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Entrepreneurial competence and commitment of smallholder farmers in Madagascar

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Abstract: Entrepreneurial Capital (EC) is a crucial driver of performance for smallholder famers which represents a major share of economic activity for many developing. This article examines the extent to which EC, in the form of interactions between entrepreneurial competence and entrepreneurial commitment, affects the performance of smallholder farmers in Madagascar, while taking into consideration the effects of their gender, age and level of education. The study context is the under-researched rural areas of the central region of Analamanga, which comprises of seven rural districts with a total of 139 municipalities, where a sample of 411 smallholder farmers are surveyed. The results reveal a positive relationship between entrepreneurial competencies (perceived capacity, perceived opportunity and role models) and entrepreneurial commitment (affective commitment) which together positively influence performance, while several demographic factors also play a significant role. Study implications relate to how increased EC may help local people in a developing country context improve their enterprise performance. Government is advised to encourage entrepreneurship in Madagascar by advancing the numerous factors involved in enhancing EC.

Keywords: entrepreneurial capital; entrepreneurial competence; entrepreneurial commitment; smallholder farmers; Madagascar; perceived capacity; perceived opportunity; role models; performance.

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Biographical notes: Boris Urban, as the Inaugural Chair in entrepreneurship at the University of Witwatersrand, is a Prolific Author and Scholar in entrepreneurship. To date, He has published over a 150 journal articles, case studies, and book chapters. He is an Editor of five books published by Oxford University Press, Pearson and Springer. Most articles appear in a wide range of peer-reviewed journals, where his work is noticeably recognised (h-index = 33; i-index = 100).

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1 Introduction

Entrepreneurial activity is not solely dependent on economic factors but also requires Entrepreneurial Capital (EC) which represents the entrepreneurs' ability to develop profit generating capabilities in the enterprise to ensure its sustainability (Dana and Morris, 2007; Erikson, 2002; Suriyankietkaew, 2019). EC is connected to entrepreneurial behaviour (Urban, 2020), is associated with innovation, and can increase employment growth (Rauch et al., 2005). The entrepreneurial ability to leverage resources under conditions of uncertainty has long been acknowledged as a critical entrepreneurial capability required in advancing the performance of the enterprise, specifically in a developing country context (Dana and Ratten, 2017; George et al., 2016; Shane and Venkataraman, 2000).

An important aspect of such performance is the capacity to create, test, and maintain adaptive capability (Urban, 2020), which resonates with the notion of EC, where human capital theorists maintain that knowledge in the form of capabilities and competencies increase abilities, which in turn increases sustainable entrepreneurial activity (Becker, 1964; Choudhury et al., 2021; Marvel et al., 2016; Suriyankietkaew, 2019; Unger et al., 2011). Consequently, the central focus of the study is on the literature of human capital and the notion of capitals insofar they contribute to entrepreneurial performance (Marvel et al., 2016; Unger et al., 2011). However, what seems to be missing from such works is that many scholars find that assessing EC is complicated and challenging, specifically in determining the right combination of EC elements required to enhance small and medium enterprise performance, principally in a developing country context (Dana, 2007; Dutta et al., 2021; Inkinen et al., 2017; Kuckertz et al., 2017; Urban, 2020).

The major, unaddressed puzzle, driving this article is to understand the significance of EC as a crucial driver of performance for smallholder famers which represents an essential share of activity for many developing countries (Arimany-Serrat et al., 2019; World Bank, 2016). This article addresses recent calls for research to empirically investigate a range of under-reported and emergent agribusiness matters in developing markets (Arimany-Serrat et al., 2019; Dana and Morris, 2007; Urban, 2020). Despite their key role in promoting food security across the globe, smallholder farmers feature among the poorest proportion of the world's active population (Han and Li, 2020). An estimate of half the world's starving population are smallholder farmers and about 75% of the hungry people in Africa (Dana and Morris, 2007; Harvey et al., 2014).

It is important to address this dilemma, since in order to advance more productive and better performing economic agriculture activity, smallholder farmers need to possess and efficiently utilise a synergistic set of resources and assets, including the necessary knowledge and competencies (Dutta et al., 2021). However, the problem in the majority developing countries, is that rural farmers on small landholdings have restricted capitals and competencies which limit the performance of their agricultural enterprises (Han and Li, 2020; World Bank, 2013). One of the major challenges confronting smallholder farmers in developing countries is the enhancement and advancement of their EC quotient, particularly among marginalised sectors of the population (Urban and Ratsimanetrimanana, 2015). Therefore, understanding the plight of smallholder farmers through the lens of EC is important when concerning when considering that the economy of Madagascar is a market economy with limited government intervention power and the pricing of goods and services are primarily guided by the variation and interconnection of the forces of supply and demand (Dayo et al., 2017; IMF, 2017).

Recognising this knowledge gap in research on EC presents an opportunity to empirically investigate how EC may potentially help local people in a developing country context to adapt and apply EC to their local settings and improve their enterprise performance and competitiveness. Consequently, the research purpose and subsequent research inquiry for this article is framed as: *To what extent does EC, in the form of interactions between entrepreneurial competence and entrepreneurial commitment, influence the performance of smallholder farmers in Madagascar, while taking into consideration the effects of their gender, age and level of education?*

Several key theoretical perspectives and empirical findings on EC inform the problem formulation of this study, where researchers emphasise the necessity to explore EC in the light of the context and heterogeneity of small enterprises, particularly from an emerging and developing market perspective (Jones et al., 2018; Zelekha and Dana, 2019). EC has been conceived as the multiplicative function of 'entrepreneurial competencies and entrepreneurial commitment which may be regarded as the present value of generated future entrepreneurial behaviour' (Erikson, 2002, p.278). Entrepreneurial Competence (ENTCOMP) is best comprehended as the combined ability to recognise and exploit opportunities while gathering and co-ordinating the required resources. While Entrepreneurial Commitment (ENTCOMT) indicates the 'emotional, intellectual and physical energy' displayed by the entrepreneur to secure the objectives of the enterprise (Erikson, 2002; Ulrich, 1998). Moreover, it has been argued in the literature that the manifestation of ENTCOMT devoid of the suitable levels of ENTCOMP is not useful, since human capital and accompanying entrepreneurial behaviour is pivotal for emerging enterprises (Erikson, 2002; Ulrich, 1998; Venter and Urban, 2015).

