Analysis of Financial Behavior of SMEs in the Creative Industries in Bandung City, Indonesia

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ABSTRACT

One of the challenges faced by small and medium enterprises (SMEs) is maintaining the sustainability of business activities in terms of good financial management. The problem is that knowledge of SMEs is inferior compared with that of large companies. Financial management education is becoming increasingly important as the market develops and demographics, economics and policies change. Previous studies demonstrate a relationship between financial conditions and economic growth. Research on financial behaviour in SMEs is related to several aspects, namely, overconfidence, heuristics and risk perception. The present research uses quantitative methods and factor analysis with 13 indicators. Questionnaires are sent to 432 SMEs in the creative industries in Bandung City. Results reveal that from 13 indicators of financial behaviour, nine can be analysed further. The nine indicators are divided into internal and external factors that shape the financial behaviour of SMEs in the creative industries in Bandung City. Internal factors are based on the self-ability of the business actor, whereas external factor are aspects that are beyond the control of the business actor. Theoretically, this study recommends further research to deeply analyse the factors that shape the financial behaviour of SMEs in the creative industries. Practically, this study highlights the need for education and literacy to strengthen financial behaviour of creative industry entrepreneurs.

Keywords: financial behaviour, SMEs, creative industries, internal factors, external factors

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1. BACKGROUND

Hudson and Evans (2005) claim the small and medium enterprises (SMEs) are the main pillars of a country's economic activities. Such a statement is based on the role of SMEs in developed countries such as in the United States, Japan, Germany and Italy. This situation is inseparable from the role of the government in a country where SMEs are located. Governments in these countries enact policies that support the creation of conducive conditions for SMEs so that they can grow and develop well. In addition, SMEs can be regarded as a lever of a country's competitiveness and economic stability.

The existence of micro, small and medium enterprises (MSMEs) is currently recognized as a driver of creative economy, including that of Bandung City. The development of the creative industry in Bandung is of high potential because of its location for the synergy and collaboration of universities, businesspeople, society, government and media. The development of the creative economy in Bandung has indicated satisfactory improvement. To date, the leading sub-sectors of the creative industry in Bandung are as follows: (1) music, (2) fashion, (3) art, (4) design, (5) architecture, (6) IT and (7) food (Herawaty and Raharja, 2018).

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UNESCO has declared Bandung City as a 'Creative City' in 2015. SMEs contribute significantly to the GRDP of the city (see Table 1).

Table 1 Bandung City's GRDP According to Business Scale in 2011 (in IDR billion)

Scale	On the basis of current prices	On the basis of constant prices
Micro	**56.050,80**	**20.542,66**
Small	17.443,70	6.379,61
Medium	12.839,48	4.683,44
Large	25.767,63	9.479,60

Source: Central Statistics Bureau of Bandung City, 2016 (Data Processed)

The data in Table 1 reveal that most of Bandung City's GRDP is contributed by MSMEs rather than by large businesses. MSMEs play a crucial role in the economy of Bandung City. Among these MSMEs, some belong to the creative industries. The creative economy can be analyzed from many sides, such as the type of sector, its impact and scale of the company, as a driver of growth (Muftiadi and Raharja, 2018).

Many aspects related to MSMEs are interesting to study. One of them is the financial behaviour of MSMEs. Business people are required to understand and master good financial management. However, knowledge of financial management is minimal among SMEs compared with that among large companies. Finance management for small businesses differ from that for large businesses (Moritz et al., 2016) because the economic and non-economic motives vary (Gallo et al., 2004). Even the financial mechanism carried out by SMEs is distinct from that by large companies (López-Gracia & Sogorb-Mira, 2008; Berger & Udell, 1995). Given such differences in financial management between SMEs and large companies, researchers analyse the financial behaviour of SMEs (Johnsen & McMahon, 2005).

The importance of financial education is increasing with the development of markets and changes in the demographics, economics and policies (Thiessen, 2014). This importance has become a problem for SMEs facing various changes, such as those in storage, borrowing, capital and investment. Previous studies demonstrate a relationship between financial condition and economic growth (Nkundabanyanga et al., 2014; Bencivenga & Smith, 1991; Greenwood & Jovanic, 1990). The problems faced by SME entrepreneurs can be addressed by increasing their level of financial and financial literacy (Thiessen, 2014). Financial literacy influences the existence of financial behaviour and other factors such as values, actions against risks, beliefs and experiences (Hira, 2012).

