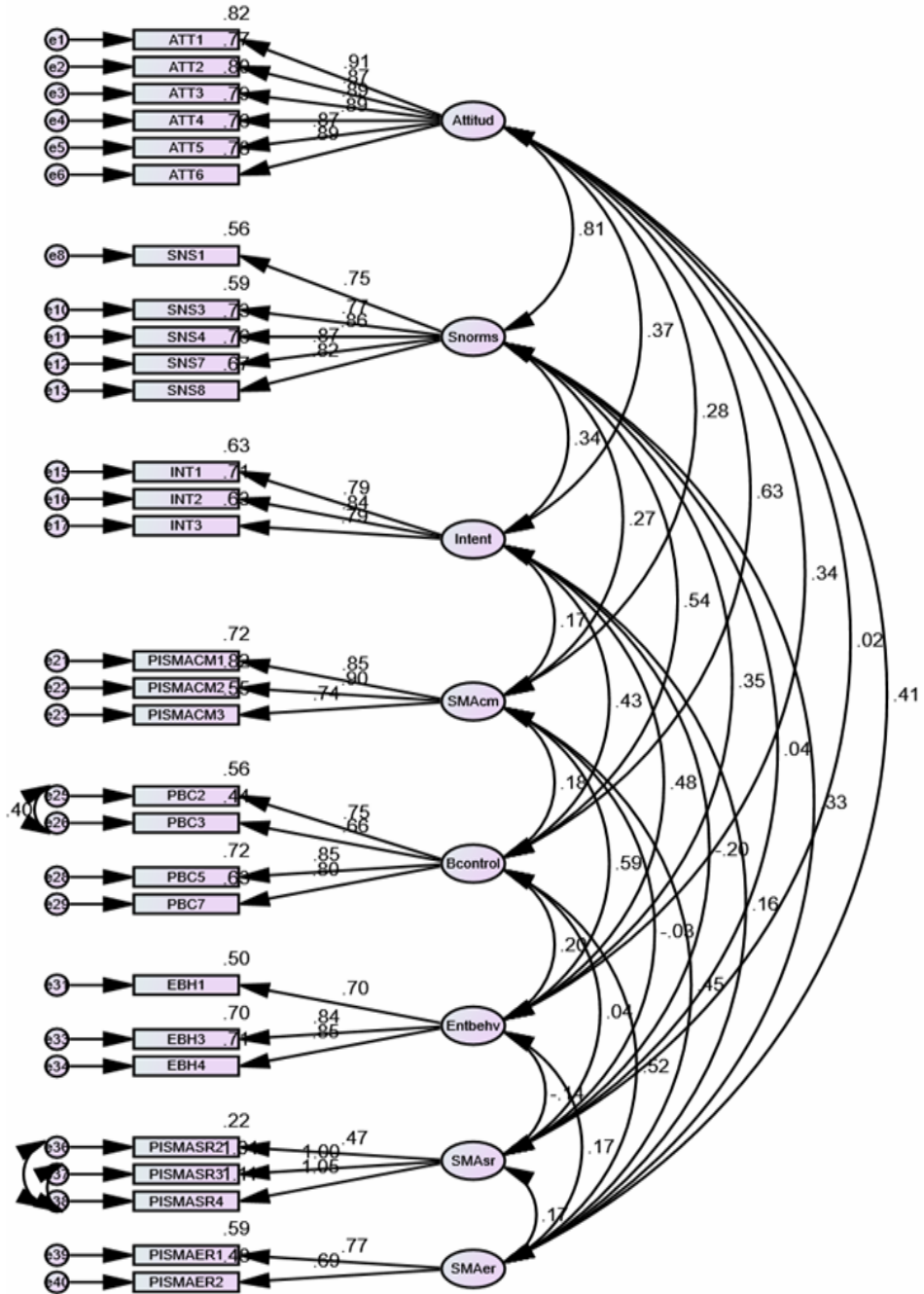
Note: AVEs are diagonal; squared correlations are off diagonal.

