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## **Entrepreneurial motivation and entrepreneurial leadership of entrepreneurs: evidence from the formal and informal economies**

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**Abstract:** Micro, small and medium enterprises (MSMEs) have played a pivotal role in the economy of developing countries. Intriguingly, only a small fraction of MSMEs are legally registered as formal enterprises, and they typically lack entrepreneurial management. Our paper is to test the influence of formality status on entrepreneurial motivation and leadership among active entrepreneurs. To gather data, we surveyed formal and informal entrepreneurs in East Java, Indonesia. Our results show that formal entrepreneurs score higher in all dimensions of the entrepreneurial motivation variable compared to informal entrepreneurs, except for desire for wealth. Yet, only entrepreneurial opportunity is statistically significant among all the entrepreneurial motivation dimensions. Furthermore, while informal entrepreneurs seem to accept more risk and have higher achievement than their counterpart in the formal sector, this does not apply to the other dimensions of entrepreneurial leadership. For this variable, only proactive behaviour is significantly different from zero.

**Keywords:** micro; small and medium enterprises; MSMEs; entrepreneurial motivation; entrepreneurial leadership; formal economies; informal economies.

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**Biographical notes:** Retno Ardianti is a Lecturer at Petra Christian University. She has published papers in national and international peer-reviewed publications on topics such as SMEs survival, microfinance, business performance, and entrepreneurship education. She is the co-author of a book on SMEs profile in Surabaya, Indonesia. Her current research focuses on small business development and innovation in Indonesia.

Ingrid is a Lecturer at Petra Christian University. She is interested in program evaluation with main focus on impact evaluation, public economics, political economics, economics of entrepreneurship, and development economics. Her articles have been published in peer-reviewed journals and book chapters.

## 1 Introduction

Micro, small and medium enterprises (MSMEs) have traditionally become the key drivers of economic development. Entrepreneurial activities of MSMEs will boost innovation and facilitate resource allocation. They are also able to create a lot of employment opportunities to local communities, especially in rural areas, since MSMEs mainly engage in domestic economic activities which in turn promote economic growth. In developing countries, however, these business entities are characterised by a high degree of informality with only a small fraction of MSMEs are legally registered as formal enterprises. High levels of red tape and tax compliance costs as well as inflexibility in the formal labour market are considered as the major explanations of this informality (Mourougane, 2012).

Against the above backgrounds, several interesting questions emerge. First, what underlies the establishment of new businesses? Second, what kind of leadership qualities associated with successful entrepreneurs? Third, do they vary among formal and informal economy entrepreneurs? The purpose of this study is to provide new empirical evidence to these issues. Indeed, the growing interest in incorporating the informal sector into analysis has appeared after a seminal publication by Williams (2007). According his marginalisation thesis, people who undertake entrepreneurial activities in the informal sector are those marginalised from the formal economy and consider these as a last resort necessity-driven.

The novelty of our work is our comprehensive measure of the individual characteristics, representing both entrepreneurial motivation and the capability in leading ventures (i.e., entrepreneurial leadership qualities). Basically, our model of entrepreneurial motivation is based on Shane et al. (2003) who believe that entrepreneurship is as a continuing process. In line with Maslow, they argue that the transition of individuals from one stage of the entrepreneurial process to another is determined by human motivation, known as entrepreneurial motivation. We are aware that entrepreneurs in the third world have been challenged to provide sufficient resources to finance their new enterprises. We also address this issue and extend our model by the inclusion of resources availability construct (Morales-Gualdrón et al., 2009). Borrowing from Fernald et al. (2005), we build our entrepreneurial leadership model from characteristics that are associated with successful entrepreneurs and leaders, that is, able to motivate, visionary, pro-activeness, innovativeness, risk taking, achievement orientation, and persistence.

The setting of the study is East Java Province, Indonesia. East Java has continued to play a pivotal role in the Indonesian economy. East Java's economy has been the second largest contributor to the national economy, with an annual contribution of above 15% per year over the last five years. East Java's GDP growth has also been consistently higher than the national level during the same period. Manufacturing and trade, hotel and restaurant industries were two sectors that dominated East Java's economy in 2014, accounting for 28.90% and 17.24%, respectively. Nevertheless, the share of agriculture was still in-negligible, contributing for approximately 13.73% of the provincial GDP (Badan Pusat Statistik Provinsi Jawa Timur, 2015). Importantly, more than half of East Java's GDP (over 54%) was generated by the value added of MSMEs between 2011 and 2012. It is not a surprise to many that only a small number of these MSMEs were run with formal registration (Dinas Koperasi dan UMKM Provinsi Jawa Timur, 2014).