With a rational model, financial behaviour can explain investor behaviour or market anomalies (Glaser et al., 2004). However, extant research find that financial behaviour exerts only slight influence on economy (Muradoglu & Harvey, 2012). Slovic (1972) explains that financial behaviour develops more slowly than economic behaviour. However, this opinion contrasts with that of De Bondt and Thaler (1985, 1987) who view research on financial behaviour as a trigger to expand financial studies.

2. THEORETICAL REVIEW

Financial managers usually need recommendations on financial behaviour to find out how to change the behaviour of their clients or the manner of communication with them (Muradoglu & Harvey, 2012). Kahneman and Riepe (1998) describe several recommendations for financial managers, such as controlling excessive self-confidence, communicating realistic opportunities for clients and ensuring that the framework taken is relevant to the client's request. The existence of extensive knowledge on financial behaviour can provide strategic

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benefits for financial managers. Even when determining the strategy in investing with financial behaviour, a financial manager can avoid 'mental mistakes and errors' (Ricciardi & Simon, 2000). In the perspective of knowledge on financial behaviour, strategic decision making is critical. Harvey and Bolger (1996) and Onkal and Muradoglu (1995, 1996) evidence that knowledge on financial behaviour in work practices can improve performance.

According to Ricciardi and Simon (2000), behavioural finance is a scientific discipline involving interdisciplinary interaction and inherent integration such that the discussion cannot be isolated. Behavioural finance is built by various assumptions and ideas of economic behaviour, emotional involvement, traits, likes and various things inherent in humans because interactions of intellectual and social beings underlie the emergence of a decision to take an action. Financial behaviour is based on psychological processes with high complexity and involves social aspects (Muradoglu & Harvey, 2012). Psychology is one of the main inputs and considerations in financial behaviour.

Chinen and Endo (2012) state that individuals possessing the ability to make correct decisions about finance will not have financial problems in the future. These individuals also show healthy financial behaviour and can determine priority needs. Healthy financial behaviour is reflected in good planning, management and financial control activities. In addition, the present research focuses on decision making related to financial management which is measured using the dimensions of overconfidence (Nosic & Weber, 2007), heuristics (Gigerenzer & Gaissmaier, 2011) and risk perception (Forlani & Mullins, 2000).

3. RESEACH METHODS

This study uses an approach with quantitative methods, with descriptive analysis as the type of research. As for the research population, 2,357 small-scale entrepreneurs are involved in the creative industries in Bandung City. The sampling technique uses judgment sampling and results in a sample size of 432 business actors.

Data are processed using factor analysis. The following assumptions must be met to use factor analysis:
1. A correlation exists among independent variables.
2. Partial correlation can be observed from the anti-image correlation.
3. The entire correlation matrix (correlation between variables) is measured by the Bartlett test of sphericity or measure sampling adequacy (Cerny & Kaiser, 1977).

The formula for the Kaiser–Meyer–Oikin (KMO) test is

$$MO_j = \frac{\sum_{i \neq j} r_{ij}^2}{\sum_{i \neq j} r_{ij}^2 + \sum_{i \neq j} u_{ij}^2}$$

where

R = $[r_{ij}]$ is the correlation matrix and
U = $[u_{ij}]$ is the partial covariance matrix.

The formula for Bartlett test is

$$X^2 = -\left[n - 1 - \frac{1}{6}(2p + 5)\right] \ln|\hat{\rho}|$$

Where

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R = value of determinant n = amount of data p = number of variables

Factor analysis intends to describe covariant relationships among several underlying but unobserved variables and random quantities called factors (Johnson & Wichern, 1998). The random vector X observed with p component has a mean and covariance matrix. The factor analysis model is as follows:

$$X_1 - \mu_1 = l_{11}F_1 + l_{12}F_2 + ... + l_{1m}F_m + \varepsilon_1 \quad (1)$$

$$X_p - \mu_p = l_{p1}F_1 + l_{p2}F_2 + ... + l_{pm}F_m + \varepsilon_p$$

It can also be written in matrix notation as follows:

$$\boldsymbol{X}_{pxl} = \boldsymbol{\mu}_{(pxl)} + \boldsymbol{L}_{(pxm)}\boldsymbol{F}_{(mxl)} + \boldsymbol{\varepsilon}_{pxl} \quad (2)$$

