Determining factors that contribute to financial literacy for small and medium enterprises

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Abstract. Financial literacy on the SME owner/manager will subsequently improve the profitability of SME. Although, numerous research had existed in financial literacy subject, there are still limited research that examined the factor related to financial literacy. In this paper, we are examining demographic and SME factor that contribute to financial literacy using linear regression. Other objective of this paper is to confirm the benefit of financial literacy on access to credit. The finding shown that for demographic factor, level of education is contributed to financial literacy. The second finding is that level of financial literacy is related with greater degree of access to credit

1. Introduction
High variety of financial product had emerged in the era of modern financial. These rapid changes have given opportunities for investor or financial product consumer to select wider range of product that suitable with their investment preferences. In the other hand, this evolution poses a problem for a new investor or unexperienced investor to select the suitable one. To resolve with this matter investor needs specific knowledge and capabilities that called financial literacy [1].

Financial literacy defined as investor or person capability to understand and make use of financial concepts [2]. The component of financial literacy is ranging from the money management, investment and leverage [1]. The rapid development of financial industry has put financial literacy to the spotlight among scholar. Because the existences of financial literacy will have an effect to behavior of investor in finish their financial task.

Financial literacy on investor will highly contribute to investor behavior on debt management [3], Investor wealth [4], and their investment behavior [5]. In the small business area, financial literacy of the owner or manager have an effect on SME performance [6], business growth [7] and a better access to credit [8]. Despite of the financial literacy benefit, recent literature have revealed that majority of people still have a low level on financial literacy [9] [10].

The puzzles left in the table is to identify the factors that contribute to financial literacy. Few literatures have emanated to answer the question. There are researcher that contribute with the indicator to measuring financial literacy [11]. Some of researcher have put an effort on understanding the determinant of financial literacy. Other scholars had studied the influence of psychosocial factors on
financial literacy [12]. While other stream of research had put their focus on investigating the effect of demographic properties such as gender and age on financial literacy [13] [14].

The literature on the factors contribute to financial literacy is immense and mainly refers to personal finance scope namely personal investment. In contrast, there are still limited financial literacy factors research on SME owner or manager. Notably, no study has been published that has investigated the financial literacy related factor with a specific factor on small and medium enterprises context such as the age of their business or amount of SME Assets. Thus, this study is attempted to close a gap in the literature

The primary objective of this paper is to investigate factors that related with financial literacy using demographic factors and specific SME factors. Namely age, education, gender, SME ages. This objective tried to test generic demographic factors on different context of SME mixed with a new factor that related to SME factors. The secondary objective is to understand the effect of financial literacy on financial behavior of the owner/ manager of SME in their SME financial capability. In this second objective, this paper attempt to comprehend the benefit of financial literacy on SME financial capability, namely their access to a loan. Financial literacy supposed to contribute to SME access of loan [8]. SME that supported with a good financial literacy will have a better financial report. It is obvious with a better financial report surely will give a SME with greater financing opportunities. Thus in this secondary objective our hypothesis is “SME with a better financial literacy will subsequently have a better access to loan”.

2. Literature review
Financial literacy could be defined as investor or person capability to understand and make use of financial concepts [2]. Other alternative definition is that financial literacy comprise with an ability to considering relevant information in make a logical choice among diverse financial choices [15]. From the definition, it’s clear that financial literacy comprises of two properties. First properties are knowledge related to financial decision (thought) and second properties related to behavior (decision). In the past literature, the terms financial literacy is often used interchangeably with financial knowledge and financial education. However, few scholars renege that financial literacy is differ with other term. Financial literacy consist of behavioral element, which not existed in other term [11]. The factors of financial literacy are already existed in the past literature. Summary of research in financial literacy factors is listed in table 1 below.

