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## IMPACT OF ENTREPRENEURIAL CHARACTERISTICS ON CREDIT ACCESSIBILITY: CASE STUDY OF SMALL BUSINESSES IN WEST SUMATERA – INDONESIA\*

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**Abstract.** Currently, the studies on entrepreneurial characteristics do not distinguish the business scales, while different scales of businesses, i.e. small, medium to large scales have their own characteristics. The purpose of this research was to determine whether business performance mediates the impact of entrepreneurial characteristics on accessing credit at small-scale business. In this study, a total of 221 questionnaires was distributed to the respondents of small enterprises entrepreneurs in West Sumatera Province, Indonesia using the method of the purposive random sampling. The hypotheses were tested using survey data from small enterprises that had obtained bank loan. For data analysis, the Structural Equation Model (SEM) was used. Based on the study results, the entrepreneurial characteristics positively affect the business performance, which then positively affects the chances of access to the credit. Ultimately, it was proven that entrepreneurial characteristics affect the access to credit. The research finding highlights the important of the role of business performance in mediating the effect of entrepreneurial characteristics on credit access. Therefore, it is recommended that there should be a strategy to strengthen the entrepreneurial characteristics to improve the small business performance. In addition, the entrepreneurs are recommended to develop and maintain a strong entrepreneurial characteristics.

**Keywords:** entrepreneurial characteristics; business performance; small business; credit access

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## **1. Introduction**

Small enterprises in Indonesia are still constrained with the limitations in operating their business, such as lack of capital, the poor quality of human resources, lack of access to the market and the limitation in skills and technology. However, the major constraints they are encountering are mostly lacks of capital. A small business is economically productive, having the assets of a maximum of IDR 50 - 500 million excluding land and building, or annual sales of IDR 300 million - 2.5 billion (Micro Small Medium Enterprises (MSME) regulation in Indonesia (Ministry of Cooperation, Small and Medium Enterprises Regulation No. 20 years 2008). Other definition is provided by the Indonesian Central Bureau of Statistics (2018) that small business is classified as those which have 5 – 19 workforces. In this research, the concept of small business is classified by Regulation No. 20, 2008 based on the asset and sales and according to the Central Bureau of Statistics based on the number of workforces.

The limitation of capital and difficulties in accessing the source of funding are becoming a major problem for small business. Similarly, Lekhanya (2016) found the same result that the lack of finance become the obstacles for rural small medium enterprises to survive and to grow in South Africa. Likewise, in India, access to finance is widely perceived as an essential factor for firms, and especially to maintain their daily business operation and to achieve long term investment opportunities and development target (Biswas, 2014). Even in Algeria, financial constraints are high for both small medium enterprises (SME) and large firms (Bouazza, Ardjouman & Abada, 2015). According to BI & LPPI (2015), of 57 billion unit of micro small medium enterprises (MSMEs) in Indonesia, only 30% has the ability to access finance. Out of the percentage, 76.1% earned credits from banks, and the rest earned credit from non-bank. It means that in Indonesia, 60 – 70% of MSMEs have no access to the banks credit. Although finance from banks is a great financial source, they have difficulties to fulfill the bank requirements for obtaining the loan.

The business performance becomes the consideration for banks to provide lending. However, lack of the business information or financial statement of the small businesses made the banks have to find other indicators to measure the business performance. Therefore, the requirements of credit should reflect the capability of business or their performance as the first criterion for selection. Such information can usually be seen from the financial statements which are published to the public; yet, small enterprises can hardly provide it because of some limitations in their resources. Even, they do not have financial statements at all.

Some factors influence the small business owners to acquire loan from banks. Oladele, Oloowokere & Akinruwa (2014), revealed that there was a connection between available financial source and the owners of small medium enterprises and their business performance. Meanwhile, the business performance is influenced by internal and external factors (Munizu, 2010; Nicolescu, 2009). In other words, there is a correlation between business performance and the access to credit. The successful business owners will tend to convince that they have the ability to repay the loans.

This study examined the relationships between entrepreneurial characteristics, business performance and credit access at small business in West Sumatera, Indonesia. The study used combination of two dimensions of entrepreneurial characteristics, i.e. demography characteristics and entrepreneurial orientation. According to Setyawan et al. (2015), entrepreneurs as human resources have important role in managing the business. The model of hypothesis study was developed and tested using Structural Equation Model (SEM). Furthermore, this paper does not only testify the effect of entrepreneurial characteristics on the access to credit, the effects of entrepreneurial characteristics on business performance, but it also tests this mechanism works through analysis on the mediating effect of business performance. It is expected that the study finding proposes some strategies to strengthen the small enterprises abilities to access the banks credit.

