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ENTREPRENEURIAL INTENTIONS IN THE CARIBBEAN: ANTECEDENTS AND VARIATIONS

INTENCIONES EMPRESARIALES EN EL CARIBE: ANTECEDENTES Y VARIACIONES

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ABSTRACT

Increasingly, researchers and policy makers across the globe explore the transformative role of entrepreneurship in the development process. What remains relatively under interrogated in this process is the issue of entrepreneurial intentions within the Caribbean region. Where entrepreneurial intentions play a pivotal role in future entrepreneurial activity, this area of research can provide useful insights for development policy and practice. Considering the above, three main objectives guide this paper. Firstly, we comparatively examine the entrepreneurial intentions drawn from adult populations across Barbados, Jamaica and Trinidad and Tobago. Secondly, we assess the relative importance of entrepreneurial skills, knowledge, and opportunity to entrepreneurial intentions. Thirdly, we also explore for possible socio-demographic variations (specifically based on sex, age, level of educational attainment, and type of current profession or career) in the levels of entrepreneurial intentions. To do this, we utilize available raw data from the Global Entrepreneurship Monitor (GEM) survey for the Caribbean countries. We use this data set to test for the relative significance of key antecedent variables for understanding entrepreneurial intentions. Point to variability in the relationship between attitudinal factors, socio-demographic backgrounds, and entrepreneurial intentions between countries in the study. Implications for a more contextualized theorizations of entrepreneurial intentions are discussed.

KEYWORDS

Entrepreneurial intentions, GEM, Caribbean, contexts

RESUMEN

Cada vez más, investigadores y responsables políticos de todo el mundo exploran el papel transformador del espíritu empresarial en el proceso de desarrollo. Lo que sigue siendo relativamente poco cuestionado en este proceso es la cuestión de las intenciones empresariales en la región del Caribe. Cuando las intenciones empresariales desempeñan un papel fundamental en la futura actividad empresarial, este ámbito de investigación puede aportar ideas útiles para la política y la práctica del desarrollo. Teniendo en cuenta lo anterior, tres objetivos principales guían este documento. En primer lugar, examinamos comparativamente las intenciones empresariales de la población adulta de Barbados, Jamaica y Trinidad y Tobago. En segundo lugar, evaluamos la importancia relativa de las aptitudes empresariales, los conocimientos y las oportunidades para las intenciones empresariales. En tercer lugar, también exploramos las posibles variaciones sociodemográficas (específicamente en función del sexo, la edad, el nivel de estudios y el tipo de profesión o carrera actual) en los niveles de intención empresarial. Para ello,

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utilizamos los datos brutos disponibles de la encuesta Global Entrepreneurship Monitor (GEM) para los países del Caribe. Utilizamos este conjunto de datos para comprobar la importancia relativa de las variables antecedentes clave para comprender las intenciones emprendedoras. Señala la variabilidad en la relación entre factores actitudinales, antecedentes sociodemográficos e intenciones emprendedoras entre los países del estudio. Se discuten las implicaciones para una teorización más contextualizada de las intenciones emprendedoras.

PALABRAS CLAVE

Intenciones empresariales, GEM, Caribe, contextos

INTRODUCTION

Without a doubt, empirical support for the link between entrepreneurship, value creation, and economic growth continues to grow (Van Stel, Storey, & Thurik, 2007; De Nicola, Muraközy, & Tan, 2021). In fact, entrepreneurship is positioned as part of a global cultural and ideological shift away from the centrality of formal management and organizational behaviour to those of market logic, leadership, and socio-economic development (Bromley, Meyer, & Jia, 2022). Within this new thrust, the entrepreneur, has also been represented as a key driver of creativity, innovation, and growth, but with a requirement for a particular orientation and/or intention, and with the hope that these dispositions will develop into some degree of planned behaviour (Bhat & Singh, 2018). This aspect of intentionality, as the degree to which an individual may or may not be committed towards starting a business in the not-too-distant future, also unfolds in the broader literature, as critical aspect of promoting and securing this cultural transformation (Krueger, Reilly, & Casrud, 2000; Ozaralli & Rivenburgh 2016).

While the push for entrepreneurial cultures also exists within the Caribbean region, these efforts remain largely undertheorized or tested, and with little examination of entrepreneurial antecedents and intentions (Devonish et al., 2010; Esnard, 2012; Valliere & Steele 2015; Mohan, 2022). What exists however are pockets of research that treat with: (i) the challenges related to the micro-economic and institutional framework that underpin Caribbean economies (Minto-Coy, Lashley & Storey, 2018) (ii) the importance of racial (Boxill, 2003), ethnic (Ryan & Stewart, 1994) and gender disparities within the entrepreneurial space (Esnard, 2012, 2016; Lashley & Smith 2015; Pounder 2016), and in more recent times that of, (iv) the possibilities for diasporic entrepreneurship (Nurse & Kirton, 2014; Minto-Coy, 2016).

In light of the above, three main objectives guide this paper. Firstly, we comparatively examine the entrepreneurial intentions (EI) drawn from adult populations across Barbados, Jamaica and Trinidad and Tobago. Secondly, we use the theory of planned behaviour to test for the relative importance of entrepreneurial skills, knowledge, and opportunity for understanding entrepreneurial intentions. Thirdly, we also explore for possible socio-demographic variations (specifically based on sex, age, level of educational attainment, and type of current profession or career) in the levels of entrepreneurial intentions.