Additionally, when considering the heterogeneity of individuals in inimitable settings assuming distinctive behaviours to start and grow enterprises, understanding EC based on demographics is important (Bosma et al., 2020; Dana and Morris, 2007; George et al., 2016; Salamzadeh et al., 2014).

The article provides important contributions to the broader entrepreneurship literature and specifically to the research stream of agribusiness management in transition economies regarding sustainable development (Arimany-Serrat et al., 2019). By assessing the relationship between EC, by way of a 'multiplicative function between ENTCOMP and ENTCOMT, in terms of enterprise performance from a non-Western

perspective (Jones et al., 2018), this article drives the research stream of agribusiness management and agenda forward. Additionally, by focusing on smallholder farmers in Madagascar specifically in terms of how gender, age and level of education (Bosma et al., 2020) potentially influence the relationship between EC and performance, the article delivers a nuanced and more fine-grained empirical investigation (Dana and Dana, 2015), in an under- researched developing country context (Dana et al., 2018). It is anticipated that by 'generating theory that anticipates problem domains that will inform future thought and action, can help keep our theories not only vibrant but also relevant in a constantly changing landscape of organisational realities' (Corley and Gilia, 2011, p.25).

Conducting research on practical problems in developing countries provides an important contrition to the research stream of agribusiness management in these economies, since small enterprises often lack EC and subsequently underperform which makes them non-sustainable (Dana et al., 2018; Jones et al., 2018). In Madagascar, the agricultural sector occupies a significant function in both the economy and the culture of the country, with approximately 70% of the population occupied in farming endeavours and 64% of Malagasy people living in rural areas (Dayo et al., 2017; Harvey et al., 2014). Smallholder farmers represent approximately 82% of the rural population who live beneath the poverty threshold (Harvey et al., 2014; Moradi et al., 2020; Urban and Ratsimanetrimanana, 2015). Despite this involvement, most Malagasy smallholder farmers remain at the bottom of the pyramid and constitute 80% of the poorest proportion of the population, earning an average annual income as low as 328,200 MGA or 105 USD per year (Harvey et al., 2014; IMF, 2017). Despite this gloomy scenario, very few studies have investigated smallholder farmers in Madagascar from an entrepreneurship perspective (Urban and Ratsimanetrimanana, 2015). Harvey et al. (2014) examined the hazards associated with agricultural vulnerabilities and climate change confronting smallholder farmers in Madagascar, while Rakotobe et al. (2016) explored the approaches of smallholder farmers for surviving the effects that cyclones tend to have in Madagascar. Consequently, this article seeks to address these persisting issues by investigating the relationship between EC and enterprise performance of smallholder farmers in Analamanga's rural areas, a region localised in the central environs of Madagascar. This article conducts an original empirical examination into EC and interrogates the validity and reliability of these measures in a non-western, developing market context (Dana et al., 2018; Urban, 2020).

The article starts with an analysis of the study context and literature to support the study hypotheses. The research methods are described in terms of measuring instruments used and data collection. Following the statistical analyses results are interpreted and discussed. Several policy and practical implications are offered based on the findings and the paper ends by demarcating study limitations which serve as potential research routes.

2 Literature review

2.1 Madagascar: contextual understanding

Madagascar itself is an island located 400 km from Mozambique, off the south-east coast of Africa, in the Indian Ocean and is the 47th largest nation with a land area of 581,540 km^2, a water area of 5501 km^2 and a population of 24.92 million people

(World Bank, 2016). Analamanga, where the study takes place, is the most populous of the twenty-two regions of the Republic of Madagascar (Harvey et al., 2014; IMF, 2017).

Madagascar, a factor-driven economy, with a population of 26.3 million (2019), has a GDP per capita (2018; PPP, international $) (IMF) of 1.63 thousand, and is ranked relatively low in terms of the World Economic Forum Global Competitiveness Rankings (2019) where it was positioned 132/141 and in terms World Bank Starting a Business Rating (2019) 80/190 (Bosma et al., 2020; World Bank, 2016). Owing to the occurrence of frequent political crises, the country is struggling to show any consistent economic take-off, culminating towards a sustainable development. Political instability, especially when associated with a mass civil protest, has shown to decrease productivity, physical and human capital accumulation, worldwide (Rakotomanana et al., 2010). Some statistics even suggest that Madagascar is the single poorest country in Sub-Saharan Africa (IMF, 2017). Poverty, in Madagascar, is a rural phenomenon, affecting 82% of the rural population (Harvey et al., 2014). Smallholder farmers (farmers, usually living in rural areas and possessing less than 2 ha of land) comprise the largest group of workers in the country and similarly to in the rest of the world, most of them constitute the poorest proportion of the active population. There are around 450 to 500 million smallholder farmers' worldwide (Harvey et al., 2014). Smallholder farmers, in Madagascar however also face additional challenges with the recurrent manifestation of natural disasters, which is mostly reflected through the high cyclone rate in the country (Rakotobe et al., 2016).

While Madagascar has followed an urbanisation route, this has impoverished many rural areas where most of the population reside, and consequently, poverty alleviation and entrepreneurship projects are frequently advocated as relevant interventions for developing the Madagascan rural areas (Urban and Ratsimanetrimanana, 2015). For instance, Madagascar's development strategy on rural entrepreneurship was broadened, resulting in the creation of 1287 formal enterprises in 2018. Madagascar has a stable Total early-stage Entrepreneurial Activity (TEA) rate over the last three years: 21.8% in 2017, 20.7% in 2018 and 19.5% in 2019 (Bosma et al., 2020). Recognising the elevated levels of poverty facing smallholder farmers in Madagascar, prior studies have investigated the financial lives of smallholder farmers with the aim to provide recommendations on the types of assistance and services that can be implemented to help improve their lives (World Bank, 2016). Smallholder farmers are food growers who possess and work on less than 2 ha of land (Harvey et al., 2014). The smallholder farming business is a family-owned business whereby traditional cultivation techniques are transmitted from one generation to the next. In the present-day, there are an approximate number of 525 million smallholder farmers in the world, of which 33 million farms in Africa. Many practice this profession for survival reasons, as there is a shortage of more profitable opportunities for them to earn a living (World Bank, 2016). Smallholder farmers cultivate 12% of the world's agricultural land (Rakotobe et al., 2016; World Bank, 2016) and many are solely dependent on agricultural productivity for their survival (Harvey et al., 2014).