## **2. Literature Review**

### *2.1. Entrepreneurial characteristics*

Entrepreneurial characteristics are the possession of certain personalities that expose an individual toward entrepreneurial behavior (Westhead, 2011). Meanwhile, Fatoki & Asah (2011) stated that entrepreneurial characteristics are the traits or attributes that are specific to the owner of the firm which can influence on the performance of the firm negatively or positively. According to Islam et al. (2011), the entrepreneur characteristics referred to demographic characteristics, individual characteristics, personal traits, entrepreneur orientation and entrepreneur readiness. Fatoki & Asah (2011) stated that according to Lumpkin & Dess (2001), the concept of entrepreneurial orientation consists of five dimensions: autonomy, innovativeness, risk taking, pro-activeness and competitive aggressiveness. In this study, only demographic characteristics and entrepreneur orientation were used to explain the entrepreneur characteristics (Wekesa et al., 2016; Islam et al., 2011; Fatoki & Asah, 2011).

### *2.2. Business performance*

Business or firm performance refers to its success in the market, which may have different outcome (Islam et al., 2011). Wheelen and Hunger (2015) noted that the performance of a business is the final result of empowering resources through efficient and effective strategies. The same description was given by Adebisi et al. (2015) that the performance is the ability of a business to use resources effectively. Meanwhile, Lingensiya (2012) explained that performance is the ability of a business to use its own resources in competition and its readiness to face external pressure, including globalization. According to Adebisi et al. (2015), the performance of a business can be expressed by financial and non-financial means. The same opinion was stated by Lingensiya (2012) that business performance can be measured by financial and non-financial means. Harash et al. (2014) in their research noted that business performance were indicated by (1) financial performance, (2) market performance and (3) the level of return to the shareholder. Based on the previous research, in this research the dimension of business performance were financial measures (capital, profit, sales) and non-financial measures (market) (Adebisi et al., 2015; Harash et al., 2014). There are four dimensions of the performance variables that are growth of capital, sales, profit growth and market (Adebisi et al., 2015; Harash et al., 2014).

### *2.3. Credit access*

Access to credit is defined as the ease of small business which can secure financial assistance or loans from lending institutions (Kitili, 2012). Another definition of access to finance is provided by Claessens & Tzioumis (2006). It refers to the availability of supply of quality financial services at a reasonable cost. According to Kira and He (2012), credit access is the ability to get credit for financing business. The other explanation was given by Nakinyingi (2010) that the access to credit is if there is no restriction related to cost administration or procedure from financing institution that they intend to propose for credit. It has two dimensions, i.e. the number and frequency of credit received. Akudugu et al. (2009) emphasized that access to credit is the situation where individuals have the rights to make decisions related to the allocation in the short term and repay according to the schedule and interest rate committed. Credit access can be stated as the ability and the will of the owner/manager of business to obtain credit (Ogubazhi & Muturi, 2014), and also the ability of the company to obtain and use financial services which can be used according to the need (Claessens, 2006). In the present study, two dimensions were used to explain the access to credit variable, such as the amount and frequency of credit received (Nakinyingi, 2010; Nkundabanyanga et al., 2014).

### *2.4. Relationship between entrepreneurial characteristics and business performance*

Based on the findings from previous studies, entrepreneurial characteristics had a significantly positive effect on the business performance (Islam et al., 2011; Ganyaupyu, 2013; Mothibi, 2015; Wekesa et al., 2016; Garg & Phaahla, 2019) and determined the success of business. According to Garg and Phaahla (2018), entrepreneurship relates to an entrepreneur's specific activity in decision making process. Meanwhile, according to Islam et al. (2011), the entrepreneur's characteristics can be classified into demographic and individual characteristics,

personal trait, entrepreneur orientation, and entrepreneur readiness. Then, Islam et al. (2011) pointed out that the entrepreneurs' characteristics have positive and significant effects on the business success in SMEs at Bangladesh. Therefore, a small business owner have to have clear mission and strategy about their business. Furthermore, building a strong social network and having good government relationship becomes significantly important. Furthermore, this study applied demographic characteristics and entrepreneur orientation as variable indicators for entrepreneurial characteristics. Therefore, only relationship between entrepreneur characteristics (demographic characteristics & entrepreneurial orientation) and business performance will be discussed in this paragraph). According to Soomoro, Abdelwahed & Shah (2019), demographic characteristics of entrepreneur consisting of gender, age, education and experience have a positive and significant role to raise the entrepreneurs in Pakistan. This finding is supported by Ganyaupfu (2013) and Mothibi (2015).