The rest of the paper is structured as follows. Section 2 reviews the relevant literature. Section 3 gives a brief overview of MSMEs and the informal sector in East Java. Section 4 highlights the data and the used methodology. Section 5 presents the main findings. The final section is a discussion and concludes.

## **2 Literature review**

### *2.1 Informal economy entrepreneurs*

Although there is no specific definition or measure of the informal economy, it is typically defined as economic activities and transactions that are sufficiently hidden (Andrews et al., 2011). The actors in informal economy operate in a shadowy zone in producing legal goods and services without registering their economic activities to government authorities (Bruton et al., 2012). Further, Webb et al. (2009) explain the illegality and legitimacy in informal economy. This is because the economy contains activities which recognise and exploit opportunities outside formal institutional boundaries, but within informal institutional boundaries. For example, an entrepreneur in this type of economy, may employ undocumented workers to produce legal and legitimate products. In this study, we define informal entrepreneurs as individuals who act as owners and managers of businesses that actively engage in the production and sales of goods and services that are legitimate but not yet registered upon any government bodies. This definition includes business organisations of any size, from micro, small, and medium enterprises.

To date, a large volume of studies aimed to explain factors that motivate an individual to become entrepreneurs have been published. However, few studies which explain the motives of informal economy entrepreneurs from those that have been published. Williams (2007) explains that the study of the motives of informal economy entrepreneurs has been dominated by what he calls as the ‘marginalisation thesis’ which assumes that entrepreneurs in the informal sector are largely those marginalised from the formal economy and engage in any endeavour out of economic necessity, and as a last resort when no available options are available to them.

Recent studies have viewed informal economy entrepreneurs from a very different perspective such as neo-liberal and structuralist perspectives (Williams and Nadin, 2012). The neo-liberal perspective looks at the participation in the informal entrepreneurship as voluntarily, chosen by entrepreneurs who view taxes as too high and government regulations as hindering entrepreneurship. On the other side, the structuralist perspective considers that the informal entrepreneurship as a direct outcome of under regulations rather than over-regulations (Adom and Williams, 2012; Williams and Nadin, 2012). Andrews et al. (2011) define the informal economy as an economy consisting of heterogeneous markets with different groups of actors that engage in many different informal activities, for many different reasons and at varying levels of income.

### *2.2 Entrepreneurial leadership*

Entrepreneurs may also serve as the leaders in their business organisations. In doing their businesses, entrepreneurs must lead their venture to survive in the market. The term

entrepreneurial leadership then comes, which is derived from entrepreneurship and leadership fields. Entrepreneurial leadership is defined as leadership that creates visionary scenarios that are used to assemble and mobilise 'a supporting cast' of participants who become committed by the vision to the discovery and exploitation of strategic value creations (Gupta et al., 2004). Entrepreneurial leadership can also be viewed as leading through direct involvements, a process that creates a value for organisational stakeholders by bringing together innovation and resources to respond on a recognised opportunity (Darling et al., 2007).

Until now, research on entrepreneurial leadership is in its very initial phases of conceptual and theoretical progress (Ahmed and Ramzan, 2013). Previous studies in this topic have discussed some important aspects of entrepreneurial leaders, such as the concept of entrepreneurial leader (Vecchio, 2003; Van Zyl and Mathur-Helm, 2007; Kuratko, 2007; Ahmed and Ramzan, 2013) and the characteristics of entrepreneurial leader (Chen, 2007; Fernald et al., 2005; Kansikas, et al., 2012; Nicholson, 1998; Santora et al., 1999).

Entrepreneurial leaders can operate within the context of large organisations as well as in founder-driven organisations (Darling et al., 2007). Instead of relying on organizational hierarchical chain of command and control in leading, entrepreneurial leadership is based on individual skills, such as the ability to achieve goals innovatively and to gather the required resources [Skodvin and Andresen (2006) in Kansikas et al. (2012)]. This reveals that even in the smallest business venture, entrepreneurial leadership skills are needed to support the success of the venture.

Leaders with entrepreneurial skills and characteristics may possess what it takes to become an entrepreneurial leader (Kansikas et al., 2012). Chen (2007) identifies that risk-taking, pro-activeness, and innovativeness characterise entrepreneurial leadership, while one study from Fernald et al. (2005) identifies that risk-taker, achievement-orientated, and creativity as the most highly cited characteristics among entrepreneurs. Further, visionary, ability to motivate, charismatic, ability to communicate, honesty and trustworthy are found as the most highly cited characteristics among leaders. A model that specifies the personal characteristics that are common to both entrepreneurs and leaders are then developed, and it is so-called entrepreneurial leadership.