Table 1. Financial Literacy Factors, List of Recent Literature.

| Author | Year | Factors | Sample |
|--------|------|---------|--------|
| United States Government Accountability Office | 2010 | English language, culture | Non-English-speaking population (US) |
| Chen H, Volpe R.P | 1998 | Gender, work experience, age | College Student (US) |
| Arif K | 2015 | Age, gender, marital status, work activity | Investor (Pakistan) |
| Bashir T, Arshad A, Nazir A, Afzal N | 2013 | Psychosocial factor | Bank Consumer (Pakistan) |
| Suciachi | 2013 | Gender | SME (Philippines) |

3. Method
Sample in this research is consist of SME owner or manager in Surabaya. The sampling method in this research is using purposive sampling. Requirement of sampling process is the research subject should already be an owner or manager of SME at least 6 months. This requirement created with the expectation that research subject understand the operational the SME. The financial literacy measurement is followed measurement by Nkundabanyanga & Kasozi [16]. Measurement scale employing 5-point Likert scale. Financial literacy variable used 2 dimension that align with SME specifically characteristic
namely, financial knowledge and financial skills. The measurement on access to credit using 2 dimensions namely, loan history and source of financing, the complete questionnaire question item in appendix. In this paper, we will employ regression analysis using Ordinary Least Square (OLS).

4. Result and Discussion
In this paper, we utilize 80 sample of SME in Surabaya. 76 of the sample is collected from offline survey, where 4 of the sample collected via email. All sample answered questionnaire completely.

Scale of sample is illustrated in figure 1. The majority of sample is in micro category enterprises. This category subsequently have a revenue turnover below 300 million rupiah. However, there are only 1 % in medium category. That mean this paper will represent mostly the micro and small enterprises.

![Figure 1. Sample on scale of enterprises.](image)

| Table 2. Regression Result (Financial Literacy). |
|-----------------|-------|-------|
| Independent Variable | Beta  | Sig   |
| Gender           | -0.116| 0.471 |
| Age              | -0.088| 0.445 |
| SME Age          | 0.071 | 0.345 |
| Education        | 0.288 | *0.007|

*Significant at 0.05

Table 2 demonstrate the result of Regression analysis. The regression model shown that for demographic variable of gender, age and SME age doesn’t not have relate with financial literacy. In the other hand for education of SME owner / Manager shown a significant positive relationship. This finding indicated that higher level of education will contribute to higher level of financial literacy.

Demographic variable isn’t related with financial literacy. This result is differ from what we expect based on the past literature [13] [17]. We argue that the differences are existed because of the sample in this paper consist of owner or manager with an experience. To meet on this requirement, the sample should have a minimum level of financial literacy. This argument is clarified by the mean financial literacy variable. Mean of financial literacy is on slightly higher than the midpoint of financial literacy (3.56 out of 3) this means that majority of sample have higher than average financial literacy level.

Level of education have indicated a positive relationship with financial literacy. Individual with a higher level of education will have an ability to learn about financial literacy, therefore will have a consequence on greater degree of financial literacy. This result is aligned with the research from Sucuahi, (2013). For SME context, the education could predict financial literacy better compared with other demographic variable.
Table 3 Descriptive statistic.

| Independent Variable | Mode | Mean         | Notes                      |
|----------------------|------|--------------|----------------------------|
| Gender               | 0    | Female       |                            |
| Age                  | 3    | 40-50 Years  |                            |
| SME Age              | 2    | 1-3 Years    |                            |
| Education            | 2    | Middle Education |                    |
| Financial Literacy   | 3.3625 | Higher than mid-point |                |
| Credit Access        | 3.805 | Higher than mid-point |                |

Table 4. Regression Result (Access to Credit).

| Independent Variable | Beta | Sig  |
|----------------------|------|------|
| Financial Literacy   | 0.361| 0.000|

*Significant at 0.05

The secondary objective in this paper is to investigate the relationships between financial literacy to access of credit. Regression analysis on this matter is listed in table 4. Regression analysis have indicated that there is positive relationship between financial literacy and credit access. This mean that we accepted hypothesis 1. This implied that greater financial literacy for SME will provide benefit for the SME in the form of greater credit access. This result is similar with Nkundabanyanga & Kasozi, (2014) research in Uganda, Africa.