Moreover, according to Lucas (2017), entrepreneur's level of education has a positive effect on the business performance since it enhances the entrepreneurs' self-confidence and self-efficacy and finally improves business management. Also, Indarti & Langenberg (2004) stated that education level of the business owner has a significant relationship to the business success. Educational background of the entrepreneurs influenced their learning process, understanding and analyzing the business condition quickly. According to Peter & Musyitha (2015), the education level of an entrepreneur influences the business performance. Educated entrepreneurs will have the ability to manage their businesses and make financial statement to develop their businesses. In addition, educated entrepreneurs will also have the ability to be self-learning. Nyoni & Bonga (2018) recommended that entrepreneurship education should be promoted to improve the business performance. They argued about the need of formal education as important resources for entrepreneurs because it will give good technical knowledge to identify business opportunities. Essel, Adam & Amankwah (2019) added that higher educated entrepreneurs tend to adopt more innovative practices compared with other counterparts whose no or low formal education background. However, Wekesa et al. (2016) found that education is not a significant influence on the performance, but uneducated entrepreneurs can have better business performance due to, they have experience and managerial training skills. Amateifio & Agbeblewu (2017) explained that the education level has no significant influence on the performance of SMEs in the Accra metropolis, but the owners/managers have to learn about practical knowledge by continuously learning in managing business, reading and listening to the experts, attending seminars and learning from other people's experience.

According to Khaleque (2018), business experience has a positive influence on sales and finally on the business performance. Lampadarios (2017) added that a senior experience manager is more likely to avoid common pitfalls, has solid outlook for the future, guides the company through hardship and recognizes the threats and opportunities in the environment in order to ensure sustainable growth. Mothibi (2015) explained that based on his research on SMEs in Pretoria, South Africa, statistically, managerial competence and education have the highest significantly positive effect on SMEs success. Therefore, educational qualifications and managerial competences of SMEs entrepreneurs should be improved in respect to the business operations. According to Weekesa et al. (2016), firms will have a better performance if they are operated by young, well-experienced and skilled entrepreneurs. Garg & Phaahla (2018) added that entrepreneurial, technical and managerial skills and the ability to conduct market research are essential skills that should be possessed by the owner/manager of small business to succeed and grow.

In regard to gender, according to Nyoni & Bunga (2018), many researchers found that males have significantly higher entrepreneurial intentions than their counterpart and tend to be risk taking persons. Lucas (2017) pointed out that in Kenya, in the MSMES sector, male entrepreneurs performed better compared to the female entrepreneurs because males are more willing and ready to take risks and less family responsibilities compared to females. Osunsan (2015) added that there was a significant effect of gender on small business performance. Although the level of business performance owned by male and female entrepreneur were high, but the male owned business tended to perform better than their counterpart. Likewise, the same opinion was also stated by

Soomro, Abdulwahed & Shah (2017) that there was a positive and significant relationship between the gender of entrepreneurs and business success of SMEs in Pakistan. In their research, the male respondents accounted for 82.6%, while female ones were 17.4%.

In Indonesia's context, Elfindri, Ayunda & Saputra (2010) agreed that 85% of Minang entrepreneurs have difficulties in managing business at their ages around 40 if the business is run only based on the entrepreneur's talent. However, different opinion was stated by Munizu (2010) and Wekesa et al. (2013) with some arguments. The latter stated that although education had an insignificant influence on business performance, the uneducated, yet skilled and experienced entrepreneurs tended to manage their businesses successfully. The age of an entrepreneur influences the success of the business (Kemayel, 2015). According to Peter & Musyityha (2015) the older the entrepreneurs, the greater the opportunity they have to manage their business successfully. However, Wekesa et al. (2016) had a different opinion that the age of the entrepreneur had a negative relationship with the business performance. The younger entrepreneurs usually accept the changes quickly and take the opportunity promptly compared to the older ones. Adzido, Sedzro, Dorkpah (2016) added that the entrepreneurs whose age less than 50 years (productive age) must be supported with a good education that will affect the way the entrepreneurs manage their business. Contrary to the arguments, Indarti & Langenberg (2004) found that there was an insignificant correlation between the age of entrepreneur and their business success.

According to Abdulwahab & Damen (2015), there was an impact of the entrepreneur characteristics on the small business success. In their research, entrepreneur characteristics were measured by the need for achievement, self-confidence, innitiativeness, autonomy, risk-taking propensity, and experience. Meanwhile, Hosain & Asheq (2019) described the role of entrepreneurial orientation to SME performance in Bangladesh. They explained that all dimensions of entrepreneurial orientations possessed a positively significant effect on SME performance except for competitive aggressiveness. On the other hand, Oni, Agbobli & Iwu (2019) stated that only three attributes of entrepreneurial orientation influenced business performance which are innovativeness, risk-taking and pro-activeness. It was expected that the owner/manager of small business should integrate & cultivate cultures that support entrepreneurial orientation in order to be more successfull in the business operations. Mason et al.(2015) found that there was a positive and significant impact of innovativeness, risk-taking behavior and pro-activeness in explaining the performance. Bhatt & Sankhla (2018) explained that risk-taking ability, good communication skills and self-confidence are the major characteristics which have the impact on business success. Lampadarios (2017) investigated that the entrepreneurial orientation has a very strong relationship with the performance because it relates with the longevity and long-term performance. Schillo (2011) argued that in general, entrepreneurial orientation may contribute positively to the performance, but every business has a different combination of external influences and internal corporate characteristics. Frese, Brantjes & Hoorn (2002) investigated that there were mediating effect of perceived environmental difficulties on the relationships between entrepreneurial orientation and success. The entrepreneurial orientation has a positive and stronger impact on the business performance in a dynamic environment (Giriati, 2017).