with

μ_i = variable average i

ε_i = specific factor i

F_j = *common factor* j

l_{ij} = loading from variable i to factor j

The part of the variant i from the common factor m is called communal i which is the sum of squares of the loading variables i and m on common factors (Johnson & Wichern, 1998). The formula is expressed as follows:

$$h_i^2 = l_{i1}^2 + l_{i2}^2 + ... + l_{im}^2 \quad (3)$$

Factor analysis also aims at using a count correlation matrix to 1) identify the smallest number of common factors, particularly the most parsimony factor model, that provides the best explanation or links the correlation between the indicator variables; 2) identify through rotation factors the most reasonable factor solution; 3) estimate the shape and structure of loading, communality and unique variants of the indicators; 4) interpret general factors and 5) if necessary, estimation scores (Subash Sharma, 1996).

KMO Test

The KMO test aims to determine whether all data obtained sufficient to be factored. The hypotheses of KMO are as follows:

H0: The amount of data is sufficient to be factored.

H1: The amount of data is insufficient to be factored.

Statistic test:

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$$KMO = \frac{\sum_{i=1}^{p}\sum_{j=1}^{p} r_{ij}^2}{\sum_{i=1}^{p}\sum_{j=1}^{p} r_{ij}^2 + \sum_{i=1}^{p}\sum_{j=1}^{p} a_{ij}^2} \quad (4)$$

i = 1, 2, 3, ..., p and j = 1, 2, ..., p
r_{ij} = correlation coefficients between variables i and j
a_{ij} = partial correlation coefficients between variables i and j

If the KMO value is greater than 0.5, then H0 is accepted. The amount of data is sufficient to be factored.

Bartlett Test (Intervariable Freedom)

The Bartlett test aims to determine a relationship among variables in multivariate cases. If variables X1, X2, ..., Xp are independent or mutually independent, then the correlation matrix among the variables is the same as the identity matrix. To test the freedom between these variables, the Bartlett test states the following hypotheses:
H0: $\rho = I$
H1: $\rho \neq I$

Statistic test:

$$\bar{r}_k = \frac{1}{p-1}\sum_{i=1}^{p} r_{ik} \quad , k = 1, 2,...,p$$

$$\bar{r} = \frac{2}{p(p-1)}\sum\sum_{i<k} r_{ik}$$

$$\hat{\gamma} = \frac{(p-1)^2\left[1-(1-\bar{r})^2\right]}{p-(p-2)(1-\bar{r})^2} \quad (5)$$

where
$\bar{r}_k$ = average diagonal element in the k column or row of the R matrix (correlation matrix)
$\bar{r}$ = overall average of diagonal elements

Rejection area:
H0 is rejected if

$$T = \frac{(n-1)}{(1-\bar{r})^2}\left[\sum\sum_{i<k}(r_{ik}-\bar{r})^2 - \hat{\gamma}\sum_{k=1}^{p}(\bar{r}_k-\bar{r})^2\right] > \chi^2_{(p+1)(p-2)/2;\alpha} \; . \quad (6)$$

If the variables are correlated with one another, then variables are related. If H0 is rejected, multivariate analysis can be uses, especially principal component analysis and factor analysis.

4. RESEARCH RESULTS AND DISCUSSION

The results of data processing reveal that 79.2% of business actors have records regarding the financial management of their business. However, this form of financial recording is simple, as indicated by 72% of respondents who shared that their financial records are still manual. The reason for the respondents making simple financial records is that they

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view their business as small, and , as such, they do not feel the need to record their finances according to the applicable financial accounting standards.

The results also show that the constraints in recording business finances are not mastering financial recording or accounting. In addition, the business capital used for daily operations mostly comes from personal wealth so the respondents feel they do not need to carry out detailed financial records. This can also be a 'time bomb' that can detonate in the course of business operations. Many business actors have yet to separate the use of capital for business and for personal needs. As a result, the capital that should be used for business operations is actually spent on daily expenses. This practice can disrupt business operations, especially those related to business capital.

Business people prefer to use funds from internal business rather than from external companies. This preference can be understood because business actors do not want outsiders to interfere with the management and do not want to have debt to parties outside the company. Businesses actors also do not want outsiders to become an obstacle in making decisions for the continuity of their business.

However, business actors recognize that basically the owner or manager of the business must know how to manage finances properly and correctly. Although the applicable financial accounting standards are not followed, each business must record financial transactions. In practice, financial management of businesses, such as purchasing production needs that are carried out spontaneously without prior planning, continue to show weaknesses.