### *2.3 Entrepreneurial motivation*

Motivation has been traditionally studied in order to answer three main questions: what activates a person, what makes an individual chooses one behaviour over another, and why do different people respond differently to the same motivational stimuli. [Schumpeter (1934) in Carsrud and Brännback (2011)]. Shane et al. (2003) build a model of entrepreneurial motivation that views entrepreneurship as a process. The model begins with the set of human motivation (i.e., need for achievement, locus of control, desire for independence, passion, and drive). Some or all of these motivating factors will later influence the transition of individuals from one stage of the entrepreneurial process to another. This model explains that entrepreneurship is a process that begins with the recognition of an entrepreneurial opportunity which will then followed by the development of ideas to pursue the opportunity that would end up with the execution of the ideas.

Morales-Gualdrón et al. (2009) also propose a model for the study of entrepreneurial motivation in academia. This model comprises of six major groups or motivational

dimensions which are personal (i.e., need for achievement, need for independence, and desire for wealth), opportunity, scientific knowledge, the availability of resources to create business, incubator organisation, and to the social environment.

### **3 An overview of MSMEs and informal economy entrepreneurs in East Java**

As of the entire Indonesia, histories, cultures, government policies, and stages of economic development also provide noticeable explanations for the advancement of entrepreneurial activities among MSMEs in East Java.

During the colonial era, the Dutch controlled banks and large-scale enterprises. While ethnic Chinese were originally merchants, they subsequently highly involved in a wide range of small businesses. In contrast, the majority of indigenous Indonesians, known as *pribumis*, were farmers even though some owned small businesses. After gaining its independence on 17 August 1945, authoritarian governments dominated political landscapes of Indonesia until 1998. During this period, political elites along with their family members and cronies enjoyed large business concessions from the corrupt governments. Besides, to encourage entrepreneurship among *pribumis*, the government launched a series of policy instruments that loosened credit terms and the conditions for obtaining business permits and licences to this group instead of their Chinese counterparts. Yet, the onset of the Asian Financial Crisis in 1997–1998 and its unintended impacts on the economy further slashed the share of Chinese's entrepreneurial activity in Indonesia (Dana, 1999).

The Indonesian economic geography is also markedly unique because spatial diversity in resource endowments and policies which in turn determine the local development outcomes. Over time, the national economic activity has been highly concentrated in Java Island with the three big Java provinces (i.e., Jakarta, East Java, and West Java) account for almost half of the national GDP. East Java's GDP itself has constituted more than 15% of Indonesia's GDP with relatively higher economic growth rates over the last five years. Apart from agriculture, the economy of this province has been heavily dependent on manufacturing and trade, hotel and restaurant industries. While the former contributed 13.73% of the provincial GDP in 2014, the share of the latter sectors was 28.90% and 17.24% (Badan Pusat Statistik Provinsi Jawa Timur, 2015). Thanks to the contributions of local MSMEs which were able to generate the total value added about 54% in 2011–2012 (Dinas Koperasi dan UMKM Provinsi Jawa Timur, 2014).

According to a census conducted by the Central Bureau of Statistics (BPS) of East Java in 2012, the number of MSMEs in this province was 6,533,694 units or just 12.07% of the country's total MSMEs. Micro-enterprises accounted more than 6.5 million units or constituted over 95% of the total number of establishments. This figure was followed by small and medium-enterprises, showing values of 261,827 units (3.84%) and 30,410 units (0.05%). Interestingly, the majority of these establishments engaged in the informal sector (Pemerintah Provinsi Jawa Timur, 2014).

Furthermore, it is revealed that the distribution of MSMEs is varied by economic sectors. MSMEs in agriculture controlled 60.25% of total establishments in 2012. The second largest sector was the trade, hotel, and restaurant industry with slightly more than

25% of total MSMEs. Manufacturing was in the third place, occupying about 5.21% of total enterprises. In accordance with these findings, the employment share in agriculture was also the highest among the other sectors. Overall, the agricultural sector absorbed over half of total employment in MSMEs (56.54%). While the level of the employment in trade, hotel, and restaurant was above one quarter (25.11%), manufacturing only employed less than 10% of the total workforce (Table 1).