### *2.5.Relationship between entrepreneurial characteristics and credit access*

Several previous studies (Fatoki & Asah, 2011; Chinonso & Zhen, 2016; Campanella & Serino, 2018) revealed that characteristics of owner/manager affected firm's capability to access bank loan. The differences of personal characteristics will make differences in the ability of entrepreneur to improve financial performance (Irwin and Grayson, 2006)

Regarding to the age of owner/manager, there are several studies investigating the effect of entrepreneurs' age on the access to finance. Some studies (Kung'U, 2011; Fatoki & Asah, 2011; Ogubazhi & Muturi, 2014, Campanella & Serino, 2019) found out that the owner's age/manager has a significant effect on SMMEs's access to the bank loan. According to Kiboki, Sakwa & Kiriago (2014) the mature owners of firms are more likely to access the credit. The effect of entrepreneurs's age on the ability to access the bank credit can be viewed from both creditor



and debtor perspective (Chinonso & Zhen, 2016). The older entrepreneurs are perceived as non-innovative and non-dynamic, while the younger ones are regarded as innovative and good performers. Therefore, the older entrepreneurs are less riskier compared to the younger ones. Ogubazghi & Muturi (2014) stated that age is one of the most general factors which affects the access to bank loan; therefore, the age of the owner/manager has a significant effect on SMMEs' access to the bank loan in Eritrea Kenya. Furthermore, Campanella & Serino (2019) added that older applicant has a higher possibility of being accepted when applying for loan, due to entrepreneurs' age is positively correlated with the acceptance probability.

Numerous studies such as of Kung 'U (2011), Ogubazhi & Muturi (2014), Faisal et al (2018) and Campanella & Serino (2019) confirmed the educational level of manager/owners firms has an effect on the access to credit. According to Chinonso & Zhen (2016) higher education will improve communication skills, and foresight of the owners/managers. Also, they will have the ability in preparing a business proposal and financial statement. In general, educated entrepreneurs have the skill to manage their resources, such as human, financial, and marketing resources. It will lead to the high performance of business and they do not need to encounter unnecessary difficulties in accessing the bank loan. In addition, the importance of education is emphasized in general as it enhances the entrepreneurs with literacy, so they are able to manage their business properly and perform record keeping of their business ( Faisal et al., 2018). Furthermore, Chioma et al. (2017) argued that education significantly contributed to the ability of poultry farmers to access to the credit because higher level of owner/manager's education will lead to the higher productivity compared to their counterparts with lower education. Educational level determines the degree of opportunity to enhance living condition. Enterprises with higher educated owners and diversified enterprises are more likely to receive formal credit (Nikaido, Pais, and Sarma, 2015). Hendrawan (2012) explained that higher educated owner/manager tends to present a good rational reason and provide a well-prepared proposal to earn bank credit. They also have better knowledge, skill, and ability and also are more confident. Nevertheless, this finding is not in agreement with that of Campanella & Serino (2019) who stated that entrepreneurs' education factor is insignificant related to the probability to earn credit from banks.

Prior studies (Kung'U, 2011; Hendrawan, 2012; Rabah Gana & Ayari, 2013) stated that entrepreneurs' experience affects the ability to access the credit. Therefore, lack of managerial experience has a negative effect for SMEs to earn finance from commercial banks (Chinonso & Zhen, 2016). Kung'U (2011) added that previous experience will impact to the skill of the owner/manager's business. The business skills of entrepreneurs influence their ability to access credit and to manage their business successfully. Studies conducted in the past have found that the gender of firm's owner/manager influences the access to finance.

Chinonso & Zhen (2016) and Campanella & Serino (2019) discovered that gender has a positive impact for SMEs on access to finance by SMEs. In Italy, if applicant/manager is a male, it will be a higher possibility for him to have his credit application accepted by officers (Campanella & Serino, 2019). Meanwhile, female entrepreneurs tend to be riskier than their counterpart (Chinonso & Zhen, 2016). Female owners of enterprises engaged in capital intensive industries are more likely to encounter credit constraints (Nikaido, Pais, Sarma, 2015). Chinonso & Zhen (2016) argued that gender has a significant influence on the accessibility of debt finance for SMEs in Nigeria. In contrast, Fatoki & Asah (2011) argued that there is no significant relationship between the gender of the SMEs owner/manager and the access to debt finance. However, contrary to the above findings, Irwin and Grayson (2006) stated that women entrepreneurs of micro-finance institution in the developing country were easier to raise finance than men because women had better track record in repaying their loan.

