CHAPTER 1

INTRODUCTION

In today's business, business owners need to deal with environmental issues as a basis for strategic change, in line with the growing social and regulatory concerns for the environment (Chen and Hung, 2014). By engaging in environmental business practices, it may support the company to gain competitive advantage and improve their organizational as well as environmental performance (El-Kassar and Singh, 2019). With the growing social and regulatory concerns for the environment, external influences can affect managers to promote unique resources, especially those managers who have experienced from impropriety and have failed to meet the compliance problems regarding environmental issues (Berrone *et al.*, 2013).

Based on the Indonesian Law Number 20 Year 2008, Micro, Small, and Medium Enterprise (MSME) is a productive economic business that stands independently and carried out by an individual or business entity that is not a subsidiary or is not a branch of any company which is owned, controlled, or is a part of another business unit either directly or indirectly, with the amount of assets (excluding the factory sites) less than equal 10 billion rupiah and annual sales is less than equal 50 billion rupiah. From 2010 to 2017, The Ministry of Cooperatives and SMEs reported the number of MSMEs in Indonesia is growing by 10,1 million units, from 52,7 million business units in 2010 to 62,9 million business units in 2017. The threats emerging from rapid growth of industries in Indonesia should be inspected thoroughly by the company, government, and society as a whole as it could possibly generate unidentified risk towards the environment.

Inadequate control for the industrial activities could result in harming the natural resources of a country, letting out hazardous wastes and emissions toward

the environment that endanger the biotic ecosystem and also the people who come in contact with it (Saria *et al.*, 2006; Sindern *et al.*, 2016; Dsikowitzky *et al.*, 2017; Suherman *et al.*, 2019). Based on the Indonesian Law Number 32 Year 2009, waste is the non-product (residual) result from the production process which are categorized to: Hazardous and Toxic Substances (B3) which is emitted from specific sources on the main process of production (and otherwise), and from other unrecognized sources. The second category of waste is non-B3 waste which come from domestic waste, agricultural waste, and some of the industrial waste (BPS, 2018). Wastes and emissions are not only threaten industrial and municipal areas, but also the slum areas (Alam *et al.*, 2019). For example, the quality of rivers in Indonesia are stepping on the heavily polluted level in 2018. From the data provided by BPS, 25,1% of villages in Indonesia are facing water pollution, and 2,7% villages land are polluted (BPS, 2018). In order to address this issues, business owners get better understanding on environmental issues from the viewpoint institutional theory as a tool in this modern era of organization. Institutional theory recognizes the need for an organization to conform with other organizations and adopt changes necessary to achieve social and economic benefits (DiMaggio and Powell, 1983; Zucker, 1987). According to institutional theory, a company is required to comply with external pressures (namely coercive, normative, and mimetic pressures which are associated with regulators, customers, and competitors) because institutional isomorphism will result in organizational legitimacy that promote environmental practices (DiMaggio and Powell, 1983; Rahman *et al.*, 2014). In achieving corporate sustainable development, institutional views are considered useful to support the firms' commitment in promoting sustainability initiatives (Bansal, 2005). The three mechanisms of institutional theory are: coercive isomorphism, normative pressures, and mimetic process.

Environmental management will be sought as the crucial performance indicators to develop business' competitive advantage in the future (Chiou *et al.*, 2011). Environmental management accounting (EMA) itself can be defined as

"the management of environmental and economic performance through the development and implementation of appropriate environment-related accounting systems and practices. While this may include reporting and auditing in some companies, environmental management accounting typically involves life-cycle costing, full cost accounting, benefits assessment, and strategic planning for environmental management" (IFAC, 2005). EMA raises the attention regarding social and environmental issues by conducting identification, collection, analysis, and the use of physical and monetary environmental information (Burritt *et al.*, 2009). EMA has proved its usefulness by providing information to management regarding the measurement of environmental and social risk of non-product output and obtain advantage in terms of financial benefit, promoting cleaner production (CP) (Burritt *et al.*, 2009), and reducing cost associated in production also the waste produced in the production (Sulong *et al.*, 2015). Previous study also showed that EMA has a potential to generate innovation in which level a firm commits in process innovation (Ferreira *et al.*, 2010).

Material Flow Cost Accounting (MFCA), as an EMA tool, was introduced by International Organization for Standardization (ISO) in 2011. MFCA helps firm to trace and quantify the cost of physical flow of material and energy used in business practices of a firm to better recognize the possible environmental and financial consequences of utilizing the energy and material during the business process. By recognizing the consequences of material and energy usage, a firm may explore the opportunity to promote the environmental and financial performance by attaining efficient uses of material and energy which will result in lower cost associated in the process and reduce the negative impacts of business toward the environment (ISO, 2011).