The article is structured as follows: we present (i) the entrepreneurial context for the Caribbean (with specific reference to three cases, namely Barbados, Trinidad and Tobago and Barbados), (ii) the advances and challenges of building an intentions-based framework for understanding entrepreneurial activities, (iii) the methodology for collecting and analysing GEM data across the named Caribbean territories, and, (iv) comparative findings and discussions.

ENTREPRENEURIAL CONTEXT IN THE CARIBBEAN

After 50 odd years of development theory and praxes in the Caribbean, high levels of unemployment, debt, poverty, crime, and migration, all remain perennial issues within the region (Thomas, 2000; Boxill & Quarless, 2005; Singh, 2002; Minto-Coy & Rao, 2016). The penetration of neo-liberal policies also creates many market contradictions, which place increasing pressures on small island developing nations, who are already precariously positioned in the global economy (Akhter & Pounder, 2008; Briguglio, 2016). Added pressures become those of navigating global inequities with those of charting more promising and sustainable futures for the region (Klak & Conway, 1998; Thomas, 2000; Tewarie, 2016).

In treating with the push for an entrepreneurial imperative however, one must take into consideration the relative importance of economic and institutional structures across countries (Van Stel, Storey, & Thurik, 2007; Simón-Moya, Revuelto-Taboada & Guerrero, 2014). One consensus in the literature is that economic and political climates (e.g. policies, programs and procedures) all play a pivotal role in entrepreneurial involvement, investments and innovations (Ozaralli & Rivenburgh, 2016; UNDP, 2022). Others argue however for closer examinations of the nature of these economic conditions and the impact on entrepreneurial activities. As a case in point Amoros, Borraz and Veiga (2016) contend that high levels of inflation and informal sector engagement (seen here as negative conditions) directly impact the presence of necessity rather than opportunity based entrepreneurial activities. On the flip side, Ozaralli & Rivenburgh, (2016) show that favorable conditions play a part in boosting entrepreneurial intentions and future entrepreneurial engagement.

In the case of the Caribbean, a few scholars have begun to test for the possible significance of entrepreneurial policy, and resultant activities, to the sustainability of economic and social development efforts in the region (Babwah & Babwah, 2013; Pounder, 2013). The key finding of these regional studies is that when unencumbered, entrepreneurs who are alert and who also take advantage of opportunities within the market, make a positive impact on national growth levels. The caveat, however, is that this can mostly be achieved, if governments limit regulatory policies, encourage human development, better distribute scarce resources through the market process and provide critical structures that can facilitate the growth of the entrepreneurial spirit (Acs & Virgill, 2009). Where the study sets out to identify the levels, determinants

and variations of entrepreneurial intentions, an examination of contexts can provide some key insights for the Caribbean region. The study addresses these concerns.

Barbados

Barbados is a small island developing state, located northeast of Venezuela, with an average population of 284, 000, and a high human development index of 0.790, thus ranking their development as 71st of 188 other countries (UNDP, 2022). The country has been transformed from a sugarcane-based economy to one that is driven by investments in tourism, financial services, and entrepreneurial activities, for which the state continues to play a pivotal role. Against these conditions, the expansion of the entrepreneurial sector is presented as a necessary way to address patterns of economic decline and that of rising unemployment levels (Marshall, 2014). The Barbados Agency for Micro Enterprise Development³ and the Youth Entrepreneurship Scheme⁴ have thus emerged as two major initiatives that have been implemented, as a collaboration between the state and the private sector, to deal with the growth mandate (Devonish et al., 2010). Some of the persistent challenges however remain the need for entrepreneurial training at all levels of the education system and for increase resources to be allocated to that sector (Knight & Hossain, 2008). In the last GEM report for Barbados, Marshall (2014) also underscores a lack of relevant entrepreneurial policies, as well as commercial and legal infrastructure to support entrepreneurial development.

Trinidad and Tobago

The twin island of Trinidad and Tobago has a larger population of 1.3 million, with what UNDP 2021/2022 report considered a very high human development index of 0.810, and 56th ranking (UNDP, 2022). The country is considered as one of the more developed Caribbean economies that is based on revenue gained from innovation driven activities (GORTT, 2022; UNDP, 2022). However, much contention remains over the degree or type of innovative activities that drive economic activities in Trinidad and Tobago. To this end, Bailey, Pacheco, Carillo, Lezama-Rogers and Brathwaite (2013), argue that what exist for early and established entrepreneurs in Trinidad and Tobago is “replicative rather than innovative” activities (p. vi.). In part, this debate has spiralled a series of local initiatives (including competitions, grant funding) all aimed at encouraging the development of new or improved products and services that can address some social or economic need (GORTT, 2022).

Given the high dependence on the energy sector and the overall volatility of the Caribbean economy, there is an ever-present need for more innovation and creativity within the market. In driving the same, the government of Trinidad and Tobago has developed a Micro and Small Enterprise Development Policy (2014-2016) that seeks to create a holistic ecosystem to support entrepreneurship (GORTT, 2014). Part of

³ This agency offers training and technical support to incumbent entrepreneurs.

⁴ This scheme provides loan financing to young intentional entrepreneurs.

this policy initiative includes the need to reduce constraints of investments, create entrepreneurial opportunities, and provide an economic framework that support business systems in Trinidad and Tobago.