2.2 Entrepreneurial capital

The 'Resource Based Theory (RBT)' is a valuable lens into which the relative importance of 'capitals as resources' can be investigated (Grant, 1991). Understanding the nature of capitals relates to appreciating the heterogeneity and distinctive nature of resources, in the formation and exploitation of opportunities by individuals with distinctive characteristics (Alvarez et al., 2013). In drawing on RBT, scholars perceive entrepreneurs are the driving force of important decisions and entrepreneurial capitals and capabilities play a key role towards explaining entrepreneurial activity (Adedeji et al., 2020; Rauch et al., 2005). An established literature shows that entrepreneurial human capital provides several advantages to the entrepreneur in terms of imparting capabilities to discover and exploit new venture opportunities (Unger et al., 2011; Venter and Urban, 2015).

The conceptualisation of EC as succinctly formulated by Erikson (2002, p.285) is adopted for the purposes of this article: 'Entrepreneurial capital (PV) = Entrepreneurial competencies *x* Entrepreneurial commitment'. These two dimensions of EC are discussed separately to indicate their role in the study hypotheses, but in the first instance it is important to acknowledge the heterogeneous nature of individuals in terms of their quotient of EC, which may be grouped according to demographics (Venter and Urban, 2015). Such a perspective would characterise different type of entrepreneurial phenomenon (George et al., 2016; Shane and Venkataraman, 2000), according to differences in demographic factors, such as gender, age and educational levels (Bosma et al., 2020; Kolstad and Wiig, 2015).

Educational level: In all countries, an educated population with the requisite knowledge, skills and capacity for entrepreneurship has proven vital to driving competitiveness and performance of enterprises (Marvel et al., 2016; Unger et al., 2011). Moreover, it has been reported that entrepreneurs residing far away from educational institutions are usually not as well educated as their peers living closer to schools in urban areas (Kolstad and Wiig, 2015). Therefore, the number of profits generated by business owners dwelling in rural areas, where the number of schools is limited, is much lower than that enjoyed by those residing around cities (Kolstad and Wiig, 2015; Van der Sluis and Van Praag, 2008).

Gender: The role of gender as a demographic factor is often used to explain differences in entrepreneurial proclivity and behaviour (Brush and Greene, 2016). Bosma et al. (2020) and Cabrera and Mauricio (2017) identified how women face far larger hindrances when navigating the entrepreneurial process because of cultural biases (especially in developing countries), domestic responsibility and an absence of women entrepreneurial role models. Cabrera and Mauricio (2017) and Venter and Urban (2015) shown that women have different motivators and competencies when engaging in entrepreneurship, often relating to flexibility to allow for 'work-life balance' due to household responsibilities and their role as primary child caretakers.

Age: An individual's age is a crucial factor that significantly affects their intention to engage with entrepreneurial activity (Bosma et al., 2020). Different age groups have various levels of entrepreneurial activity with economies in all geographic regions show the highest entrepreneurship levels occurring among 25- to 34-year-olds (Bosma et al., 2020).

2.3 Entrepreneurial competencies (ENTCOMP)

In terms of ENTCOMP other researchers tend to perceive competence as a group of connected knowledge, attitude and skills that an individual possesses and uses to deliver a distinguished achievement in a particular area of responsibility (Erikson, 2002; Mathew and Rodrigues, 2019; Venter and Urban, 2015). In this regard ENTCOMP reflects the ability of an entrepreneur to recognise opportunities and mobilise all the necessary resources to exploit and explore them (Erikson, 2002). ENTCOMP in this sense is understood as the capacity of the entrepreneur to leverage a set of resources to perform a set of tasks or activities, where Lopa and Bose (2014) suggested there are six major components of ENTCOMP (opportunity, organising, relationship, strategic, commitment and conceptual competencies). Such conceptualisations and corresponding dimensions of ENTCOMP can be further broken down into entrepreneurial skills ('perceived capability and perceived opportunities) and entrepreneurial personality (less fear of failure and role models') (Barazandeh et al., 2015; Chen et al., 2001; Conroy, 2003; Nauta and Kokaly, 2001).

- Perceived capability is the entrepreneur's apprehension of their own ability to achieve entrepreneurial tasks.
- Perceived opportunities reflect individuals' awareness of the opportunities that they can exploit and explore as entrepreneurs.
- Less fear of failure relates to a reduced intention to avoid failure and the expected shame connected to it during evaluative situations.
- Role models refer to the individuals whose ability to inspire others through their behaviour is imitated by the entrepreneur.

Hypothesis 1: There is a positive relationship between entrepreneurial competencies (perceived capacity, perceived opportunity, less fear of failure and role models) and the performance of smallholder farmers, where demographics (gender, age and level of education) play a significant role.

2.4 Entrepreneurial commitment (ENTCOMT)

ENTCOMT is the capacity of an individual to relentlessly work until the successful establishment of their business into a dependable and a sustainable enterprise (Erikson, 2002). 'Endurance,' 'perseverance,' 'passion' and 'self-determination' are four words that have been highlighted by Tasnim et al. (2013) when describing commitment within the context of entrepreneurship. These researchers further maintain that ENTCOMT is an essential factor stimulating not only profitable venture performance, but also new venture establishments, new product development and internationalisation. In fact, Tasnim et al. (2013) suggested that entrepreneurial performance is a by-product of normative commitment, while affective commitment nourishes entrepreneurial passion and supports the overall business performance. Others who corroborate the positive relationship between ENTCOMT and business performance, in an emerging market context (Venter and Urban, 2015), have echoed similar observations. These scholars argued that the greater commitment entrepreneurs have, the more focused and consistent they are in refining strategies used and actions taken until they succeed. Accordingly,

commitment provides entrepreneurs with the freedom to act and ensures them to remain in control of their achievements (Allen and Meyer, 1990). ENTCOMT has been conceptualised in terms of the following constituents: 'normative commitment, affective commitment and continuance commitment' (Allen and Meyer, 1990; Tasnim and Singh, 2013; Yousef, 2017).

- Normative commitment relates to an individual's devotion to their organisation because of their feeling of responsibility.
- Affective commitment is an individual's devotion to their company based on desire.
- Continuance commitment indicates an individual's devotion to their company based on a feeling of need.

Hypothesis 2: There is a positive relationship between entrepreneurial commitment (normative commitment, affective commitment and continuance commitment) and the performance of smallholder farmers, where demographics (gender, age and level of education) play a significant role.