5.5 Structural model

The next step was to test the hypotheses postulated using SEM. SEM was chosen because it is the most preferred method for testing causal relationships, multiple relationships as well as determine model fitness (Bagozzi and Yi, 2012; Byrne, 2013). As shown in Table 5, both R²s of the hypothesised models and fit indices proved the models were fit. In model one; it was proposed that attitude, subjective norm and PBC have a positive and significant relationship with entrepreneurial intention (H1a, H1b and H1c). Specifically, the findings show a positive and significant relationship between attitude and entrepreneurial intention ($\beta = 0.15$, t -value = 2.27, $p < 0.01$). ($\beta = 0.10$, t -value = 1.62, $p > 0.05$) supporting H1a. This suggests that in Ghana, positive attitude of unemployed youth, to a very large extent, influences their intention to engage in entrepreneurship. The findings however, found no support for H1b as there was no statistically significant relationship between subjective norms and entrepreneurial intention ($\beta = 0.10$, t -value = 1.62, $p > 0.05$). This finding may imply that in Ghana, intention to pursue entrepreneurial activities is entirely up to the youth and has nothing to do with the support or approval of relevant others. PBC was found to be significant and positively related to entrepreneurial intention ($\beta = 0.31$, t -value = 6.33, $p < 0.001$) thus, supporting H1c. This indicates that high PBC influences the youth to form intention to engage in entrepreneurship in Ghana. In predicting the direct relationships between the individual constructs and entrepreneurship behaviour in model two, the path from attitude to entrepreneurship behaviour ($\beta = 0.17$, t -value = 2.2, $p < 0.01$) was positive and significant; likewise, the path from subjective norms to entrepreneurship behaviour ($\beta = 0.17$, t -value = 2.25, $p < 0.01$), therefore supporting H2a and H2b. In contrast, PBC and entrepreneurship behaviour recorded a statistically non-significant relationship ($\beta = -0.06$, t -value = -1.05 , $p > 0.05$), providing no support for H2c. This could be inferred that in Ghana, although unemployed youth may possess significant control over forming entrepreneurial intention, they cannot overcome the barriers to entrepreneurship when it comes to actually performing the behaviour. In Ghana, many factors including lack of financial resources, high taxes and poor entrepreneurial infrastructure impede entrepreneurship development. The path between entrepreneurial intention and entrepreneurship behaviour reported the highest statistically significant relationship ($\beta = 0.25$, t -value = 5.04, $p < 0.001$) and supported H3. This means that in Ghana, individuals with strong

entrepreneurial intention are likely to perform entrepreneurship behaviour in contrast with assertions that existence of environmental barriers often results in non performance of behaviour.

Figure 2 Final measurement model (see online version for colours)



5.6 Mediation tests

Tests for mediation effects of PIBCA (ER, CM and SR) intention and entrepreneurship behaviour relationship were performed. In view of the limitations associated with Baron and Kenny’s (1986) approach to mediation testing (Hayes, 2013), bootstrap method of mediation analysis (Preacher and Hayes, 2004; MacKinnon et al., 2004) was adopted; employing a bootstrapping sample of 2,000 to test the mediation effects of H4a-c. The initial results indicate a positive and significant effect between entrepreneurial intention and entrepreneurship behaviour ($\beta = 0.41, t\text{-value} = 11.00, p < 0.001$) and R^2 of 0.17. Subsequent results revealed that the relationship between entrepreneurial intention and behaviour was partially mediated by PIBCA (SR) thereby supporting H4a (direct path: intention \rightarrow PIBCASR $\beta = 0.34, p < 0.001$; indirect path: PIBCASR \rightarrow entrepreneurship behaviour $\beta = 0.02, p < 0.001$). The implication is that although strong intention influences entrepreneurship behaviour, having a strong SR increases performance of behaviour. There were however no mediation effects of PIBCA (ER and CM) on the relationship between intention and behaviour. Thus, PIBCAER (direct path: intention \rightarrow PIBCAER $\beta = 0.34, t\text{-value} = 14.00, p < 0.001$; indirect path: PIBCAER \rightarrow entrepreneurship behaviour ($\beta = -0.01, t\text{-value} = 0.32, p > 0.05$); PIBCACM (direct path: intention \rightarrow PIBCACM $\beta = 0.33, t\text{-value} = 13.00, p < 0.001$; indirect path: PIBCACM \rightarrow entrepreneurship behaviour $\beta = 0.03, t\text{-value} = 0.15, p > 0.05$). H4b and H4c were therefore not supported (see Table 6).