This paper indicated that the owner of SME should have some certain level of literacy because of their experience. This result could be a main point that differentiate between financial literacy in context of regular investor and household and financial literacy for SME context. Related with the issue, scholars usually differentiate between financial literacy on household context with the financial literacy on SME context. This also could pose a problem to compare between groups. In the future, there should be a conformity between SME and household regarding financial literacy that will facilitate the comparison process.

Financial literacy had shown their role in maintaining the success of firm. In this paper, we explore this roles by examining financial literacy role for greater access of credit. Higher financial literacy will contribute to greater degree of access to finance. We interpret the result; financial literacy will provide greater access of credit because this knowledge will provide a stable and good record on financial register. Other issue that should be underpinning the relationships is that people with greater financial literacy should have a clear understanding about debt management. They should have maintained excellent history of debt. This knowledge should be have contributed to relationships between financial literacy and access to credit.

5. Conclusion and Future Research

Positive relationships in demographic variable only met in between level of education on SME owner/manager with a level of financial literacy. Furthermore, other demographic level wasn’t significantly related with financial literacy. This result differs from the existing literature because diverge research subject. Financial literacy proof to had a positive relationship with the access to credit. This result is confirming existing literature in the subject.

In this paper behavior of owner/ manager measured using perceptions scale from the sample. In the future, it’s a major opportunity to perform analysis based on non-perception scale such as number of credit or variability source of funding. On related factors to financial literacy, there should be more research that assign other demographic or SME factors to financial literacy.
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## Appendix

### Table A. Financial Literacy.

| No | Dimension             | Question                                                                 |
|----|-----------------------|--------------------------------------------------------------------------|
| 1  | Financial Knowledge   | I know about managing personal finance                                   |
| 2  |                       | Am aware of financial products and services provided by banks             |
| 3  |                       | My firm participates less in the formal financial system                 |
| 4  |                       | I know the different sources of financing from which my firm can use      |
| 5  |                       | My firm makes effective financial choices                                |
| 6  |                       | I have a working knowledge of financial institutions                      |
| 7  | Financial Skills      | I have adequate skills in financial management                           |
| 8  |                       | Am capable of discussing money and financial issues with comfort         |
| 9  |                       | Am very confident when making financing decisions                        |
| 10 |                       | My firm has control over personal finance                                |

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### Table B. Credit Access

| No | Dimension             | Question                                                                 |
|----|-----------------------|--------------------------------------------------------------------------|
| 1  | Loan History          | My firm has ever acquired a loan from commercial banks                    |
| 2  |                       | My firm received the full amounts of loan facility applied for            |
| 3  |                       | The loan amounts received satisfied my firm’s credit needs                |
| 4  | Financing Source      | My firm finds it easy to access credit from commercial banks             |
| 5  |                       | My firm obtains loans more often from commercial bank                     |

Nkundabanyanga and D. Kasozi 2014
### Table C. Questions List

#### Financial Literacy

| No | Dimension     | Question                                                                 |
|----|---------------|--------------------------------------------------------------------------|
| 1  |               | I know about managing personal finance                                   |
| 2  |               | Am aware of financial products and services provided by banks             |
| 3  | Financial Knowledge | My firm participates less in the formal financial system             |
| 4  |               | I know the different sources of financing from which my firm can use     |
| 5  |               | My firm makes effective financial choices                                |
| 6  |               | I have a working knowledge of financial institutions                     |
| 7  |               | I have adequate skills in financial management                           |
| 8  | Financial Skills | Am capable of discussing money and financial issues with comfort         |
| 9  |               | Am very confident when making financing decisions                        |
| 10 |               | My firm has control over personal finance                                |

Nkundabanyanga and D. Kasozi 2014

#### Credit Access

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