**Table 1** Number of MSMEs and contribution to employment in East Java, 2012

<i>Sector</i>	<i>Number of enterprises</i>		<i>Number of employees</i>	
	$\Sigma$	%	$\Sigma$	%
Agriculture	4,112,443	60.2474	6,286,111	56.5428
Mining and quarrying	26,680	0.3909	45,658	0.4107
Manufacturing	356,047	5.2161	944,599	8.4966
Electricity, gas, and water supply	12	0.0002	28	0.0003
Construction	16,789	0.2460	42,691	0.3840
Trade, hotel, and restaurant	1,720,042	25.1986	2,791,426	25.1085
Transport and communication	174,541	2.5570	231,825	2.0852
Finance, rent, and business services	8,035	0.1177	35,653	0.3207
Services	411,342	6.0262	739,448	6.6512
Total	6,825,931	100	11,117,439	100

*Source:* Pemerintah Provinsi Jawa Timur (2014)

The informal economy should be understood as a result of a nation's business structure that largely involves migrant workers (Rezaei et al., 2013). In Indonesia, migrant workers in urban areas usually come from agricultural workers. These workers are attracted by the opportunities to obtain higher income in urban regions. Many of these migrant workers are then engage in informal economic activities by working as street vendors or employees of home industries, working in food stalls or many kinds of small kiosks offering retail goods or repair services. These are all the jobs that typically do not require high skills or high education levels which can lead to rural migrants to survive in the cities (Badan Perencanaan Pembangunan Nasional, 2009).

## 4 Sample and methodology

### 4.1 Sample

To gather data, we distributed a questionnaire to 120 formal entrepreneurs and 88 informal entrepreneurs in East Java. The selection of the sample is on the basis of two criteria. First, the respondent has to be the owner/leader of an establishment that has 1–19 employees. In other words, we follow the definition of micro and small enterprises of the Indonesian Central Bureau of Statistics (BPS). We then group them as formal entrepreneurs if their establishments are registered, and they are considered as informal entrepreneurs if they own or manage unregistered establishments. Second, the establishment must have been operated for at least one year.

**Table 2** Summary statistics

<i>Variable</i>	<i>Formal</i>	<i>Informal</i>
Age (%)		
< 25	13.30	22.70
25–35	32.50	25.00
36–45	15.00	21.60
46–55	24.20	22.70
> 55	15.00	8.00
Female (%)	26.70	47.70
Married (%)	71.70	63.60
Education (%)		
Elementary school	0.80	4.50
High school	48.30	48.90
University	49.20	44.30
Work experience (%)		
All	43.30	39.80
Relevant	57.50	44.30
Entrepreneurial networks (%)		
Having a business (in the past)	95.00	98.90
Having a business (current)	92.50	94.30
Working hours (%)		
< 12	13.30	11.40
12–24	13.30	23.90
25–36	13.30	15.90
> 36	13.30	15.90
Years of business operations (years)	13.97	9.72
Industrial sectors (%)		
Agriculture, forestry, and fishing	1.67	1.14
Manufacturing	15.00	27.29
Retail trade	77.50	68.18
Other services	5.83	3.42
Observations	120	88

Table 2 shows key characteristics of the respondents and their establishments based on their entrepreneurial status. Looking at their age groups, nearly half (50%) of all formal and informal entrepreneurs are considered as young adult entrepreneurs. Although there is no clear difference in marital status between the two groups, the proportion of women in the informal economy is much higher than in the formal economy (47.70% versus 26.70%). Most of them have attained at least lower secondary education. While 49.20% of formal entrepreneurs have completed their tertiary education, only 44.30% of informal entrepreneurs have finished their university degrees. It should also be noted that over one-third of formal and informal entrepreneurs have prior work experience before

operating their current establishments. Both formal and informal entrepreneurs (43.30% against 39.80%) reported that they had any type of work experience and higher proportions of these groups said to have relevant work experience.

Interestingly, Table 2 also reveals that almost all the respondents interviewed (above 90%) have family members, including extended family members who have ever or are being engaged in any entrepreneurial activities. This gives strong *prima facie* evidence about the role of social networks in providing information and resources and thereby shaping the intention to start a business. Moreover, it can be seen that informal entrepreneurs tend to work longer hours than their formal entrepreneur counterparts. The most striking difference is in the second group (12–24 hours per week) as the number of informal entrepreneurs who reported to have this working time is 10.60% larger than the other group of entrepreneurs.