Table 5 Hypothesised direct paths

Hypothesised structural paths		Estimate (β)	T-value	P-value	Outcome
<i>Direct paths to intention</i>					
H1a: Attitude	\rightarrow Intention	0.15	2.27	**	Supported
H1b: Sub_Norm	\rightarrow Intention	0.10	1.62	0.11	Not supported
H1c: PB_Control	\rightarrow Intention	0.31	6.33	***	Supported
<i>Direct paths to Ent Behave</i>					
H2a: Attitude	\rightarrow Ent_Behave	0.17	2.55	**	Supported
H2b: Sub_Norms	\rightarrow Ent_Behave	0.16	2.55	**	Supported
H2c: PB_Control	\rightarrow Ent_Behave	-0.06	-1.05	0.29	Not supported
H3: Intention	\rightarrow Ent_Behave	0.25	5.04	***	Supported

Note: $R^2 = \text{Intention} = 0.21; R^2 = \text{Ent Behave} = 0.20; GFI = 0.98; NFI = 0.94;$
 $CFI = 0.96; \chi^2/df = 2.7; RMSEA = 0.066.$

Table 6 Summary of mediation tests

Relationship	Direct without mediator	Direct with mediator	Indirect effect	Mediation type	R2
Int \rightarrow PIBCACM \rightarrow Entrep_Behave	0.41(***)	0.33(***)	0.03(0.15) ns	No mediation	0.36
Int \rightarrow PIBCAER \rightarrow Entrep_Behave	0.41(***)	0.34(***)	-0.01(0.32) ns	No mediation	0.35
Int \rightarrow PIBCASR \rightarrow Entrep_Behave	0.41(***)	0.34(***)	0.02(***)	Partial mediation	0.36

Note: $\chi^2/df = 3; GFI = 0.99; NFI = 0.96; TLI = 0.92; CFI = 0.97; RMSEA = 0.07;$
 NS = Not significant; *** $P < 0.001; R^2 = 0.38.$

6 Discussion

This study sought to integrate two theories in behaviour change (TPB and TTM-POC) to predict entrepreneurship behaviour among unemployed youth in Ghana. The study posited that attitude, subjective norm and PBC directly influence intention and entrepreneurship behaviour. Moreover, intention influences entrepreneurship behaviour while PIBCA (SR, ER and CM) were proposed to mediate the relationship between intention and entrepreneurship behaviour. Findings in relation to H1a were supported in the context of youth entrepreneurship behaviour in Ghana. This indicates that the majority of unemployed youth who have positive attitude are likely to develop intention to engage in entrepreneurship. This finding is consistent with (Kautonen et al., 2015, Kautonen et al., 2013a, 2013b) who show strong relationship between attitude and entrepreneurial intention. In H1b, the result shows no significant relationship between subjective norm and intention and therefore provided no support for the hypothesis. The finding suggests that in Ghana, the intention to pursue entrepreneurial activities is solely the preserve of the youth and the approval of significant others is of no consequence. This disconfirms studies that report significant relationship between subjective norm and intention (Hasan et al., 2015; Tweneboah-Koduah, 2014). Regarding H1c, findings show a significant relationship between PBC and entrepreneurial intention. This implies that unemployed youth have control over their ability, skills and capabilities to develop entrepreneurial intention. Perhaps the progressive removal of barriers also influences the youth's intention to venture into entrepreneurship. This is consistent with Ediagbonya (2016) who found PBC to influence entrepreneurial intention. On the direct relationships between attitude, subjective norm, PBC and entrepreneurship behaviour, attitude was found to be a strong influencer of entrepreneurship behaviour. This supports H2a and confirms Fishbein and Ajzen's (2010) assertion that positive attitude, while influencing intention, can also directly influence actual behaviour. In Ghana, this means that unemployed youth appreciate entrepreneurship as a means to enhance their life and a good alternative to being unemployed. On the other hand, the positive relationship between subjective norm and entrepreneurship behaviour and supporting H2b suggests the importance of approval of significant others in influencing the youth to engage in entrepreneurship behaviour. The finding also corroborates previous studies (Mancha and Yoder, 2015; Rex et al., 2015) which suggest that performing a behaviour is dependent on the individual complying with what referents think about the behaviour. For H2c, no statistically significant relationship was found between PBC and entrepreneurship behaviour. We conclude that this is probably because unemployed youth perceive that barriers to entrepreneurship still exist, and they cannot overcome them when it comes to performing entrepreneurship behaviour. This finding is inconsistent with findings that suggest PBC influences actual behaviour, especially when actual behaviour is completely volitional (Rex et al., 2015; Plotnikoff et al., 2010). The study also found a strong relationship between intention and entrepreneurship behaviour supporting H3. This is attributed to the fact that as long as there is strong intention, there is greater likelihood that entrepreneurship behaviour will be performed. This finding supports those who conclude that strong intention leads to performance of actual behaviour (Kautonen et al., 2015). On the mediating role of PIBCA, the study found a partial mediation effect of PIBCA (SR) and thus supported H4a. This means that the likelihood of the youth performing entrepreneurship behaviour increases with the introduction of PIBCA SR. We