According to Fatoki (2017), there is a significantly positive relationship between the entrepreneurial orientation, the access to debt finance and the performance of SMEs. In this study, the access to debt finance partially mediates the relationship between entrepreneurial orientation and the business performance. Sidek, Mohamad, & Nasir (2016) stated that the entrepreneurial orientation and the access to financial services is inter-related each

other. In addition, an effective entrepreneurial orientation can be applied as good predictor of firm's ability to access financial resource. However, studies on the relationships of the factors are limited. They added that the entrepreneurial orientation supports the business to get the access to the capital resources and therefore their business performance should be improved. Furthermore, there are only risk taking and aggressive competitiveness which have positively significant impact on the access to finance. There is a significantly negative relationship between entrepreneurial orientation and SMEs ability to access finance in Nigeria (Aminu and Shariff, 2015).

#### *2.6. Relationship between business performance and credit access*

Kiboki, Sakwa & Kiriago (2014) stated that the business performance affected access to finance. The performance can be measured by financial and non-financial indicators. According to Gerba & Viswanadham (2016), it includes profitability, total asset, return on investment (ROI), sales volume, employment size, capital employed, market share, costumer satisfaction, productivity, turnover, delivery time, employees' turnover and others. Some previous studies explained that business information had an impact on access to credit (Kira & He, 2012, Fatoki & Asah, 2011; Fatoki & Odeyemi, 2010). There was a positive relation between financial information and access to debt finance due to the factor that financial statements showed business ability to meet the financial obligation (Nangaki, Namusonge, & Wandera, 2014). According to Adzido, Sedzro & Dorkpah (2016), a business with increasing trends of profits and sales are more attractive to banks than the poor performing ones. However, they require reliable financial information, preferably audited financial statements as useful basis for granting credit facilities. Business information exhibits the business current asset, future performance and the ability of the business to repay loan (Kira & He, 2011). Meanwhile, Pandula (2011) pointed out that financial performance was the main factor that influenced the access to finance. The same opinion was stated by Sarapaivanich & Kotey (2006) that there was a significantly positive effect of financial information quality on the ability to access external funds for SMEs in Thailand. Kitindi, Magembe & Sethibe (2007) revealed that financial information provided by lenders was used by creditors, banks, and the lenders to analyze their business performance and to predict future performance. Fatoki & Asah (2011) added that information obtained from financial statement can be used as indicators of borrower's future prospects and the ability to repay loan. Therefore, there was a positive relationship between financial information maintained by a firm and the access to debt finance. Kira & He (2012) explained that the lenders used the business information to decide borrower's credibility whether to issue or to extend a loan. Absence of sufficient information leads to information asymmetry and may jeopardize the access to credit finance (Sarapaivanich & Kotey, 2006). Therefore, business performance influences the credit access because from lenders perspective, the performance predicts ability of small business to repay its loan.

#### **Problem Statement**

Small Enterprises (SEs) have an vital role in economic growth and development of debt financing. The ability of small business to obtain bank's loan is low due to a number of factors. Entrepreneurs as human resource plays a great impact on accessing the credit. From the borrower's side, business performance can be predicted as the ability to repay loan. Therefore, objectives of this research are to conduct empirical examination on the role of business performance as a mediator of the influence of entrepreneurial characteristics on small business accessibility to debt finance.

#### **Research Objectives**

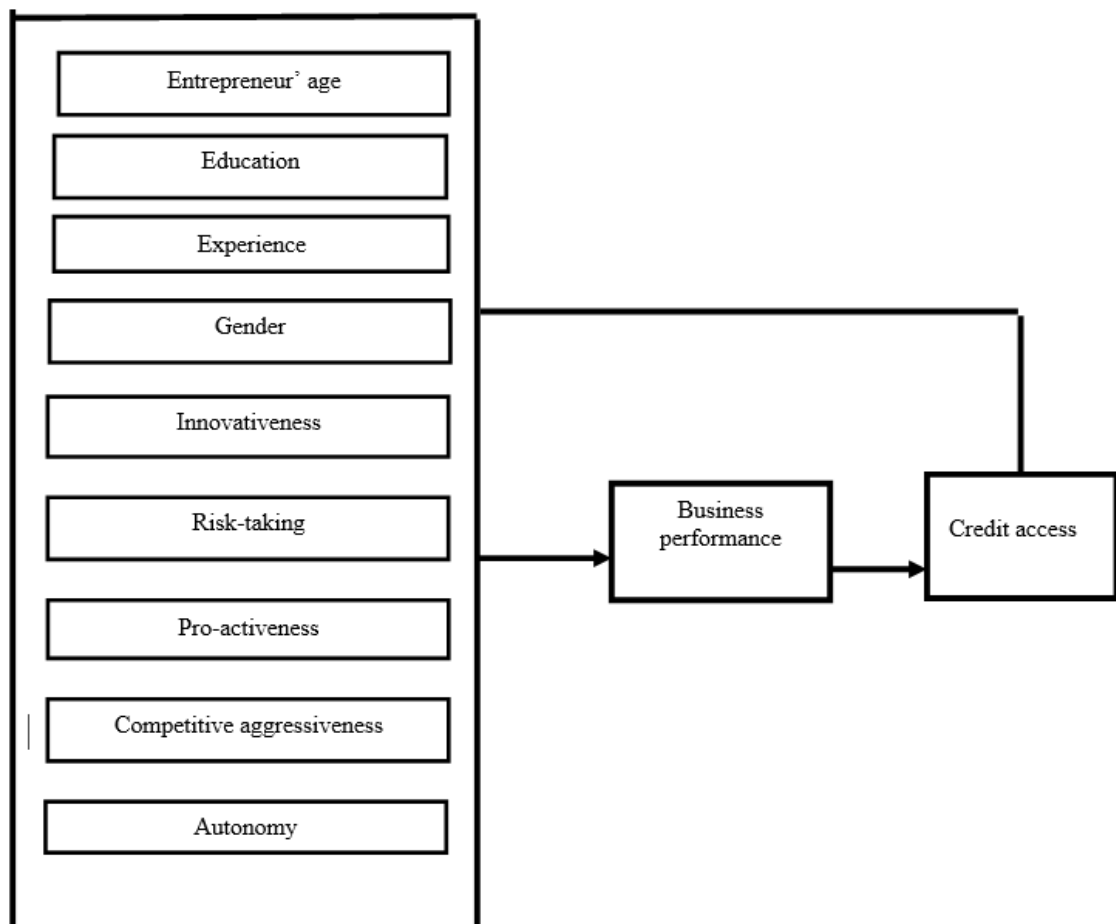
The objectives of the research are:

1. What is the role of entrepreneurial characteristics in business performance?
2. What is the role of entrepreneurial characteristics in credit access?
3. What is the role of business performance in credit access?
4. Does an entrepreneurial orientation influence credit access partially through affecting business performance?

### 3. Research Methodology

The research was carried out in seven districts in West Sumatera Province, Indonesia. The study used a survey method and the total unit analysis consisted of 221 small businesses, the details of which were as follows: in Pasaman (13 units), Pesisir Selatan (18 units), Dharmasraya (16 units), Bukittinggi (32 units), Padang (100 units), Solok (22 units) and Payakumbuh (22 units). Stratified and purposive random sampling was used in selecting the respondents for the study, while the observation unit was the owners/managers of the small businesses. In this study, several districts were selected as the samples based on the consideration that in the areas, there were at least 4% of the total number of small scale businesses operating in West Sumatera. In this study, the data were collected using structured questionnaires and all the variables were measured using a five-point Likert scale with level 1 = strongly disagree, 2 = disagree, 3 = fairly agree, 4 = agree and 5 = strongly agree. The time horizon of this research was the cross-section /one shoot.

Conceptual framework is provided in Figure 1 below



**Figure 1.** Conceptual framework showing ties between entrepreneurial characteristics



The research model above illustrates that entrepreneurial characteristics are considered to have an indirect influence on access credit through business performance. Moreover, entrepreneurial characteristics also have a direct influence on credit access.

To examine the effect of entrepreneurial characteristics on business performance and credit access, the following hypotheses are proposed.

Hypothesis 1: Entrepreneurial characteristics has a positive relationship with business performance.

Hypothesis 2: Entrepreneurial characteristics has a positive relationship with credit access.

Hypothesis 3: Business performance has a positive relationship with credit access.

Hypothesis 4: Business performance has a partial mediating effect on entrepreneurial characteristics and credit access.

## 4. Results

### The Validity and Reliability

The validity and reliability are the two main criterion used in SEM. The validity criteria were assessed using Confirmatory Factor Analysis (CFA) or loading factor. The reliability was assessed using Construct Reliability (CR) and Variance Extracted (VE). The result of validity and reliability can be seen at table 1.

**Table 1.** Construct Reliability and Validity Analysis

| Variable                        | Dimension                  | Loading Factor | CR>0.70 | VE> 0.50 |
|---------------------------------|----------------------------|----------------|---------|----------|
| Entrepreneurial Characteristics | Entrepreneurs' age         | 0.881          | 0.923   | 0.820    |
|                                 | Education                  | 0.929          | 0.881   | 0.717    |
|                                 | Experience                 | 0.837          | 0.889   | 0.724    |
|                                 | Gender                     | 0.924          | 0.911   | 0.774    |
|                                 | Innovativeness             | 0.918          | 0.921   | 0.705    |
|                                 | Risk taking                | 0.954          | 0.871   | 0.694    |
|                                 | Pro-activeness             | 0.858          | 0.910   | 0.772    |
|                                 | Competitive Aggressiveness | 0.878          | 0.876   | 0.779    |
|                                 | Autonomy                   | 0.900          | 0.893   | 0.745    |
| Business Performance            | Capital growth             | 0.828          | 0.887   | 0.728    |
|                                 | Sales                      | 0.861          | 0.884   | 0.721    |
|                                 | Profit growth              | 0.873          | 0.894   | 0.808    |
|                                 | Market growth              | 0.784          | 0.818   | 0.600    |
| Credit access                   | Amount received            | 0.649          | 0.963   | 0.705    |
|                                 | Frequency of access        | 0.878          | -       | -        |

The result of the analysis in Table 1 shows a validity and reliability test for each construct. Loading factor at all constructs which were analyzed above 0.5 considered valid. Also, they have  $CR \geq 0.7$  and  $VE \geq 0.5$  Therefore all constructs are considered valid and reliable (Hair et al., 2014).