The other important distinction comes from the duration of business operations. On average, registered establishments take part in business for a longer period of time (13.97 years) compared with unregistered establishments (9.72 years). The survey also highlights that the two establishment groups commonly enter the retail trade sector, especially eating and drinking places. This sector accounts for over two-thirds of the industrial sectors, 77.50% for registered establishments and 68.18% for unregistered establishments respectively. Surprisingly, the share of the primary sector in the formal and informal businesses is very small (1.67% and 1.14%).

#### *4.2 Measures of entrepreneurial motivation and leadership*

Our structured questionnaire made use of a five-point Likert scale ranging from 1=strongly disagree to 5 = strongly agree to measure our two latent variables, that is, entrepreneurial motivation and entrepreneurial leadership. Following Shane et al. (2003) and Morales-Gualdrón et al. (2009), the construct of entrepreneurial motivation was measured by eight dimensions: need for achievement (3 items), desire for wealth (2 items), locus of control (2 items), need for independence (2 items), passion (3 items), self-efficacy (2 items), opportunity (3 items), and resource availability (2 items). As for entrepreneurial leadership, we adopted the common characteristics among entrepreneurs and leaders as proposed by Fernald et al. (2005): ability to motivate (2), visionary (3), pro-activeness (4), innovativeness (2), risk-taking (2), achievement oriented (3), and persistence (4).

#### *4.3 Data analysis*

We performed a confirmatory factor analysis (CFA) framework based on structural equation modelling (SEM) to assess the reliability and validity of our measures. In our case, the use of SEM gives two main advantages. First, the method is powerful in comparing the hypothesised model to the data because it provides comprehensive information on fit-statistics. If the fit is acceptable, the hypothetical relationship between latent and observed variables as well as the dependencies among the latent variables themselves is considered to be supported by the empirical data. Second, the method addresses the problem of measurement errors as a result of the estimation of the relationships among the variables. Because we are also interested in examining whether there are any significant differences between formal and informal entrepreneurs in terms



of their motivations and leadership practices, we carried on our analysis by running SEM-based testing for group mean differences on latent variables in the final stage.

## 5 Results

### 5.1 *The assessment of the fit of the models*

SEM does not have a single best statistical test to measure the overall model fit. A model fit can be determined by evaluating absolute and relative indices as presented in Table 2. We computed five absolute goodness-of-fit indices ( $\chi^2$ ,  $\chi^2/df$ , RMSEA, GFI, and RMR) and three relative goodness-of-fit indices (NFI, CFI, and IFI). The examination of the overall model fit indicates that the proposed models of entrepreneurial motivation and leadership are able to fit the data reasonably good. Among the eight criteria, there are only the chi-square (goodness-of-fit statistic and the Bentler-Bonett normed fit index (NFI) that fail to reach the required thresholds. However, it should be noted that these indices are sensitive to sample size since they are not adjusted for the degree of freedom (df). Therefore, if the sample size is considerably large such as in this current study (N = 208), the  $\chi^2$  fit index tends to result in significant values even though there are small differences between the model and the data. On the other hand, the NFI is more likely to overestimate the model fit with larger sample sizes.

**Table 3** The goodness of fit of the models

<i>Model</i>	$\chi^2$	<i>df</i>	<i>p-value</i>	$\chi^2/df$	<i>RMSEA</i>	<i>RMR</i>	<i>GFI</i>	<i>NFI</i>	<i>IFI</i>	<i>CFI</i>
Entrepreneurial motivation (EM)	187.10	136	0.002	1.376	0.042	0.033	0.91	0.89	0.97	0.97
Entrepreneurial leadership (EL)	200.30	158	0.013	1.268	0.032	0.025	0.92	0.87	0.97	0.97
Recommended value			> 0.05	≤ 2	≤ 0.05	≤ 0.05	≥ 0.9	≥ 0.9	≥ 0.9	≥ 0.9

### 5.2 *The assessment of the measurement models*

We evaluate our measurement models through reliability and validity tests. Internal consistency reliability was assessed by calculating Cronbach’s alpha. It is suggested a value of 0.70 as the lowest limit to indicate that the measurement scales of the constructs are stable and internally consistent. The Cronbach’s alpha values for the constructs under study are given in Tables 4 and 5. The reliability coefficient for each construct is greater than 0.7, indicating an acceptable degree of reliability.

The validity of the entrepreneurial motivation and leadership scales was verified by way of construct validity. Specifically, it consists of the examination to convergent validity and discriminant validity. We start the convergent validity tests by examining the factor loadings along with their statistical significance. All standardised factor loadings obtained from the analysis are greater than 0.5 (ranging from 0.57 to 0.97) and the t-values for the coefficients are significant at the 5% level (Tables 4 and 5). These results thus point to good convergent validity.