therefore conclude that in Ghana, the more the youth perceive that engaging in entrepreneurship will enhance their self-image and personality, the more likely they will engage in the behaviour, given that entrepreneurship aids in enhancing self-image and identity (Falck et al., 2012; Kuehn, 2016).

7 Theoretical, managerial and policy implications

This study has implications for theory, policy and practice in many ways. First, it extends TPB's application to the Ghanaian context. Specifically, the findings show that attitude and PBC influence youth entrepreneurial intention while attitude and subjective norm directly influence youth entrepreneurship behaviour. Secondly, to the best of the researchers' knowledge, this study is the first to mediate the intention-behaviour gap with TTM (POC) conceptualised as PIBCA. The findings therefore, advance the TPB and indicate that the mediating role of PIBCA SR improves the predictive powers of the model.

The findings also offer useful suggestions for practice. We recommend that those involved in behaviour change interventions on entrepreneurship focus on developing the attitude through education and awareness creation. Furthermore, designers of behaviour change interventions on entrepreneurship should design and implement programmes that emphasise skills, ability and competence. Steps also need to be taken to reduce potential barriers that prevent the youth from pursuing entrepreneurship activities. Apart from government providing financial assistance, we recommend that it should also minimise taxes and the cost of doing business. Although, the study found no relationship between subjective norm and entrepreneurial intention, it did however reveal a significant relationship between subjective norm and entrepreneurship behaviour. Therefore, entrepreneurship interventions should be designed to seek the approval of relevant others; for example, successful entrepreneurs, role models, family and friends. Implementers of behaviour change interventions that promote youth entrepreneurship should also focus on building positive intention towards entrepreneurship behaviour. Finally, we suggest that entrepreneurship programmes should be designed to enhance positive self-image and reinforce personal identity (SR). This is in line with the study's findings that entrepreneurship behaviour increases with the addition of PIBCA SR. When these are done, it is the belief of the researchers that youth entrepreneurial interventions are likely to achieve better results and encourage the youth to pursue entrepreneurship activities in Ghana.

This study also has several policy implications. First, evidence suggests that most entrepreneurship interventions in Ghana that fail to achieve their objectives can be rectified if policy makers consider developing policies that will improve the youth attitude and develop their skills, abilities and competences. In addition, policy makers should ensure that barriers (lack of financial support, taxes, inadequate infrastructure, etc.) that stifle the performance of entrepreneurship behaviour are removed to translate entrepreneurial intention into actual behaviour. Furthermore, the influence of significant others on youth entrepreneurship behaviour should not be overlooked in the design of entrepreneurship policies.

8 Limitation and future research directions

The study focused on only one region in Ghana (Greater Accra Region). Caution must therefore be taken in generalising the findings. The sampled respondents were drawn entirely from unemployed youth population. Since entrepreneurship behaviour is a volitional activity, other categories (for example, those in vulnerable and under employment) could be targeted in future studies. Furthermore, entrepreneurship behaviour was measured based on self-reporting; therefore, the issue of causation, (i.e., measuring whether actual entrepreneurship behaviour change has taken place) can best be inferred using experimental and longitudinal designs in further studies. SR only explained 38% of the variance in actual entrepreneurship behaviour. Future studies could explore the mediation or moderation roles of other environmental factors such as taxes, government policies, etc. The use of convenience sampling is not representative enough and thus limits the statistical inferences made in this study. Random sampling techniques could be explored in future studies. Research avenues also exist for qualitative or mixed method designs to provide richer perspectives as far as youth entrepreneurship behaviour is concerned.

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