Based on Table 1, it can also be stated that all dimensions of entrepreneurial characteristics have positive loading factors. Demography characteristics consisting of entrepreneur's age, education, experience and gender have a positive influence both on business performance and credit access. The study results are consistent with the findings of Lucas (2017) who stated that education level, gender, experience, and age of entrepreneurs (Nyoni & Bonga, 2018) have a positive effect on the performance. Peter & Munyithya (2015) agreed that education level and age of the entrepreneurs influenced the entrepreneurial success in Kituy County. Also, they added that cultural background and marital status affected the business performance. Education becomes the largest dimension of demographic characteristics that was found to be the most influential. This is consistent with other studies, such as Mothibi (2015) who stated that managerial competence and education had the highest positive and significant influence on SMEs success. Furthermore, similar results have been found by Indarti & Langenberg

(2004) who revealed that education of SMEs entrepreneurs has an important role in the success of business in Indonesia. However, this result is contrary to that of Wekesa et al. (2016) & Amarteifio & Agbeblewu (2017) who found that educational level have no significant effect on business performance, but they agreed that uneducated entrepreneurs should be supported by management skills and experience.

Regarding the entrepreneurial orientation, all loading factors are positive. In other words, innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy affect the business performance. The result of this study is in line with previous research conducted by Hosain & Asheq (2019) who investigated the effect of entrepreneurial orientation on SMEs performance by using five-dimensional aspects in boutique and clothing business in Bangladesh. They suggested developing the level of entrepreneurial orientation by arranging a periodical training session for the employees in order the business to survive and sustain. Lampadarios (2017) added that entrepreneurial orientation plus prior work experience, and management skills are the major points for SMEs entrepreneurial success factor in the UK chemical distribution industry. The condition of environment will result in different impact on the business. In a dynamic environment, the entrepreneurial orientation provides stronger effect.

In regard with risk taking, it can be considered the greatest influence of entrepreneurial orientation in this study. Risk taking is an activity to consider and accept the risks in decision making process to face an uncertainty condition (Suhardi, 2009). The ability of business owner to take an action according to the level of risk influence the business success (Elfindri, Ayunda & Saputra, 2010).

The findings show that all dimensions of entrepreneurial characteristics have positive value. In other words, entrepreneur's age, education, experience, gender, innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy have positive and significant effects on credit access. The results are consistent with some previous studies. Gender, education (Irwin & Grayson, 2006), age (Ogubazghi & Muturi, 2014; Campanella & Serino, 2019) and experience (Faisal et al., 2018) are positively associated with the access to formal credit. Chinonso & Zhen (2013) and Faisal et al. (2018) added that networking, membership in a business associations or groups affect the access to credit. Regarding the level of education, there are several studies that investigated the effect of education on access to finance, but there are conflicting results. Some studies (Indarti & Langenberg, 2004; Irwin & Grayson, 2006) found that education influenced access to credit. On the contrary, other studies conducted by Ogubazghi & Muturi, 2014; Campanella & Serino, 2018) investigated that there was no relationships between the entrepreneur's education and access to credit.

Regarding the entrepreneurial orientation, there is a relationship between entrepreneurial orientation and credit access. This findings is consistent with the previous research conducted by Fatoki (2017) and Sidek, Mohamad & Nasir (2016) who stated that entrepreneurial orientation influences positively the access to financial service. However, these study results is contrary to those of Aminu & Sharif (2015) who stated that there was a significantly negative relationship between entrepreneurial orientation and SMEs access to finance in Nigeria.

### **Direct Effects**

The study results support the hypotheses testing as follows:

**Table 2.** The Result of Structural Model Parameter Estimation

| Path   | Standardized | t-value |
|--|--------------|---------|
| Entrepreneurial characteristics → business performance | 0.39         | 4.938   |
| Entrepreneurial characteristics → credit access        | 0.217        | 3.638   |
| Business performance → credit access                   | 0.494        | 7.708   |

As can be seen from Table 2, the findings explain the following results.

#### Hypothesis 1:

Entrepreneurial characteristics has a positive and significant effect on business performance.