2.5 Multiplicative function between ENTCOMP and ENTCOMT

Based on the conceptualisation of EC, the continued and collective influence of ENTCOMP and ENTCOMT should match forthcoming entrepreneurial behaviour (Erikson, 2002). In this formulation the combined effects of ENTCOMP and ENTCOMT signify the ability to generate and exploit future opportunities where the relations between ENTCOMP and ENTCOMT is argued to be 'multiplicative, not an additive, one, as both components must be intensely existent for entrepreneurship to take place' (Erikson, 2002; Ulrich, 1998).

The 'present value' of entrepreneurial behaviour in terms of ENTCOMP and ENTCOMT is then conceivably the most significant capital resource of an enterprise which provides it with a competitive advantage (Alvarez et al., 2013; Erikson, 2002). Acknowledging such prior research highlighting the importance of the combined effects of ENTCOMP and ENTCOMT it is proposed, that:

Hypothesis 3: There is a positive relationship in terms of a multiplicative interaction between the entrepreneurial competencies and entrepreneurial commitment and the performance of smallholder farmers, where demographics (gender, age and level of education) play a significant role.

3 Research design

A 'cross-sectional research design' was used to collect primary data from respondents. The hypotheses were evaluated using multiple linear regressions for H1 and H2, while simple linear regression was used to evaluate H3 as it enabled the generation of *p*-values and effect size ratios.

The study unit of analysis was the individual smallholder farmer situated in Analamanga's rural areas in Madagascar, where primary data was collected at a particular point in time, through a structured questionnaire, conducted as an interview. It was deemed necessary to conduct 'face-to-face' interviews to collect data as the

Madagascan rural context has elevated levels of poverty and difficult conditions pertaining to collecting data via on-line sources as internet coverage is weak (Instat, 2014; Rakotobe et al., 2016; World Bank, 2016).

3.1 Sampling and data collection

The population consisted of 16,800 adult smallholder farmers in terms of the adult working-age population (18- to 64-years-old) following the 'Madagascan Household Permanent Survey' database (Instat, 2014). The sampling qualifying criteria was operationalised as individuals having and working on less than 2 ha of land (Harvey et al., 2014) and residing in the rural areas of the central region of Analamanga, which comprises of seven rural districts with a total of 139 municipalities recorder in this area (Instat, 2014).

The following sampling method was adopted to complement the scope of the area under investigation:

- *Step 1*: Initially a random selection of four rural districts (North, East, South, West), termed as the district sample was conducted (see Table 1).
- *Step 2*: In each district sample, a random selection of one municipality – termed as the municipality sample was conducted by applying the weight of the population of a specific municipality sample with regards to the total population of the overall municipality samples (see Table 1).
- *Step 3*: From each municipality sample, a random selection of *n* smallholder farmers was selected. Employing the underneath equation formula (Cooper and Schindler, 2011), the calculation of the minimum required sample size was based on the expressed as:

$$s = X^2 NP\left(1-P\right) \div d^2\left(N-1\right) + X^2 P(1-P)$$

- After examining the data for any omitted or incomprehensible data, a final sample size of 411 complete responses was obtained.

Table 1 List of district, district and municipality samples and population size

Location	*Districts*	*District samples*	*Municipality samples*	*Population size*
North	Anjozorobe A/rivo Avaradrano	Anjozorobe	Analaroa	3017
East	Manjakandriana Andramasina	Manjakandriana	Ambohibary	3206
South	A/rivo Atsimondrano	A/rivo Atsimondrano	Ampanefy	7190
West	Ankazobe Ambohidratrimo	Ambohidratrimo	Mahabo	3387
			Total population	16,800

Sources: Instat (2014) and World Bank (2016).

For data collection purposes, a team of five people (one supervisor and four interviewers) was organised. The team was responsible for assisting respondents to complete questionnaires in all district samples. The interviewers who conducted interviews over a three-week period controlled the survey, and ethical protocols ensured that the respondents were comfortable to be interviewed and that their responses were treated with confidentiality and anonymity. To facilitate data collection, at the start of the interview process, all the team members met in the central region of the regional location and then, from there, visited households and stopped by to conduct individual interviews, provided the households fulfilled the qualifying criteria of smallholder farmer. The survey was in English but was translated into the language of each of the three major ethnic groups surveyed. Subsequently 'a third party back-translated this version into English, so that in essence the survey instrument was subjected a double back-translation process' (Cooper and Schindler, 2011).

The sample characteristics revealed that 58.4% of the samples were female and 41.6% of male. With regards to the age, 47.4% of the samples were in the age category of between 20-years-old and 39-years-old, while 41.8% were in the age category of between 40-years-old and 59-years-old. In terms of educational level, 55% of the sample indicated secondary school education and above completed and 38.7% declared having a level of primary school completed.

3.2 Instrument

All the study measures reflected the conceptualisations as reviewed in the literature and all questions were measured on '7-point Likert scale in which 1 represented 'strongly disagree and 7 represented strongly agree' (Cooper and Schindler, 2011).

Demographic information was collected in terms of 'gender (male or female), age of respondent in terms of the following categories (18–20-years-old; 20–39-years-old; 40–59-years-old and 60–64-years-old); and level of education in terms of the following categories (no formal education; primary school completed; secondary school education and above completed)'.

As an Independent Variable (IV), ENTCOMP was measured in terms of the following dimensions as sourced from prior studies: Perceived capability scale (with 8 items) (Chen et al., 2001); Perceived opportunities scale (with 9 items) (Kuckertz et al., 2017); Fear of failure scale (with 5 items) (Conroy, 2003); Role models scale (with 9 items) (Nauta and Kokali, 2001).

The second IV, namely ENTCOMT was measured in terms of the following dimensions as sourced from prior studies: Normative commitment scale (with 5 items) (Allen and Meyer, 1990); Affective commitment scale (with 7 items) (Allen and Meyer, 1990); Continuance commitment scale (with 8 items) (Allen and Meyer, 1990).

In terms of the study Dependent Variable (DV), namely enterprise performance was measured with 6 items (Kanyua et al., 2015). See Table 2 for the full set of questions per study construct.