Jamaica

Jamaica is classified as an upper middle income and factor-driven⁵ economy, with a population of 2.8 million, a Gross Domestic Product of US\$13.9 million, with a history of high public debt, expenditure, and unemployment (IMF, 2016). To some extent, this has been the result of historical macroeconomic mistakes that continue to affect the economic outlook of Jamaica (Clair, Henry & Hlatshwayo, 2013). Jamaica has a HDI of 0.707 and ranking of 110th (UNDP, 2022). Against this context, the Government of Jamaica has placed entrepreneurship and MSME development at the forefront of the country's economic policy agenda. Additionally, the state has in most recent times developed the National Youth Policy 2015-2030 (GOJ, 2015) and the revised MSME policy (GOJ, 2018) as two critical documents that advance calls for innovation, creativity and productivity as key prerequisites for global competitiveness. In the most recent GEM Jamaica report since 2017, Gaynor-Clarke et al. (2023) argue that despite these developments, the consumer sector remains the dominant type of entrepreneurial activities, with some reduction in business activity during the pandemic, and with still low levels of entrepreneurial intentions.

Building an Intention-based theoretical Framework

Entrepreneurial intentions as a construct has been consistently defined as an individual's intent or plan to start a new [business] venture (Ajzen, 1991; Pillis & Reardon, 2007). As a form of planned behaviour (Krueger, Reilly & Carsrud, 2000; Wilson, Kickul & Marlino, 2007), it is important therefore to understand the individual and contextual factors that affect entrepreneurial intentionality (Wang, Prieto & Hinrichs, 2010). Where "new businesses emerge over time and involve considerable planning" (Krueger, Reilly & Carsrud, 2000, p. 411), explorations of entrepreneurial intentions can provide reliable predictors of related activities (Ajzen 1991; Krueger, 2000).

As a context-specific framework, Shapero's (1975) and Shapero and Sokol's (1982) seminal work on entrepreneurial intentions⁶ continue to provide testable frameworks for testing intentionality, with the focus on:

- i. perceived desirability (that is, the level of attraction an individual experiences for starting and operating a new venture⁷)

⁵ Bailey et al. (2013) suggest that factor driven economies are sustained by subsistence agriculture, extraction of natural resources, and creation of regional-scale intensive entities.

⁶ Entrepreneurial intention is defined here as the commitment to performing behaviour that is necessary to physically start the business venture (Krueger, 1993).

⁷ Krueger (1993)

- ii. perceived feasibility (the degree to which an individual is confident that he/she is capable of successfully starting and running a new venture⁸), and;
- iii. propensity to act (the tendency to act or engage in entrepreneurial behaviour in accordance with one's decisions⁸).

Inherent in this model is an understanding that the entrepreneurial event is a complex interplay of the degree to which an individual finds entrepreneurial events attractive, doable (as a measure of self-efficacy), and based on these, has the propensity to follow through on their intentions. This self-predictive approach therefore centers on the individual and the extent to which s/he exhibits certain perceptions and propensities that positively affect entrepreneurial behavior. A key expectation is that the propensity to act, will bridge the gap between the background of the individual, his/her attitude towards entrepreneurship and his/her intentions (Shane & Venkataraman, 2000). The absence of social factors however remains a gap that has guided continuous research.

Using a social cognitive model, Azjen (1991) advanced a theory of Planned Behaviour (TPB) which offers a more generic framework for explaining intentional behaviours. According to Azjen (1991), intentions to engage in planned behaviours are produced by three (3) factors:

- i. attitudes towards the behaviour (the favourable or unfavourable perceptions held by the individual about the activity).
- ii. subjective/social norms (the attitudes held by members of the individual's social network about the activity), and,
- iii. perceived behavioural control (the extent to which an individual is convinced that he or she has the competencies required to successfully perform the behaviour).

Through the testing of this model, researchers have posited that our beliefs or information about a particular phenomenon, and the related influence of subjective norms and pressures [perceived normative beliefs held by significant others, friends, family, and other individuals], as well as the individual's assessment of these desirability and ability impact entrepreneurial behavior (Ajzen & Fishbein, 2005). In so doing, this model therefore presents a more complex treatment of personal attitudes that is assessed through cognitive beliefs about a specific behaviour (both at the individual and collective levels) as well as affective evaluations of that behaviour (based also on subjective norms or social pressures).

In more recent applications of these models, researchers call for continued theoretical refinement and application of the theory of planned behaviour. Of note is the level of observed multicollinearity between attitudinal factors (Krueger, 2000). It is important to note for instance that perceived behavioural control speaks directly to the issue of self-efficacy. McGee, Peterson, Mueller & Sequeira (2009) pushes therefore for the refinement of self-efficacy, as a direct reflection of one's belief in

his/her ability, knowledge, or competencies to execute planned behaviour. Other scholars point to the relevance of opportunity recognition, which has been omitted from earlier models for entrepreneurial intentions (Shane & Venkataraman, 2000; Krueger, Reilly & Carsrud, 2000; Wilson, Kickul & Marlino, 2007). Researchers also call for explorations of the mediating effects of attitude and self-control (Wang, Change, Yao & Liang, 2016) as well as for the relevance of stress, self-efficacy, and coping strategies (Zhao et al., 2015) on entrepreneurial intentions.