With the results of factor analysis using KMO and Bartlett test as basis, which indicators can be analysed further can be determined. Indicators that can be further analysed must have KMO values above 0.5. Based on the KMO value, only nine indicators can be further analysed. The other four variable indicators cannot be analysed further because they have KMO values below 0.5. The nine indicators are

1. Good financial management (X1)
2. Recording every financial transaction (X3)
3. Availability of financial records that do not comply with financial accounting standards (X4)
4. Perception of the use of business funds for personal purposes (X7)
5. Use of business funds for the purchase of company assets (X8)
6. Payment due to creditors (X10)
7. Separating personal expenses from company operations (X11)
8. Periodic planning for company operations (X12)
9. Spontaneous purchases (X13)

Data analysis using the component matrix identifies two factors from the nine indicators mentioned above. The indicators under Factor 1 are as follows:

1. Good financial management (X1)
2. Recording every financial transaction (X3)
3. Availability of financial records that do not comply with financial accounting standards (X4)
4. Perception of the use of business funds for personal purposes (X7)
5. Separating personal expenses from company operations (X11)
6. Periodic planning for company operations (X12)

The following indicators are under Factor 2 category:

1. Use of business funds for the purchase of company assets (X8)
2. Payment due to creditors (X10)
3. Spontaneous purchases (X13)

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Based on the results of the component matrix, the closeness of each indicator can be determined, as presented in Table 2.

Table 2 Component Matrix [a]

Component	X_1	X_3	X_4	X_7	X_8	X_{10}	X_{11}	X_{12}	X_{13}
1	0.564	0.823	0.656	-0.576	0.231	-0.285	0.665	0.716	-0.562
2	0.435	0.09	-0.118	0.468	0.724	0.656	0.151	0.43	0.642

Extraction Method: Principal Component Analysis.
[a]two components extracted

Each indicator has a level of correlation with Factor 1. Good financial management (X1) has a correlation of 0.564; Recording of each financial transaction (X3), 0.823; Availability of financial records that are not in accordance with financial accounting standards (X4), 0.656; Perception of the use of business funds for personal purposes (X7); -0.576; Separating personal expenses from company operations (X11), 0.665; Periodic planning for company operations (X12), 0.716. The correlation to Factor 2 are 0.724 for Use of business funds for the purchase of company assets (X8); 0.656, Payment due to creditor (X10);0.642, Spontaneous purchases (X13).

Positive correlation can improve financial behaviour, whereas negative correlation can weaken financial behaviour. Improvement of financial behaviour comprises Good financial management (X1), Recording every financial transaction (X3), Availability of financial records that are not in accordance with financial accounting standards (X4), Separating personal expenses from company operations (X11), Periodic planning for company operations (X12), Use of business funds for the purchase of company assets (X8), Payment due to creditor (X10), and spontaneous purchases (X13). The weakening of the financial behaviour of business actors includes Perception of the use of business funds for personal purposes (X7)

Unlike that of large companies, financial behaviour of SMEs is more driven by factors than the actors themselves. The financial condition of SMEs is not as complicated as the financial condition of large companies, and it can impact the management of the financial business concerned. Given the smaller scope, management is often simpler. This condition is the same as the findings of Moritz et al. (2016), Gallo et al. (2004), López-Gracia and Sogorb-Mira (2008) and Berger and Udell (1995).

To improve the financial behaviour of SMEs in the creative industries in Bandung City, efforts should be exerted to educate SMEs on how to manage their business finances. According to Thiessen (2014), the importance of financial education is increasing with the development of markets and changes in demographics, economics and policies. The level of financial knowledge and literacy should be raised. The same thing is also put forward by Hira (2012), that is, financial literacy can influence the existence of financial behaviour and other factors such as value, actions towards risk, belief and experience. In contrast with previous research, the present study look more at the internal aspects of the actors to form financial behaviours of SMEs in the creative industries in Bandung City.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the research and discussion, two factors influence the financial behaviour of SMEs in the creative industries in Bandung City. Internal factors are sourced from the internal capabilities of the entrepreneurs themselves. External factors are real conditions that occur and are outside the personal ability of the businessmen.

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This study recommends further research to deeply analyse the factors that shape the financial behaviour of SMEs in the creative industries. To improve their financial behaviour, business actors (SMEs) should be educated regarding corporate financial knowledge and financial literacy.

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