**Table 4** Internal consistency and construct validity of entrepreneurial motivation

<i>Latent variable</i>	<i>Items</i>	<i>Cronbach's alpha</i>	<i>Standardised factor loading</i>	<i>t-value</i>	<i>p-value</i>	<i>Construct reliability (CR)</i>
Need for achievement	ACH1	0.732	0.69			0.845
	ACH2		0.77	8.38	< 0.001	
	ACH3		0.64	7.50	< 0.001	
Desire for wealth	WLTH1	0.799	0.74			0.960
	WLTH2		0.92	8.66	< 0.001	
Locus of control	LOC1	0.710	0.77			0.895
	LOC2		0.72	4.90	< 0.001	
Independence	IND1	0.715	0.82			0.900
	IND2		0.64	4.44	< 0.001	
Passion	PASS1	0.736	0.65			0.770
	PASS2		0.63	6.98	< 0.001	
	PASS3		0.64	7.06	< 0.001	
Self-efficacy	EFF1	0.871	0.89			0.982
	EFF2		0.87	14.07	< 0.001	
Opportunity	OPP1	0.809	0.71			0.915
	OPP2		0.81	9.60	< 0.001	
	OPP3		0.79	9.68	< 0.001	
Resource availability	SRC1	0.728	0.97			0.922
	SRC2		0.69	4.75	< 0.001	

**Table 5** Internal consistency and construct validity of entrepreneurial leadership

<i>Latent variable</i>	<i>Items</i>	<i>Cronbach's alpha</i>	<i>Standardised factor loading</i>	<i>t-value</i>	<i>p-value</i>	<i>Construct reliability (CR)</i>
Able to motivate	MTV1	0.732	0.63			0.839
	MTV2		0.75	6.06	< 0.001	
Visionary	VSN1	0.756	0.61			0.790
	VSN2		0.62	7.94	< 0.001	
	VSN3		0.78	5.73	< 0.001	
Pro-activeness	PRO1	0.745	0.63			0.727
	PRO2		0.58	6.14	< 0.001	
	PRO3		0.61	6.36	< 0.001	
	PRO4		0.67	6.87	< 0.001	
Innovativeness	INV1	0.767	0.70			0.752
	INV2		0.57	4.00	< 0.001	
Risk-taking	RISK1	0.884	0.85			0.985
	RISK2		0.93	9.45	< 0.001	

**Table 5** Internal consistency and construct validity of entrepreneurial leadership (continued)

<i>Latent variable</i>	<i>Items</i>	<i>Cronbach's alpha</i>	<i>Standardised factor loading</i>	<i>t-value</i>	<i>p-value</i>	<i>Construct reliability (CR)</i>
Achievement oriented	ACH1	0.786	0.60			0.790
	ACH2		0.75	6.55	< 0.001	
	ACH3		0.62	6.24	< 0.001	
Persistence	PRST1	0.811	0.73			0.842
	PRST2		0.76	9.07	< 0.001	
	PRST3		0.66	8.12	< 0.001	
	PRST4		0.63	7.78	< 0.001	

The next verification involves testing the construct reliability (CR) which explains the consistency of a set of latent indicators in measuring its construct. The rule of thumb for sufficient convergent validity is a CR value of 0.7 or higher. Tables 4 and 5 show the estimated values of CR are between 0.727 and 0.985. These findings further bolster the convergent validity of our models.

Finally, the examination of discriminant validity was conducted by comparing the average variances extracted (AVEs) measures with the bivariate correlations. Discriminant validity is proven if all of AVE estimates are larger than the corresponding correlation coefficient. As can be seen from Tables 6 and 7, the estimated values of AVE are higher than the correlations shown below them or to their left, implying good discriminant validity.

**Table 6** Discriminant validity of entrepreneurial motivation

<i>Latent variable</i>	<i>Need for achievement</i>	<i>Desire for wealth</i>	<i>Locus of control</i>	<i>Independence</i>	<i>Passion</i>	<i>Self-efficacy</i>	<i>Opportunity</i>	<i>Resource availability</i>
Need for achievement	0.493							
Desire for wealth	0.476**	0.695						
Locus of control	0.251**	0.322**	0.555					
Independence	0.256**	0.308**	0.399**	0.573				
Passion	0.377**	0.422**	0.303**	0.353**	0.418			
Self-efficacy	0.485**	0.460**	0.242**	0.270**	0.401**	0.774		
Opportunity	0.250**	0.139*	0.230**	0.053	0.291**	0.278**	0.590	
Resource availability	0.237**	0.205*	0.072	0.012	0.362**	0.333**	0.256**	0.628

Notes: AVEs are shown on diagonal. Correlation coefficients shown are bivariate correlations.