Other scholars caution against the use of static or linear applications of the TPB model (Syed, Butler, Smith & Cao, 2020). An increasing number of studies call attention to cultural variations embedded in entrepreneurial intentions (Kristiansen & Indart, 2004). Some researchers highlight that where entrepreneurship as a type of activity is held in high esteem then entrepreneurial intentions are more likely to materialize (Liñán, Urbano & Guerro, 2011). Findings usually support the notion that individualistic cultures with high levels of masculinity, as well as low uncertainty avoidance and power distance, are more entrepreneurship oriented (Shinnar, Giacomini & Janssen, 2012).

Such variation also brings to the fore the relative importance of socio-demographic differences based on sex, age, and educational levels, among others. Differences based on sex have been most widely observed (Linan & Fayolle, 2015). Generally, authors have found one or more aspects of entrepreneurial intentions among males to be stronger than those of females (e.g. Strobl et al., 2012; Zhao et al., 2005). It is also believed that age has a direct influence on entrepreneurial intentions (Strobl, 2012). Education and training have also been closely associated with levels of entrepreneurial intentions (Martin, McNally & Kay, 2013; Fayolle & Gailly, 2013).

While researchers continue to provide growing evidence for the utility of the social cognitive approach to measuring entrepreneurial intentions (see e.g. Krueger, 2000; Souitaris, Zerbinati, & Al-Laham, 2007; Morwitz & Munz, 2021), there are some noted challenges. These include the blurring of theoretical and conceptual issues inherent in testing for the predictability of these models (Krueger, 2000; Morwitz & Munz, 2021), use of confounded measures of entrepreneurial intentions (Lee, Wong, Foo & Leung, 2011). Limited comparisons of the model exist, with a focus mainly on developed regions, particularly North America and Europe (Finland, Norway, France, Sweden for instance)-Brannback et al., 2007). The testing of intentions-based models of entrepreneurship in the Caribbean remains wanting (Devonish et al., 2010; Esnard, 2012; Mohan, 2022). Our study, therefore, teases through the theoretical application and advancement of the TPB in the context of the Caribbean.

RESEARCH METHODOLOGY

The paper is based on the use of secondary data obtained from the Global Entrepreneurship Monitor (GEM), which seeks to measure the relationship between entrepreneurship and economic growth. As part of this comparative cross-country monitoring process, GEM consortium researchers have used

the Adult Population Survey (APS), as a cross sectional approach, to capture entrepreneurial perceptions, aspirations, attitudes, and intentions from persons 18 to 64 years. The general aim of this survey is to determine why some countries are more entrepreneurial than others. This remains the largest data set that treats with entrepreneurial perceptions, aspirations, and intentions across the globe and with data for selected Caribbean countries.

In this paper, we attempt to draw from a GEM data set for Barbados, Jamaica, and Trinidad and Tobago (as three English speaking Caribbean countries that have consistently participated in the GEM surveys for 2005-2012). This comparative base line data sets allow for assessments of the levels, determinants, and variations of entrepreneurial intentions across selected Caribbean countries. There were no comparative data for the years that followed. The comparative analysis on factors related to entrepreneurial intentions are therefore limited to this time frame. The sample distribution for sex, occupation, and education (that is, number of years formally educated) across the countries are represented in table 1.1.

Table 1.1: Sample Distributions

Country	Years of survey	Sample Size	Sex distribution	Occupation	Educational Background in years
Trinidad and Tobago	2010 2011 2012	5441	2772 (Females) 2669 (males)	Fulltime-2119	0 years-106
				Part-time- 474	4 years-511
				retired/disabled-290.	8 years-791
				Homemaker-638	12 years-1786
				Student-317	14 years-1076
				Not working-413	16 years-682
				Self-employed-902	19 years-340
Barbados	2011 2012	4353	2493 (females) 1845 (males)	Fulltime-1906	0 years-77
				Part-time- 340	4 years-132
				Retired/disabled-120	8 years-1185
				Homemaker-104	12 years-1573
				Student-74	14 years-889
				Not working-394	16 years-451
				Self-employed-873	19 years 9

Country	Years of survey	Sample Size	Sex distribution	Occupation	Educational Background in years
Jamaica	2005	16207	8642 (females)	Fulltime-1990	0 years-61
	2006		7556 (males)	Part-time- 764	4 years-1349
	2008	Retired/disabled-253		8 years-6329	
	2009	Homemaker-474		12 years-5783	
	2010	Student-331		14 years-1055	
	2011	Not working-1554		16 years-787	
		Self-employed-2622	19 years-552		

GEM Model

This GEM survey goes beyond that of the use of key constructs within the theory of planned behavior. The GEM model treats with the individuals' perception towards entrepreneurship, societal attitudes, multi-institutional levers (political, social, economic), individual background and entrepreneurial outcomes; for which, intentions as a variable, is only one component. These data sets are employed here to tests for the relative significance of personal (educational attainment, age, sex, and type of profession) and attitudinal factors (such as perceived capacities, opportunities, fear of failure and esteem given to entrepreneurial activities) for these three named Caribbean countries.