Table 2 EFA results: Factors with corresponding items and reliabilities

Scale	*Items*	*Cronbach's Alpha*	*MSA*	*Communality values*
Entrepreneurial Competence				
Factor 1: Perceived Capability (PC)	*PC1*: I will be able to achieve most of the goals that I set for myself	.96	.94	.71
	PC2: When facing difficult tasks, I am certain that I will accomplish them			.86
	PC3: In general, I believe that I can obtain outcomes that are important to me			.79
	*PC*4: I believe I can succeed to most any endeavour to which I set my mind			.86
	PC5: I will be able to successfully overcome many challenges			.80
	PC6: I am confident that I can perform effectively on many different tasks			.86
	PC7: Compared to other people, I can do most tasks very well			.67
	PC8: Even when things are tough, I can perform quite well			.78
Factor 2: Perceived Opportunity (PO)	*PO1*: I am always alert to business opportunities	.85	.74	.73
	PO2: I research potential markets to identify business opportunities			.69
	PO3: I search systematically for business opportunities			.81
	PO6: I have set up this business to pursue an opportunity I perceived			.67
	PO7: Based on a business opportunity I perceived, I have developed a new market			.75
Entrepreneurial Competence				
Factor 3: Less Fear of Failure (LFF)	*LFF1*: When I am failing, I am not afraid that I might not have enough talent	.79	.76	.73
	LFF2: When I am failing, it does not upset my plan for the future			.79
	LFF3: When I am not succeeding, people are still interested in me			.78
	LFF4: When I am failing, important others are not disappointed			.70
	LFF5: When I am failing, I do not worry about what others think about me			.73

Table 2 EFA results: Factors with corresponding items and reliabilities (continued)

Scale	*Items*	*Cronbach's Alpha*	*MSA*	*Communality values*
Factor 4: Role Models (RM)	*RM1*: There is someone I can count on if I need support when I make decisions in my farming business	.92	.85	.73
	RM2: There is someone who helps me to weigh the pros and cons of the decisions that I make in my farming business			.87
	RM3: There is someone who shows me how to get where I am going with my farming business			.90
	RM4: There is someone who tells or shows me general strategies to succeed in my farming business			.79
	RM5: There is someone I want to be like when running my farming business			.85
	RM6: There is someone particularly inspirational to me in the farming industry			.84
	RM7: In the farming business that I am pursuing, there is someone that I admire			.83
	RM8: I have a mentor in my farming business			.52
	RM9: I know of someone who has an achievement that I would like to pursue			.74
Entrepreneurial Commitment				
Factor 5: Normative Commitment (NC)	*NC1*: One of the major reasons I continue to work for my own business is loyalty is important and therefore a sense of moral obligation to remain	.92	.84	.74
	NC2: If I got another offer for a better job elsewhere, I would not feel it was right to leave my business			.80
	NC3: I was taught to believe in the value of remaining loyal to the business that you started			.71
	NC4: Things were better in the days when smallholder farmers remained in the farming business for most of their careers			.83
	NC5: I do not think that working anywhere else is more appealing			.74
Factor 6: Affective Commitment (AC)	*AC1*: I would be incredibly happy to spend the rest of my career in this business of mine	.92	.89	.71
	AC2: I enjoy discussing about my business with people outside it			.66
	AC3: This business' problems are my own			.58

Table 2 EFA results: Factors with corresponding items and reliabilities (continued)

Scale	*Items*	*Cronbach's Alpha*	*MSA*	*Communality values*
	AC4: I think I could not be easily attached to another organisation as I am to this business			.62
	AC5: My business is part of my family			.82
	AC6: I am feeling emotionally attached to my business			.80
	AC7: This business has a great deal of personal meaning for me			.78
Factor 7: Continuance Commitment (CC)	*CC1*: I am afraid of what might happen if I leave this business without having any other job alternative lined up	.93	.88	.56
	CC2: It would be extremely hard for me to stop this business right now even if I wanted to			.87
	CC3: Too much in my life would be disrupted if I decided to stop this business			.88
	CC4: It would be too costly for me to stop this business now			.92
	CC5: Right now, keeping running this business is a matter of necessity as much as desire			.90
	CC6: I feel that I have too few options to consider stopping this business			.85
	CC7: One of the few profound consequences of stopping this business would be the scarcity of available alternatives			.82
	CC8: One of the reasons why I keep running this business is that closing it would require considerable personal sacrifice – another professional activity may not match the overall benefits I have here			.66
Performance: Factor 8 (PFT)				
	PFT2: I have all the tools required to provide high quality products from my farming activity	.88	.74	.81
	PFT3: My farm is large enough to produce profit			.78
	PFT6: I can and I do feed my crops/animals well for them to be healthy and produce high quality products			.83

4 Results

4.1 Instrument validity and reliability

'Exploratory Factor Analysis (EFA) was employed to evaluate the validity of the constructs using the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy and the Bartlett's Test of Sphericity.' This procedure was deemed appropriate considering that no specific hypotheses were constructed about the nature of the underlying factor structure of their measure, and the point was to extract a factor structure from the data in a South African country context, rather than to evaluate if a factor structure fits the data (Cooper and Schindler, 2011). The KMO for across the constructs was 0.941, with an approx. Chi-Square = 3719.55 (df = 28), which is higher than the minimum and desired value of 0.6, and the Bartlett's test of sphericity was significant (0.001). The value of the communalities for each construct item was more than the minimum requirement of 0.50 which indicates that there was no need to remove any of them from the composition of the scale (Cooper and Schindler, 2011).

'Principal Axis Factoring with the Promax with Kaiser Normalisation Rotation Method' converged in five iterations on eight clear factors – see Table 1. However, the perceived opportunity scale, as a dimension of ENTCOMP, showed a corrected item-total correlation related to each item as strong (>.30), apart from one item which showed a weak Corrected Item-Total Correlation of .20 and was subsequently removed from this scale. The commonalities after extraction demonstrated that all the study items yielded communality values higher than the minimum required value of 0.3. Therefore, it was established that there was 30% of variance related to each of the items which implies that there is common variance shared by the retained factors (Cooper and Schindler, 2011).

Divergent validity was also confirmed as all the items that did not belong to the same constructs and did indeed load on varied factors. These factors explained 85.11% of variance in the initial items. The scree plot (not shown) showed the generated factors with their eigenvalues which were all above the required value of above 1.0.

Cronbach's Alpha was computed for each construct to assess the reliability of the scales and the calculation output shows that all the factors had excellent reliability scores (Nunnally and Bernstein, 1994), see Table 2. Since all the constructs had a Cronbach's alpha value greater than 0.7 (some were higher than 0.9 which is regarded as excellent) this implies that items within the constructs can be added together to compute a composite score for each factor. The composite scores per factor were calculated by determining the average of the items within a factor.