Regression coefficient = 0.39 ;  $t_{\text{value}} = 4.938 > t_{\text{table}} = 1.96$

As expected, this finding supports earlier study (Soomro, Abdelwahed & Shah, 2019) which revealed that demographic characteristics of entrepreneurs, such as gender, age, education and experience have a positive and significant impact on SMEs entrepreneurs' success in Pakistan. It suggested that demographics variables should be upgraded in order to grow the business. In line with previous research carried out by Islam et al. (2011) that the characteristic of entrepreneur was found to be a significant factor for the business success, it is suggested that enterprises have to build a strong social network and good government relationship. This findings is consistent with the results of previous research which was conducted by Schillo (2011) and Fatoki (2017). Lampadarios (2017) added that entrepreneurial orientation is one of the main driving factors of growth of small business; therefore, it needs to be applied as part of the company activities and the business culture in daily activities. More powerful entrepreneurial characteristics will lead to improved competency of SMEs owner, and eventually affect the business performance (Sarwoko et al., 2013).

#### Hypothesis 2:

Entrepreneurial characteristics has a positive effect on credit access.

Regression coefficient = 0.217;  $t_{\text{value}} = 3.638 > t_{\text{table}} = 1.96$

This finding is consistent with that of previous research carried out by Chinonso & Zhen (2016) and Campanella & Serino (2018). Fatoki & Asah (2011) stated that improving access to finance can be done by personal development of the SMEs owners, especially in the area of business and financial management via training. Kung'u (2011) added that business skill of managers/owners of small business influenced their ability to access credit and to manage business successfully. Meanwhile, entrepreneurial orientation will support enterprise in obtaining access to capital (Sidek, Mohamad, & Nasir, 2016).

#### Hypothesis 3:

Business performance has a positive effect on credit access.

Regression coefficient = 0.494;  $t_{\text{value}} = 7.708 > t_{\text{table}} = 1.96$

The same result expressed by Kiboki, Sakwa & Kiriago (2014) who found that business performance has a significant effect on credit access. In other words, better business performance will lead to the greater accessibility of external finance compared to poor performance. Good business performances show the ability of business in repaying its loan. Similar result was also revealed by Nangaki, Namusonge & Wandera (2014) who stated that financial performance of business had positive influence on credit access.

#### Sobel Test

Sobel test can be used to test the role of variable mediation.

**Table 3.** Hypothesis testing for partial mediation

| Variable mediation influence                        | Regression coefficient | Error standard | Sobel test | t table | Description |
|---|------------------------|----------------|------------|---------|-------------|
| Entrepreneur characteristics → business performance | 0.398                  | 0.080          | 7.745      | 1.96    | Significant |
| Business performance → credit access                | 0.494                  | 0.063          |            |         |             |

Based on Table 3, the influence of entrepreneurial characteristics on credit access which is mediated by the business performance shows significant results.  $t_{\text{Sobel}}$  is higher than 1.96 ( $t_{\text{Sobel}}=7.745 > t_{\text{table}}=1.96$ ); therefore, the relationships in Table 3 are significant.

Hypothesis 4: Business performance has a partially mediating effect on entrepreneurial characteristics and credit access.

The result of this study confirmed that entrepreneurial characteristics is important for business performance and credit access. Implementation of entrepreneurial characteristics will help small business improve its performance and it will lead to a greater accessibility to earn the bank loan. This study is also in line with those conducted by Kiboki, Sakwa & Kiriago (2014). Cull and Xu (2005) added that banks tend to allocate funds to firms that have better performance outcomes in China. Poor business performance is the major reason why small enterprises does not receive credit (European Commission, 2003). In other words, Business with good performance tends to obtain credit easier compared to poor performance ones. Good business performance means that business has the ability to operate continuously and able to repay its credit.

### Indirect Effects

**Table 4.** The effect of entrepreneurial characteristics on credit access via business performance

| Path   | Direct Effect | Indirect Effect | Total Effect |
|--|---------------|-----------------|--------------|
| Entrepreneurial Characteristics → Business Performance | 0.398         | -               | -            |
| Entrepreneurial Characteristics → Credit Access        | 0.217         | 0.197           | 0.414        |
| Business Performance → Credit Access                   | 0.494         | -               | -            |

Based on Table 4, it can be summarized that through business performance as a mediating variable, there is strong effect of entrepreneurial characteristics to credit access. The role of entrepreneurial characteristics in credit access through business performance increases from 0.217 to 0.414. It proves that business performance acts as mediating variable. The result of this analysis provides empirical evidence that business performance acts as mediating factor of entrepreneurial characteristics with credit access.

### Conclusion

The discussion of previous studies tend to argue that access to credit affects the business performance. Meanwhile, this study seeks to offer a new perspective and provides empirical evidence. The study also suggests that entrepreneurial characteristics of small business enhances the business performance. Therefore, a small business expects to have greater accessibility in obtaining bank loan through its business performance; thus, it should improve its entrepreneurial characteristic attributes. The relationships between entrepreneurial characteristics, business performance and access credit may provide a guidance how small business should have greater accessibility to bank credit by improving demography characteristics and supporting entrepreneurial orientation. In this case, the entrepreneurial characteristics can be used as predictors of credit access through partial mediation of the small business' performance. Entrepreneurial characteristics more strongly affects credit access through business performance compared to its direct influences on the access to credit.

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