Dependent Variable: Entrepreneurial Intentions

In the GEM survey employs a dichotomous question about an individual's intent to start a business or not to measure entrepreneurial intentions. This operationalization of the entrepreneurial intentions' variable is consistent with the Shapero's model of entrepreneurial intentions. In this case, the GEM survey, asked, whether they were expecting to start a new business, including any type of self-employment, within the next three years. We note however, that other studies have utilized and call for a more multidimensional measure of entrepreneurial intentions to capture the continuum that is inherent in intentions (Linan & Fayolle, 2015). The use of the raw data for GEM surveys however limits the measurement of entrepreneurial intentions to a dichotomous question.

Independent Variables: Definitions and Measures

GEM data allow for examinations of several independent factors. Among these variables were socio-demographic factors, like sex, age (18 to 64 years), current profession, level of educational attainment (primary, secondary, or tertiary certification). While the GEM data did not allow for comparative analyses of key constructs within the TPB model, there were four attitudinal measures, which remained applicable and extend the Shapero model:

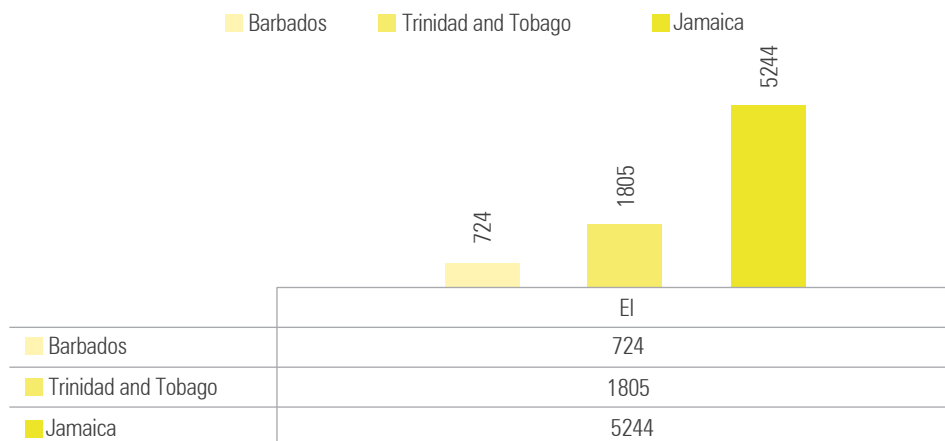
- i. *Perceived capabilities*: The percentage of respondents that represent those who possess the requisite skills and knowledge to start and operate a new venture.
- ii. *Perceived opportunities*: The percentage of respondents who can identify opportunities for entrepreneurship in their immediate environment.
- iii. *Fear of failure*: the percentage of the sample with positive perceived opportunities indicates that fear of failure would prevent them from starting a business.
- iv. *Level of esteem given to entrepreneurship*: measured via (1) the extent through which members of the society agree that entrepreneurship is a good career choice, (2) whether individuals perceive that entrepreneurs have a high social status, and (3) how individuals perceive that media attention is contributing (or not contributing) to the development of a national entrepreneurship culture.

Data sets were comparatively examined to capture the levels of entrepreneurial intentions (descriptive statistics), the variability within these levels based on the socio-demographic backgrounds of participants (t-test, ANOVA, and cross tabulations) and the factors that impact these intentions (regression statistic).

FINDINGS

A primary aim of this study was to test for a comparative level of entrepreneurial intentions across Barbados, Trinidad and Tobago and Jamaica. A frequency distribution shows that in all cases, entrepreneurial intentions were moderate, with Trinidad and Tobago having the highest percentage (35.2% or 1805 persons) in the entire sample. In the case of Jamaica, persons with reported entrepreneurial intentions were 34.3% (or 5244 persons in the sample), while the distribution for Barbados showed only 17.4% percent of or 724 persons (see figure 1.1 below).

Levels of entrepreneurial intentions



Mean scores of entrepreneurial intentions across the three countries also confirmed these orderings with Trinidad and Tobago ($\bar{x}=0.35$), followed by Jamaica ($\bar{x}=0.34$) and by Barbados with ($\bar{x}=0.17$). To test for the statistical significance of these differences, we also performed an ANOVA test on the mean scores between countries and their respective levels of entrepreneurial intentions. Findings revealed that the differences are statistically significant with degrees of freedom of 3, F ratio of 275.678 and significance of 0.000. Further post hoc tests on these differences show that mean differences were significant at the 0.05 level and highest between Barbados and Trinidad and Tobago. Specifically, the significant differences between Barbados and Jamaica (mean difference -0.169), Barbados and Trinidad and Tobago (mean difference -0.178, $p=0.000$). Given, the comparable mean scores for Trinidad and Tobago as well as Jamaica, no statistical differences were observed ($p=0.698$). The Global Entrepreneurship Monitor Caribbean 2011 Caribbean Regional Report also reported that based on the Entrepreneurial Activity (TEA⁸), Trinidad & Tobago had a TEA of 22.7% showing the highest rate in the region and the fifth highest TEA rate worldwide. TEA percentage for Jamaica was 12.8% and Barbados with 12.6% occupying the 16th and 18th position respectively (Rodrigo & Soler, 2012). The Entrepreneurship Monitor 2014 suggests that the efficiency-driven nature of the economy is a significant factor to account for these low numbers (Marshall, 2014).

⁸ the percentage of the adult population (1864 years old) actively involved in the creation and operation of a business which has been paying salaries for less than 42 months.