4.2 Descriptives and correlations

Descriptive statistics and Pearson's correlation coefficients were calculated for each construct. The mean scores indicated above the scale (1–7) midpoint averages with highest mean score for 'Perceived Opportunity (PO)' = 5.99) to the lowest mean score obtained for **'**Role Models (RM)' = 3.67). All these constructs showed high standard deviation scores (>1.00).

The correlation output illustrated several positive and significant inter-correlations between the factors, which extended between (r = 0.417, p-value > 0.001) and (r = 0.192, p-value > 0.05).

Furthermore, collinearity diagnostics showed comparatively 'low variance proportions' among the study constructs and when deciphered in combination with 'collinearity statistics they revealed Variable Inflation Factor (VIF) values of >1, deemed as acceptable' (Cooper and Schindler, 2011).

4.3 Hypotheses testing

For H1 the following equation was formulated:

$$PFT = b0 + \beta 1PC + \beta 2PO + \beta 3LFF + \beta 4RM + \varepsilon i$$

where b0 = the intercept or constant; β_1 = the regression weight of perceived capability, predictor of performance; β_2 = the regression weight of perceived opportunity, predictor of performance; $\beta 3$ = the regression weight of less fear for failure, predictor of performance; $\beta 4$= the regression weight of role models, predictor of performance.

Table 2 shows the results of the regression analyses for H1. Regarding the overall sample, it was observed that in terms the overall construct as well as for perceived capability, perceived opportunity and role models as dimensions of ENTCOMP do have a significant correlation with the DV, apart from less fear of failure which was non-significant. This means, three of the four dimensions of ENTCOMP are considerably correlated to the DV, where ENTCOMP has a partially significant relationship with the DV – performance (F (4406) = 62.90, p<.001; $b0$= –1.28, p=.01; $\beta 1$=.45, p<.001; $\beta 2$=.43, p<.001; $\beta 3$= –.02, p=.84, $\beta 4$=.14, p=.02).

In terms of the breakdown by demographics for H1, it was observed that neither for the female group (F(4235) = 30.13, p<.001; b0= –1.26, p=.05; $\beta 1$=.44, p<.001; $\beta 2$=.40, p<.001; $\beta 3$= –.01, p=.89, $\beta 4$=.13, p=.08) nor for the male group (F(4166) = 31.52, p<.001; $b0$= –1.22, p=.11; $\beta 1$=.46, p<.001; $\beta 2$=.46, p<.001; $\beta 3$= –.04, p=.73, $\beta 4$=.13, p=.15), did the less fear of failure and role model dimensions have a significant relationship with performance. The same observation is valid for the 'between 20 and 39 age group. However in terms of the between 40 and 59 age (F(4167) = 26.77, p<.001; $b0$= –1.58, p=.03; $\beta 1$=.35, p<.001; $\beta 2$=.51, p<.001; $\beta 3$= –.00, p=.99, $\beta 4$=.23, p=.02), as well as the secondary educational and above completed category (F(4221) = 27.44, p<.001; $b0$= –1.03, p=.11; $\beta 1$=.38, p<.001; $\beta 2$=.37, p<.001; $\beta 3$= –.00, p=.97, $\beta 4$=.16, p=.05), significant findings were revealed across constructs for ENTCOMP apart from the less fear of failure dimension. These results provide partial support for H1.

For H2 the following equation was formulated:

$$PFT = b0 + \beta 1NC + \beta 2AC + \beta 3CC + \varepsilon i$$

where b0 = the intercept or constant; $\beta 1$= the regression weight of normative commitment, predictor of performance; $\beta 2$= the regression weight of affective commitment, predictor of performance; $\beta 3$= the regression weight of continuance commitment, predictor of performance.

Table 3 shows the results of the regression analyses for H2. With respect to the overall sample, it was observed that the overall ENTCOMT construct as well as the affective commitment dimension have a significant correlation with performance, while the normative and continuance commitment show a non-significant result. Therefore, it can be advanced that the ENTCOMT construct in its entirety has a partially significant relationship with the DV (F(3407) = 39.91, p<.001; b0= –.48, p=.17; $\beta 1$=.08, p=.06; $\beta 2$=.10, p<.001; $\beta 3$= –.08, p=.08). These results provide partial support for H2.

Table 3 Relationship between entrepreneurial competence and performance in terms of demographic variables (H1)

Demographics	*Change Statistics*				*Main effect*										*Effect size*			*% of variance explained*
					b values					*p values*								
	F	*df1*	*df2*	*Sig.*	*b0 (Intercept)*	*PC*	*PO*	*LFF*	*RM*	*Intercept*	*PC*	*PO*	*LFF*	*RM*	*R2AB*	*R2A*	*f2*	
Gender																		
Female	30.13	4	235	<.001	−1.26	.44	.40	.01	.13	.05	<.001	<.001	.89	.08	.34	0	.52	33.9%
Male	31.52	4	166	<.001	−1.22	.46	.46	−.04	.13	.11	<.001	<.001	.73	.15	.43	0	.75	43.2%
Age																		
Between 20 and 39	33.36	4	190	<.001	−1.14	.51	.38	−.03	.10	.11	<.001	<.001	.76	.23	.41	0	.69	41.3%
Between 40 and 59	26.77	4	167	<.001	−1.58	.35	.51	.00	.23	.03	.001	<.001	.99	.02	.39	0	.64	39.1%
Level of education																		
Primary	29.18	4	154	<.001	−1.93	.50	.50	.05	.10	.02	<.001	<.001	.64	.27	.43	0	.75	43.1%
Secondary and above	27.44	4	221	<.001	−1.03	.38	.37	−.00	.16	.11	<.001	<.001	.97	.05	.33	0		33.2%
Overall Sample	62.90	4	406	<.001	−1.28	.45	.43	−.02	.14	.01	<.001	<.001	.84	.02	.38	0	.61	38.3%

In terms of the breakdown by demographics for H2, it was observed that for the female group ($F(3236) = 33.25$, $p<.001$; b0= –1.62, $p=.004$; $\beta 1=.16$, $p=.11$; $\beta 2=.65$, $p<.001$; $\beta 3= -.07$, $p=.46$), neither the normative commitment dimension nor the continuance commitment had a significant relationship with the DV. The same observation is valid for both the secondary education completed and above category ($F(3222) = 16.40$, $p<.001$; b0=.29, $p=.63$; $\beta 1=.14$, $p=.25$; $\beta 2=.56$, $p<.001$; $\beta 3= -.16$, $p=.10$) and the between 20 and 39 age group ($F(3191) = 17.35$, $p<.001$; b0= –.09, $p=.89$; $\beta 1=.13$, $p=.25$; $\beta 2=.63$, $p<.001$; $\beta 3= -.14$, $p=.21$). However, for the male group the relationship between affective commitment and performance was significantly positive ($\beta 2=.76$, $p<.001$), but the relationship between continuance commitment and performance was negative ($\beta 3= -.44$, $p=.001$).