\*p < 0.05, \*\*p < 0.01 (two-tailed).

**Table 7** Discriminant validity of entrepreneurial leadership

Latent variable	Able to motivate	Visionary	Pro-activeness	Innovativeness	Risk-taking	Achievement oriented	Persistence
Able to motivate	0.489						
Visionary	0.403**	0.454					
Pro-activeness	0.365**	0.330**	0.386				
Innovativeness	0.186**	0.240**	0.316**	0.407			
Risk-taking	0.296**	0.199**	0.346**	0.132	0.793		
Achievement oriented	0.314**	0.284**	0.281**	0.207**	0.335**	0.439	
Persistence	0.335**	0.299**	0.399**	0.281**	0.394**	0.411**	0.489

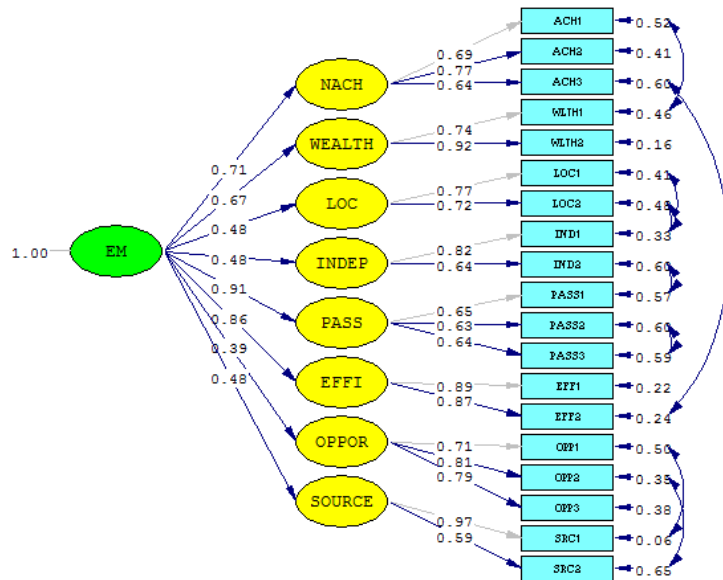
Notes: AVEs are shown on diagonal. Correlation coefficients shown are bivariate correlations.

\*p < 0.05, \*\*p < 0.01 (two-tailed).

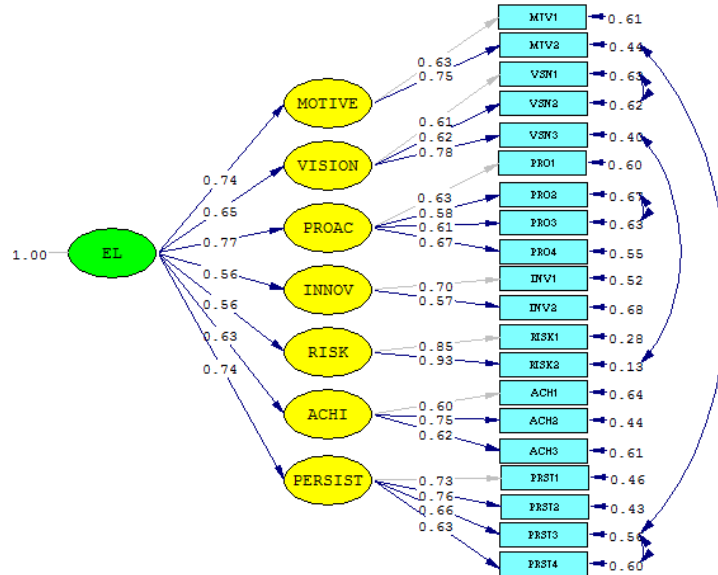
### 5.3 Latent mean differentials between formal and informal entrepreneurs

We present the final models of entrepreneurial motivation and leadership in Figures 1 and 2 respectively. Utilising these frameworks, we investigate differences in the two aforementioned variables between formal and informal entrepreneurs. We calculated the latent mean difference of the dimensions of entrepreneurial motivation and leadership.