Socio-demographic variations in Entrepreneurial Intentions

Another major objective of this study was to determine whether entrepreneurial intention scores varied significantly among individuals sampled based on several key independent variables, namely country, sex, age, educational attainment, and current profession. To achieve this objective, we utilized the independent t-test and analysis of variance (ANOVA), where applicable, to assess variations in the collective mean scores of demographic factors across entrepreneurial intentions.

In terms of sex differences, an independent sample t-test showed that the mean variations between males and females on entrepreneurial intentions across all three countries were statistically significant, with $t_{(73982)} = -21.754$, $p = .000$. When examined, the means revealed higher entrepreneurial intentions in males ($M = 0.41$, $SD = 0.491$) than in females ($M = 0.33$, $SD = 0.470$). With regards to age, the data provided statistical evidence that entrepreneurial intentions were different among the various age groups ($F_{(6,73117)} = 120.641$, $p = .000$). When we looked at educational attainment, an analysis of variance showed that the effect of education (that is, number of years formally educated) was significant ($F_{(6,73117)} = 120.641$, $p = .000$). A Scheffé post hoc comparison revealed statistically significant differences between most groups. Analysis of variance showed a significant effect of employment status on entrepreneurial intentions ($F_{(56,73949)} = 25.851$, $p = .000$). A post hoc analysis indicated that differences in entrepreneurial intentions between full-time permanent employees ($M = 0.39$) and part-time employees ($M = 0.40$) were not significant. Similar findings were observed for unemployed ($M = 0.44$) and self-employed ($M = 0.46$) groups.

Overall examination of relationships showed that except for age, demographic variables show that correlations were very weak in all cases; with sex and EI ($r = 0.080$), years of education ($r = 0.080$), and employment status ($r = 0.056$). These were all significant at 0.01. In the case of age, *Pearsons* correlation showed that there was a very weak but negative relationship between age and entrepreneurial intentions ($r = -.111$). The mean scores related to the latter showed that these are also weak with perceived skills or competencies ($r = .180$), perceived opportunities ($r = .206$), country ($r = 0.094$), fear of failure ($r = 0.051$), and esteem given to entrepreneurship ($r = 0.039$).

Attitudinal Antecedents of Entrepreneurial Intentions

At the attitudinal level, the theory proposes that perceived feasibility, desirability, and behavioural control can influence entrepreneurial intentions. Given the conceptual and methodological differences between the theory and GEM data set, we attempted to test attitudinal variables as a broader sub-set of predictive factors including those related to perceived opportunities, fear of failure, skills, and esteem directed

towards entrepreneurship. This study therefore tests for the predictive value of these attitudinal variables for entrepreneurial intentions across the three named countries.

i. *Fear of Failure*

In terms of *Fear of Failure*, Trinidad and Tobago had the highest levels with .83, followed by Barbados with .79, and Jamaica with .70. When we examined the cross tabulations for fear of failure and entrepreneurial intentions, the findings showed Jamaica had the highest number of persons who feared failure but were still willing to start a new venture. Smaller numbers were observed for Trinidad and Tobago and then Barbados in that order. See table 1.2 below.

Table 1.2 Cross tabulations by country, fear of failure and entrepreneurial intentions

Country	Frequency (Have a fear of failure but willing to start a new venture)	Frequency (Not fearing failure and willing to start a new venture)
Trinidad and Tobago	253 (5.0%)	1523 (30.3%)
Barbados	147 (3.6%)	556 (13.8%)
Jamaica	1208 (8.9%)	3919 (29.0%)

ANOVA statistics showed that these differences were statistically significant with 3 degrees of freedom, f ration of 176.514 and p value of .000. Post hoc scheffe tests also revealed that there were significant differences between all three countries with the lowest significance between Barbados and Trinidad and Tobago (-0.035, p=0.002). Differences between Barbados and Jamaica were as follows; -0.087, p=0.000).

ii. *Perceived capabilities*

When we examined persons with the knowledge and skills required to start their own ventures, both Jamaica and Trinidad and Tobago had means of .80, while Barbados had a much lower mean with .67. Cross tabulations for their perception of skills with their entrepreneurial intentions also showed that Jamaica had the highest number of persons who think that they have the skills and are willing to start a new venture. This is followed by Trinidad and Tobago and then Barbados. See table 1.3 below.

Table 1.3 Cross tabulations by country, skills, and entrepreneurial intentions

Country	Frequency (do not have the skills and willing to start a new venture)	Frequency (Have the skills and willing to start a new venture)
Trinidad and Tobago	196 (3.9%)	1590 (31.6%)
Barbados	137 (5.4%)	564 (14.0%)
Jamaica	533 (4.0%)	4580 (34.0%)

ANOVA tests showed that all three were significant with degrees of freedom of 3, F ratio of 587.414 and p value of 0.000. Post hoc Scheffe tests also revealed pointed to significant between comparisons with Barbados and Trinidad and Tobago (.131, $p=0.000$) and between Barbados and Jamaica (.127, $p\text{ value}=0.000$).

iii. Perceived opportunities

Jamaica had the highest with .52, followed by Barbados with .44, and lastly with Trinidad and Tobago, with .41. Cross tabulations for perceived opportunities also showed that more persons in Trinidad and Tobago thought their communities had some entrepreneurial opportunity. This was followed by Jamaica and then Barbados. See table 1.4 below.