For hypothesis 3 the following equation was formulated:

$$PFT = b0 + \beta 1EC + \varepsilon i$$

where $b0$ = the intercept or constant; $\beta 1$= the regression weight of entrepreneurial capital, predictor of performance.

Table 4 shows the results of the regression analyses for H3. For the overall sample, the multiplicative interaction between ENTCOMP and ENTCOMT has a significant relationship with the DV ($F(1409) = 91.97$, $p<.001$; $b0= -.05$, $p=.86$; $\beta 1=.01$, $p<.001$). Considering the breakdown by demographics, the same result was observed for both the female ($F(1238) = 133.62$, $p<.001$; $b0= -.14$, $p=.66$; $\beta 1=.01$, $p<.001$) and the male group ($F(1169) = 56.42$, $p<.001$; $b0=.39$, $p=.39$; $\beta 1=.01$, $p<.001$), as well as for the between 20 and 39 age group ($F(1193) = 84.47$, $p<.001$; $b0=.21$, $p=.57$; $\beta 1=.01$, $p<.001$), the between 40 and 59 age group ($F(1170) = 88.37$, $p<.001$; $b0=-.09$, $p=.82$; $\beta 1=.01$, $p<.001$), the primary education category ($F(1157) = 91.97$, $p<.001$; $b0= -.57$, $p=.24$; $\beta 1=.01$, $p<.001$) and the secondary and above education category ($F(1224) = 78.92$, $p<.001$; $b0=.51$, $p=.12$; $\beta 1=.01$, $p<.001$). These results provide support for H3.

5 Discussion

This article adds to the entrepreneurship literature by analysing EC in terms of the interactions between entrepreneurial competence and entrepreneurial commitment, as they influence the performance of smallholder farmers. In addition, by conducting the study in a less researched country context, Madagascar, the importance of how gender, age and level of education influence the association between ENTCOMP and ENTCOMT and performance is revealed. Understanding EC in terms of its constituent dimensions since demographics is important, as distinctions in explanations of the same situations are often due to differences demographic factors.

For H1 where a positive relationship between entrepreneurial competencies (perceived capacity, perceived opportunity, less fear of failure and role models) and the performance of smallholder farmers was predicted it is interesting to note that apart from the construct ‘less fear of failure’, the other constituents of ENTCOMP in terms of perceived capability, perceived opportunity and role models were positively and significantly found to influence performance. These positive findings reflect the ability of an entrepreneur to recognise opportunities and mobilise all the necessary skills to exploit and explore opportunities (Erikson, 2002).

Table 4 Relationship between entrepreneurial commitment and performance in terms of demographic variables (H2)

Demographics	*Change Statistics*				*Main effect*								*Effect size*			*% of variance explained*
					b values				*p values*							
	F	*df1*	*df2*	*Sig.*	*b0 (Intercept)*	*NC*	*AC*	*CC*	*Intercept*	*NC*	*AC*	*CC*	*R2AB*	*R2A*	*f2*	
Gender																
Female	33.25	3	236	<.001	−1.62	.16	.65	.07	.004	.11	<.001	.46	.30	0	.43	29.7%
Male	12.00	3	167	<.001	.84	.17	.76	−.44	.32	.23	<.001	.001	.18	0	.22	17.7%
Age																
Between 20 and 39	17.35	3	191	<.001	−.09	.13	.63	−.14	.89	.25	<.001	.21	.21	0	.27	21.4%
Between 40 and 59	19.72	3	168	<.001	−1.10	.28	.74	−.21	.16	.04	<.001	.10	.26	0	.35	26%
Level of education																
Primary	18.98	3	155	<.001	−1.85	.31	.81	−.16	.05	.02	<.001	.27	.27	0	.37	26;9%
Secondary and above	16.40	3	222	<.001	.29	.14	.56	−.16	.63	.25	<.001	.10	.18	0	.22	18.1%
Overall Sample	39.91	3	407	<.001	0	.16	.71	−.14	.18	.06	<.001	.08	.29	0	.41	28.6%

Table 5 Relationship between entrepreneurial capital and performance in terms of demographic variables (H3)

Demographics	*Change Statistics*				*Main effect*				*Effect size*			*% of variance explained*
					b values		*p values*					
	F	*df1*	*df2*	*Sig.*	*b0 (Intercept)*	*EC*	*Intercept*	*EC*	*R2AB*	*R2A*	*f2*	
Gender												
Female	133.62	1	238	<.001	−.14	.01	.66	<.001	.36	0	.56	36%
Male	56.42	1	169	<.001	.39	.01	.39	<.001	.25	0	.33	25%
Age												
Between 20 and 39	84.47	1	193	<.001	.21	.01	.57	<.001	.30	0	.43	30.4%
Between 40 and 59	88.37	1	170	<.001	−.09	.01	.82	<.001	.34	0	.52	34.2%
Level of education												
Primary	91.97	1	157	<.001	−.57	.01	.24	<.001	.37	0	.59	36.9%
Secondary and above	78.92	1	224	<.001	.51	.01	.12	<.001	.26	0	.35	26.1%
Overall Sample	188.20	1	409	<.001	.05	.01	.86	<.001	.32	0	.47	31.5%

However, the finding that 'less fear of failure,' is not a significant predictor of performance is somewhat of an anomaly when considering prior research proposes that this construct is significantly correlated to enterprise profitability and performance. In this regard, fear of failure can have both an inhibiting and a motivating effect on entrepreneurial behaviour. Such different behavioural responses could provide a plausible explanation as to why the less fear of failure dimension was not a significant factor of performance in the present study. Culturally, Malagasy people regard fear as a sign of weakness that should be silenced, for if exhibited, it attests an individual's incapacity to survive alone in a visible and an invisible world, perceived as belligerent (Rahajarizafy, 2011). This is corroborated by old adages, like '*Mitaintaina toy ny saobakaka ambodirihana*,' which describes *how shameful it is to be fearful like a frog about to fall, against the edge of a balcony* (Rahajarizafy, 2011). Being compared to 'a frog' is not viewed as flattery in Madagascar. When considering ancient dicta, the population traditionally perceives the amphibians as witless and grisly (Rahajarizafy, 2011). Correspondingly, smallholder farmers would tend to repress their fear of failure in such a way that they would not have to act on it, hence its insignificant relationship with performance.