This study extends the previous literatures to fill the gap regarding external pressures in institutional views (regulatory pressures and market pressures) and its affect on the financial performance of MSMEs in East Java which are steadily increase in number over years (BPS, 2018), which have the potential to harm the environment if there isn't any preventive action taken. Previous studies focused

on the effect of institutional pressures to the adoption of EMA (Jalaludin *et al.*, 2011; Qian *et al.*, 2011; Christ, 2014; Qian *et al.*, 2015; Iredele *et al.*, 2019; Wang *et al.*, 2019; Zandi and Lee, 2019; Abd *et al.*, 2020; Yassin and Ali, 2020), therefore this study discovers the effect of external pressures with the application of MFCA on the business process to the financial performance of MSMEs. This research tries to deepen the understanding on the factor influencing the adoption of MFCA and its effect on financial performance of MSMEs in Indonesia, specifically in East Java, as previous research by Susanto and Meiryani (2019) have discovered the investigate the factor influencing the adoption of EMA and the impact on environmental performance of SMEs in Indonesia. Further results of this study are expected to be used as considerations for business owners of MSMEs in composing strategies to achieve competitive advantage and better performance, and as discussion materials for researchers to expand the scope of research on this issues. In this paper, competitive and customer pressures will be referred as market pressures, referring to previous research done by Dai *et al.* (2018).

In previous literatures, MFCA as an EMA tool, rarely discussed as a tool which is affected by the pressures from external parties or affecting the financial performance of a firm in a survey-based quantitative research, as most of the previous literatures employed case study and exploratory approach (Sulong *et al.*, 2015; Wan *et al.*, 2015; Rieckhof and Guenther, 2018; May and Guenther, 2020), and few literatures use questionnaire survey for data collection (Nakajima *et al.*, 2014; Yagi and Kokubu, 2018). This study tries to answer the recommendation from previous review on the scarcity of MFCA studies who develop survey-based research and use statistical analysis to achieve generalized and empirical results to be added into the diversity of MFCA literatures, thus increasing the popularity of MFCA to be applicated (Christ and Burritt, 2015). Thus, this result of this study is more likely to be considered. This study provides the results from the perspective of institutional views toward financial performance, with the application of MFCA in MSME across East Java.

The research is conducted in Indonesia as a developing country where the demands for energy are high, which lead to potential shortage of existing energy, followed up with rapid increase in economic activities and populations, resulting in greater amount of wastes, plastic, and by-product produced (Andriani and Atmaja, 2019). Micro, Small, and Medium enterprises (MSMEs) across the East Java region are selected as the objects of research. Based on the latest survey by BPS (BPS, 2016), the number of MSME in East Java, which consists of 38 cities and districts, is 4,67 million and account for 17% of MSMEs in Indonesia. MSME also has considerable impact towards the social and economic aspects of Indonesia that contributes to 60% of GDP and has been the largest proportion of business actors in Indonesia (above 90%) (BI, 2015). Thus, the business practices of MSME needs to receive attention to prevent and minimize the negative impact of the activities to environment. This study also tries to introduce the terms MFCA toward the MSME actors as it can be implemented with relatively low cost and low level of difficulty (Huang *et al.*, 2019). This study tries to promote it more so that it can be acknowledged by the MSME owners, because some MSMEs may have implemented it intentionally or unintentionally in their business activities. Quantitative method is applied with data from questionnaire surveys, which is suggested by previous research to verify the previous results and also develop generalized results (Christ and Burritt, 2015; Ramanathan *et al.*, 2017). This study uses Partial Least Square – Structural Equation Modelling (PLS-SEM) to test the hypothesis.

This study develops PLS-SEM model to obtain generalized results from small sample size of MSMEs in East Java. This study finds out that the regulatory pressure and market pressure positively affect the implementation of MFCA conducted by MSMEs, as well as affecting financial performance of MSMEs. MFCA also mediates the pressure received from regulation and market as a whole to remain competitive while supporting the sustainability initiatives.

This paper is arranged in this order: The second part provides the literature review from previous research and study to develop the hypothesis of the effect of

external pressures toward the financial performance, both mediated or not mediated by material flow cost accounting. The third part shows the methodological approach and measurements used in this study which uses data from questionnaire distributed among Micro, Small, and Medium enterprises (MSMEs) across the East Java region. The fourth part interprets the analysis and results of the proposed hypothesis, followed with discussion of the results. The fifth part, as the last part of this study, provides the conclusion and limitations of this study, also proposes directions for future.