Table 1.4 Cross tabulations by country, opportunity, and entrepreneurial intentions

Country	Frequency or percentage of total (did not see opportunity in their areas but willing to start)	Frequency or percentage of total (saw an opportunity in their areas and willing to start)
Trinidad and Tobago	441 (9.4%)	1250 (26.7%)
Barbados	266 (7.6%)	359 (10.2%)
Jamaica	1634 (13.7%)	2989 (25.1%)

ANOVA statistics also pointed to the significance of these differences with 3 degrees of freedom, F ratio of 162.920, p value 0.000. In this case, the biggest statistical difference was between Barbados and Trinidad with (-.195, $p=0.000$). Post hoc test showed that they were all statistical different across countries. These were all significant at 0.05. Comparisons between Barbados and Jamaica pointed to a statistical difference of -.100, $p=0.000$. Barbados and Trinidad and Tobago (-0.195, $p=0.000$). These findings are consistent with the GEM Caribbean report for 2012 (Rodrigo & Soler, 2012).

iv. *Esteem given to entrepreneurship.*

Esteem towards entrepreneurship measures social perceptions towards entrepreneurship. Cross tabulations by country, esteem towards entrepreneurship and entrepreneurial intentions revealed that overall Jamaica highest mean scores on individuals' perception on the levels of esteem given to entrepreneurial activities. While Trinidad and Tobago had the highest percentage number of individuals who thought that entrepreneurial activities generally received high levels of esteem, the mean score was lower than that of Jamaica. Barbados scored the lowest on all counts. Table 1.5 speaks to the same.

Table 1.5 Cross tabulations by country, esteem towards entrepreneurship, and entrepreneurial intentions

	Frequency or percentage of total (did not believe that high esteem was given to entrepreneurship and not willing to start their own venture)	Frequency or percentage of total who thought that high esteem was given to entrepreneurship and willing to start their own venture	Mean scores for level of esteem given to entrepreneurship
Barbados	3431 (82.6%)	724 (17.4)	3.40
Trinidad and Tobago	3322 (64.8%)	1805 (35.2%)	3.47
Jamaica	10053 (65.7%)	5244 (34.3%)	3.97

Statistically, these mean score differences were significant. Specifically, the ANOVA statistics obtained were: df (3), f ratio (38622.100) and p value (0.000). Scheffe post hoc tests also revealed that the bigger difference was between Barbados and Trinidad and Tobago with a mean difference of -0.178. The means difference between Barbados and Jamaica was -0.169. No significant mean differences were visible between Jamaica and Trinidad and Tobago with 0.009. In a broader Caribbean report, Rodrigo, and Soler (2012) explained that Jamaica has the highest positive perception in media attention for entrepreneurs and in the association between entrepreneurs and high status. On the contrary, Barbados presents the lowest level of perception in all three variables.

PREDICTION OF MODEL

We also performed a regression model to look at the predictability of the independent factors on entrepreneurial intentions. Overall, the adjusted R square of the model as a collective examination of the demographic, attitudinal factors revealed that they only accounted for about ten percent of the variance in the entrepreneurial intentions

across all three countries. Note well that this is on average around 20 % less than other tested models; a main difference here are the variables being tested and the use of integrated approaches to measuring intentions. This can be explained by the fact that these studies employ a more integrated model with many more refined measures of self-efficacy and other social aspects like networking, prior experiences, and relational support.

Notwithstanding this, we note that the ANOVA statistics for the model showed that the independent factors served as predictors with degrees of freedom of 8, F ratio of 759.328 and p value of 0.000. This is also confirmed in the co-efficient table below which showed that in order of influence, opportunity recognition, perceived competencies or skills, country, age, years of education, esteem towards entrepreneurship and sex differences all have positive influence but weak predictive value. (see Table 1.6 below).

Table 1.6 Coefficients for Regression Model^a

Model B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Std. Error	Beta			
(Constant)	-.414	.035		-11.782	.000
age	-.004	.000	-.097	-23.621	.000
ETE	.116	.009	.051	12.528	.000
opportunity	.165	.004	.166	40.571	.000
1 competencies	.153	.004	.144	34.553	.000
FEARFAIL	.023	.004	.021	5.250	.000
sex	.049	.004	.050	12.346	.000
country	.068	.002	.121	29.898	.000
Education	.006	.000	.051	12.538	.000

a. Dependent Variable: entrepreneurial intentions

DISCUSSION

At one level, the findings suggest that using attitudinal and demographic factors alone only explains about 10 percent of the variability in entrepreneurial intentions. Theoretically, the study points to some conceptual and measurement issues as it relates to entrepreneurial attitude indicators and entrepreneurial intentions. In this case, the GEM study allowed for some examination of Shapero's model of entrepreneurial

event. In this case, the recognition of opportunity in the GEM survey mirrors closely that of entrepreneurial feasibility and other measures such as entrepreneurial skills, social and cultural norms that are employed in the theoretical model. Essentially therefore, the goodness of fit between the theoretical conceptualization, indicators, and measurement of the same was not obtained using the GEM data. However, the validity of this model makes a case for continued examinations of perceived opportunity and competencies around EI, with comparative examinations across age groups and country.