In terms of H2, where a significant relationship between entrepreneurial commitment (normative commitment, affective commitment, and continuance commitment) and performance was predicted, the overall ENTCOMT construct as well as the affective commitment dimension showed a significant correlation with performance, while the normative and continuance commitment showed a non-significant result. These results which suggest that entrepreneurial performance is a by-product of normative commitment, while affective commitment nourishes entrepreneurial passion and supports the business. Accordingly, affective commitment provides entrepreneurs with the freedom to act and ensures them to remain in control of their achievements because of their devotion to their enterprise (Tasnim and Singh, 2013; Yousef, 2017). Moreover, the present study findings reveal that among the 20-years-old and 39-years-old age group, the affective commitment dimension is positively correlated to the performance of smallholder farmers in Analamanga's rural areas. Another interesting facet of these findings is the observed negative relationship between normative and continuance commitment and performance. The rationale for this could be found in the high status attributed to men in the Malagasy society and possibly when downgraded to a lower social status such as that of a necessity entrepreneur - expressed through continuance commitment (Yousef, 2017) but where these individuals also become subject to a vicious cycle of social exclusion which hampers their enterprise performance levels (Salamzadeh et al., 2013).

For H3, where a significant relationship amongst the interaction between ENTCOMT, ENTCOMT and performance was predicted, overall significant positive results were obtained. These findings validate Erikson's (2002) assertion that EC positively influence enterprise performance and complement the multiplicative aspect of the relationship between ENTCOMP and ENTCOMT. Furthermore, the present findings additionally reveal that in terms of demographics, for both the male and female groups, EC is positively related to the performance of smallholder farmers in Analamanga's rural areas. In terms of age, it was found that among the 20-years-old and 39-years-old and the 40-years-old and 59-years-old groups, EC was positively associated to the performance of smallholder farmers. Lastly, among both the primary school and the secondary school and above educational levels, EC was deemed to be a significant determinant of performance.

At this juncture, the results from the present study are compared with other similar studies to indicate the contribution to theory on the broader entrepreneurship competence and commitment literature and specifically to the research stream of agribusiness management in emerging economies regarding sustainable development (Arimany-Serrat et al., 2019). Specific studies were selected which used similar components of entrepreneurship competence and commitment and are illustrative of the relationships which exist between these components and performance as predicted in the present study hypotheses. In this respect the study results compare favourably with Tasnim et al. (2013) findings who indicate that entrepreneurial performance is a by-product of normative commitment, while affective commitment nourishes entrepreneurial passion and supports the business. Other researchers also report that a higher level of affective commitment provides entrepreneurs with the freedom to act and ensures them to remain in control of their achievements because of their devotion to their enterprise (Yousef, 2017). Consequently, in the present study, a theoretical contribution is evident insofar the affective commitment dimension showed a significant correlation with performance, while additionally it was revealed that among the 20-years-old and 39-years-old age group, the affective commitment dimension is positively correlated to the performance of smallholder farmers in Analamanga's rural areas.

Similarly, the findings from the present study compare favourable to Barazandeh et al.'s (2015) study, insofar a positive relationship between entrepreneurial competencies (perceived capacity, perceived opportunity and role models) and the performance of smallholder farmers was positively and significantly found to influence performance. Barazandeh et al.'s study results are based on GEM data gathered on 125 cases which was selected from 59 member countries. These results showed how the positive effect of entrepreneurial competencies on business performance was supported by the data and results revealed that there is a positive effect between entrepreneurial social norms on entrepreneurs' competencies which conforms the mediating role of entrepreneurial competencies. Furthermore, researchers also demonstrate the role of resources and firm capabilities in the international entrepreneurship literature (Ratten et al., 2007). Notwithstanding these prior research findings, the present study extends the current theoretical domain by highlighting the positive and significant interaction between entrepreneurship competence and commitment on performance, as well as the influence of demographic factors on this relationship as related to the performance of smallholder farmers. Interrogating existing theories which are situated in novel emerging market contexts is useful so that important topics, such as the one under investigation is contextually detailed and specific. For this reason, the theoretical contribution this article makes is valuable as it has the potential to inform future action and offers insights into a non-western context as pertains to the realities of smallholder farmers in the agricultural sector in Madagascar.

6 Conclusions and implications

This article has made an important empirical contribution to the domain of entrepreneurship in the Madagascan context. Several empirically authenticated recommendations are offered based on the study findings. In general, overcoming rural poverty, which is an area of high concern among Malagasy decision makers and socio-economic development actors, the performance of smallholder farmers as a function of

EC appears to be a germane solution to this ongoing dilemma. Therefore, at a strategic level, Malagasy decision makers should re-evaluate their policies and are advised to provide research-based training programmes and services that pay attention to the development of smallholder farmers' perceived capability, perceived opportunities, role model environment and their levels of affective commitment. In this manner key policymakers could integrate EC as a multiplicative relationship between ENTCOMP and ENTCOMT, into one unified framework, while understanding which individual level differences influence this relationship. Implications for government boosting entrepreneurship in Madagascar, suggest that they must recognise the intricacy of the numerous factors involved in enhancing EC where each factor should be granted its due deliberation. In summary, the interaction between ENTCOMP and ENTCOMT needs to be discussed more methodically by referring to empirical works such as this study.

In terms of study limitations, as with most cross-sectional studies, this design prevents causation to be ascribed to the relationships between the study constructs under investigation. Future research may benefit by employing a longitudinal research design and relying on observation and interviews that could contribute to providing a richer understanding of EC and performance. Another limitation of the study was the reliance on a wide definition of performance and future research could focus on more specific components of performance. Ongoing studies could develop various combinations of ENTCOMP and ENTCOMT arrangements to see which groupings yield the highest level of performance. Furthermore, there is a need to better understand how EC is harmonised with elements of social capital, such as networking which has much relevance in fostering entrepreneurial activity in a developing country context. Lastly, forthcoming research might investigate additional factors such as country specific variables in developing countries where there is a prevalence of informal institutional environments.

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