**Figure 1** The CFA model of entrepreneurial motivation (see online version for colours)



**Figure 2** The CFA model of entrepreneurial leadership (see online version for colours)



**Table 8** Latent mean differences between formal and informal entrepreneurs

Latent variable	Coefficient	SE	t-value
<i>Entrepreneurial motivation</i>			
Need for achievement	0.05	(0.10)	0.49
Desire for wealth	-0.00	(0.10)	-0.04
Locus of control	0.10	(0.10)	1.03
Independence	0.08	(0.10)	0.81
Passion	0.05	(0.07)	0.68
Self-efficacy	0.08	(0.10)	0.77
Opportunity	0.20	(0.08)	2.38*
Resource availability	0.12	(0.10)	1.23
<i>Entrepreneurial leadership</i>			
Able to motivate	0.02	(0.07)	0.22
Visionary	0.01	(0.09)	0.06
Pro-activeness	0.15	(0.07)	2.20*
Innovativeness	0.02	(0.11)	0.17
Risk-taking	-0.02	(0.10)	-0.16
Achievement oriented	-0.06	(0.06)	-0.93
Persistence	0.10	(0.08)	1.36

Note: \*p < 0.05, \*\*p < 0.01 (two-tailed).

Overall, formal entrepreneurs score higher in all dimensions of the entrepreneurial motivation variable when compared to informal entrepreneurs, except for the dimension of the desire for wealth. Yet, only the entrepreneurial opportunity is statistically

significant at the 5% level, and it is shown that formal entrepreneurs have a score that is 0.20 points above informal entrepreneurs. Turning to the entrepreneurial leadership variable, the dimensions of risk-taking and achievement oriented result in higher values for informal entrepreneurs than their informal entrepreneur counterparts, whereas these conclusions do not apply to the rest of the dimensions. Among these dimensions, only the construct of pro-active behaviour is statistically as well as economically significant. Pro-activeness is also 0.15 points higher among formal than informal entrepreneurs (Table 8).

## **6 Discussion and conclusions**

We show that people who involve in establishing formal and informal business ventures share nearly the same personal characteristics. Our exercises demonstrate that pro-activeness is the characteristic that differentiates leadership qualities between formal and informal economy entrepreneurs. Prieto (2010) argues that people with proactive personality may be more inclined to mobilising resources and gaining commitment required for value creations that the entrepreneurial leader faces. Further, he adds that more pro-active people may have a greater desire to become entrepreneurial leaders in order to help their firm to create value. In this study, formal entrepreneurs have higher pro-activeness score compared to their informal economy counterparts. This implies that in a dynamic business world, formal economy entrepreneurs have shown to have more initiative and better response to face changes in the business environment.

This study also finds that opportunity as the only characteristic that is able to distinguish between entrepreneurs who engage in the informal and formal sectors. Kirzner (1973) and Shane and Venkataraman (2000) in Ireland et al. (2003) explain that the ability to recognise opportunity may vary to every individual. Only a certain population will recognise a given entrepreneurial opportunity. Further, they explain that entrepreneurial opportunities exist because of information asymmetries through which different actors develop separate beliefs regarding the relative value of resources as well as the potential future value of those resources following their transformation from inputs into outputs (Shane and Venkataraman, 2000). This result is once again support the classical view of informal economy entrepreneurs as more on the necessity-based than the opportunity-based. This study reveals that opportunity to build new products, new business, and entering a new market are still not recognisable by these informal economy entrepreneurs.

In addition, the empirical evidence also indicates that the desire for wealth is once again found to be the top motivators for both entrepreneurs. This present findings from Indonesia seem to be consistent with other research from many different countries that the desire to increase income as the top motivator of becoming entrepreneurs.

Our results lead us to several public policy implications. First, we highlight the need to increase the individual capacity of informal entrepreneurs. The lack of capability to respond to an opportunity, to create new products and services, and to expand to the new market shows their inability to think and respond entrepreneurially. Second, given they still run micro and small businesses, we argue that they have to cope with the limitations of business resources. When the informal sector is still often viewed as 'an incubator' for business potential, continuous development policy in supporting informal economy

entrepreneurs should be directed to increase their capacity in expanding their entrepreneurial ventures.

To date, the Government of Indonesia has implemented policies to foster the growth of formal small and medium enterprises, such as the simplification of registration procedures to allow shorter time for business registrations, simplification of tax payment systems, wider access to micro lending and other supportive policies. Nonetheless, as Andrews et al. (2011) argue that from a policy perspective, it is important to understand the exact nature of informality, as the policies shaping its different types may differ considerably; our research has proven that creating a supporting business environment is important but still not enough. Some initiatives to build strong individual capacities to think and act entrepreneurially are very essential to support every individual with entrepreneurial intention to recognise opportunity, develop ideas, and execute ideas into formal business establishment.

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