What this suggests is the need for empirical intrinsic case studies that can both test for an expand the scope and relevance of the theory of planned behaviour approach for predicting entrepreneurial intentions in the Caribbean. In so doing, it may also be instructive to expand the testing to include the perceived social/subjective norms, as the one other theoretical construct that is missing within the examination of the GEM data. While the GEM data contain dichotomous responses on entrepreneurship as a career choice, a more multidimensional measure is needed to capture the potential relevance of social norms surrounding this kind of economic activity.

Two variables seem particularly important in this case, namely culture and social norms. This inclusion of social factors represents an important aspect of developing multidimensional measures of resources that factor into entrepreneurial orientations at the individual level (Benedito de Oliveria Jr et al., 2016). It is important therefore for examinations of these social factors in relation to the perceptions of feasibility and desirability of/for entrepreneurship (Kruger, 2003, 2000). Heckhausen (2007) however errs on the side of caution in the differentiation between understandings of motivations (why we do things) with that of volition (how we choose to do it) in the measurement of entrepreneurial intentions. Mohan, Strobl and Watson (2018) also draw upon the need for positive role models as an aspect of motivation.

Empirically, our study provides further support for the relative importance of perceived opportunities and competencies. While the correlations were somewhat low, the findings point to the need for continued interrogation of these two independent factors and for further refinement of these measures. Given the theoretical propositions on the role of prior exposure (Ozaralli & Rivenburgh 2016) and social support (Mueller, 2006), further considerations should also be given to these unexplored variables (Moriano et al. 2012). Forgas-coll et al. (2016) also make a case for the examination of the processes through which persons develop perceived values and sense of satisfaction and the extent to which these factors impact behavioural intentions. While these social and behavioural factors, however, were not included in the data due to the lack of available data from GEM survey, they are critical to advancing knowledge that bridges the gap between intentions and actual behavior.

What these findings suggest is that of the need for more contextual and perhaps subjective analyses of the situational factors that shape entrepreneurial activities within these three countries. This examination is particularly important given that contextual factors are generally overlooked in EI research (Elfving, Brännback, & Carsrud, 2009; Welter, 2011; Frederick & Esnard, 2019). Linan and Chen (2006) suggested that extending this area of research to regions where environmental and institutional framework conditions vary can broaden theoretical understanding. The heterogenous nature of entrepreneurial ecosystems across developing countries also call for a more nuanced understanding of the preconditions for entrepreneurial activities (Alves et al. 2019). These findings also align with that of Neida Alborno-Arias and Akever-Karina SantaFe-Rojas (2020) whose study on Venezuelan migrants in Colombia, point to the importance of supportive networks as important building blocks for shaping EI. In the case of the Caribbean, Mohan (2022) pushed for further explorations of socio-cultural perceptions of opportunity and intentions. Such findings also strengthen the call for more diverse explorations of social norms, networks, cultural influences, structural differences, as well as economic and political climates (Esnard, 2023). This is where the GEM data can provide even more critical insights. Moving beyond these conceptual and methodological challenges in the Caribbean requires more deliberate explorations of the model. We also argue for deeper interrogations of contexts, structures, and cultures as critical aspects of entrepreneurial dynamics within the region (Frederick & Esnard, 2019).

In terms of practical interventions, the findings strengthen calls for greater explorations and use of entrepreneurial training opportunities with experimental learning. This training approach is heralded as a way to address attitudinal, social, and behavioral challenges embedded within promoting entrepreneurial action (Motta & Ribeiro Galina, 2023). These shaping of attitudes and mindsets represent a fundamental aspect of how we address the mismatch between behavioral patterns, change, and institutional contexts/settings (UNDP, 2022). Given the lack of research on entrepreneurial education in the region, more program evaluations and monitoring are needed to identify existing achievements and points for future intervention if we are to realize the goals within planned behaviour.

Limitations of the study

There were five major limitations of this study. Firstly, the data reflected the perceptions of the adult population cross-sectional survey which may or may not have included entrepreneurs. Relatedly, the survey limits our ability to make any causal inferences about the nature of the relationships between the variables in the model. Secondly, no analysis was done in terms of the type of businesses, sole trader, partnerships or conglomerate nor was analysis done by business size. Thirdly, there were major discrepancies between the conceptualization of key concepts in the theory of planned behavior and that of the GEM model. These conceptual

differences also had implications for variations across related studies, as well as, between the use of the theory of planned behaviour as a social-cognitive model and that of the methods for the actual implementation of the survey. Fourthly, GEM data were not collected equally across the three countries. Jamaica had the most GEM report starting from 2005 to 2011. More recent reports have also been published in 2016 and 2021. Barbados had the least with reports for only 2011 and 2012. 2011 was the only year in which all three countries participated in the GEM survey.

CONCLUSION

The study sought to examine the status, variations, and determinants of entrepreneurial intentions across three Caribbean countries, namely, Barbados, Trinidad and Tobago and Jamaica. Cross country findings show that the predictors of entrepreneurial intentions across the three countries is complex with many variations in the levels and determinants. Collectively however, findings suggest that recognition of opportunity, skills, and country, had the highest yet low predictive value of all independent variables examined. When taken however, the model only explains ten percent of the variance obtained in reported levels of entrepreneurial intentions across the three countries. Ultimately, the findings point to deeper conceptual and methodological issues that require some rethinking and testing as part of advancing ongoing discussions about the utility of the model for predicting entrepreneurial intentions in the Caribbean. The study provides empirical support for more subjective and contextual analyses in testing and predicting of entrepreneurial intentions in the Caribbean.

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