

The Role of Bekraf and Development Micro and Small Industries (MSE) in Indonesia

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Abstract. The study aims to analyze the indirect role of Bekraf and the business environment in the development of MSEs in Indonesia by using the SME strengthening framework applied in OECD countries. The research data uses secondary data from the Central Statistics Agency which are the results of a survey of micro and small industries for the period 2010 – 2019. For estimation, this study uses a robust regression method that is not sensitive to outlier data. The findings of this study are that the BEKRAF institution plays more of a role in export-oriented MSEs than in domestic market-oriented MSEs, but the role of the BEKRAF institution is still limited to increasing external loans and has not touched on increasing the productivity and compensation of SME workers. The use of the internet and online sales media for MSEs has increased competitiveness in the domestic market, while Global Value Chain (GVC) participation and the level of education of entrepreneurs have provided increased export opportunities. The level education of workers has not contributed to the performance of SMEs in comparable to the entrepreneurs which has made a positive contribution to export-oriented SMEs. The access to a fixed capital remains as the main obstacle in facilitating the development of SMEs. Therefore, its business environment needs to be improved by adjusting the capital loans that are tailored to the conditions and needs of SMEs or improving the skills and education of workers and entrepreneurs which are aligned with the level of technology mastered by SMEs. Improving SME technology itself can be done in collaboration with large industries within the GVC framework.

Keywords: MSE (Micro Small Enterprises), Bekraf Institution, GVC

1. Introduction

The Bekraf institute is formed by the government in 2015. As a non-ministerial institution, Bekraf has the main objective to encourage the development of the creative economy industry. However, in 2019, the Bekraf agency merged into the tourism ministry. This study does not aim to discuss the merger impact between Bekraf and the ministry, but the study focuses on examining whether Bekraf encourages the micro and small businesses growth in general. Prior to the merger, the Bekraf institution concentrates on managing 16 sub-sectors of the creative economy that crosses the KBLI stipulation sectors. Six of the sixteen sub-sectors of the creative economy are related to the manufacturing sector. The creative craft industry has links with KBLI C13, C15, C16, C17, C23, C25, C31, C32; while the culinary arts creative industry is related to KBLI C10; Fashion is related to KBLI C14 and C15; Music related to KBLI C 18; Film, animation, and video related to KBLI C18; and Publishing related to KBLI C18 [1]. Hence, the Bekraf institution indirectly influences the development and growth of the micro-small

business manufacturing sector. To analyze the indirect role of Bekraf institutions, this research follows the framework of the SMEs strengthening in OECD countries [2]. The framework gives four factors of determinants, namely access to economic resources (capital, labor, raw materials, and technology); market access; entrepreneur culture (opportunities, abilities, and attitudes); and institutions.

Based on the research that has been done and the framework for strengthening SMEs, the first problem is getting access to capital and credit. In developing countries, the external financing problem is access to lack of capital and credit because the bank credit loans are still relied on other asset-based finance [3, 4]. Meanwhile in OECD countries, MSME external financing has been developed by not only based on asset-based finance [5]. Moreover, financial institutions and banks themselves do not yet have the capacity to offer tailor-made MSE loans due to the non-existence of the systems, data, infrastructure, and personnel staff needed to expand MSE loans [4]. The condition of financial access gaps is also still found in other developing countries, such as in Vietnam [6] and in Bangladesh [7]. Second, e-commerce adoption and Global Value Chain (GVC) participation in the market cannot automatically to work for MSE to overcome market access barriers. Thai SME exporters do not have a positive impact on increasing the use of e-commerce [8], but the use of business-to-business (B2B) e-commerce can increase exports of Thai SMEs [9]. The adoption of business-to-consumer e-commerce has also not increased handicraft exports in Ghana [10] and has not increased sales of goods and services in Indonesia [11]. Large-scale companies are more role to cooperate in GVC participation framework, both backward and forward, with small-scale companies in Thailand [12], and Latin America and the Caribbean [13]. Meanwhile, the low performance of Indonesian SMEs among ASEAN countries has been in the low contribution of exports and global trade [14, 15]. Consequently, Indonesian companies, which join GVC, will have increased productivity after participating in GVC, hence Filipino and Vietnamese companies, which will participate in GVC, already have high productivity before joining GVC [16]. Third, this shortage of entrepreneurs and workers, who are educated and skilled in SME, results in a lack of innovation [17], feeling as if in an informal business [18], and not being involved in the GVC [19]. Amalia & Korflesch say that entrepreneurship education in universities in Indonesia has not been effective as an active entrepreneurship education program [20]. Fourth, the weak role of institutions in facilitating the development of SMEs resulted in the failure of institutionalization of continuous knowledge transfer [21]. In the Indonesian case, Bekraf institution develops a triple helix approach (government, academics, businesspeople) to improve entrepreneurial skills for creative industry business actors, but some programs are not sustainable [22]. This triple helix model can be applied to the collaborations between domestic, foreign, and global. Such innovative collaboration further enhances knowledge, innovation, and technology in an integrated manner at different levels in South Korea and West Africa [23].

Based on the previous research and the OECD concept of SME business environment development framework, this study is conducted to analyze how the business environment facilitates MSE development in Indonesia. The SME development framework in the OECD can be simplified in Figure 1. As shown in the Figure 1, the SME business environment consists of four determinants, namely access to human resources and production inputs, access to markets, entrepreneurial culture in the form of opportunities, abilities, and attitudes, and institutional and regulation. These four determinants will facilitate the achievement of entrepreneurial performance as indicated by the achievement of company and employee performance.

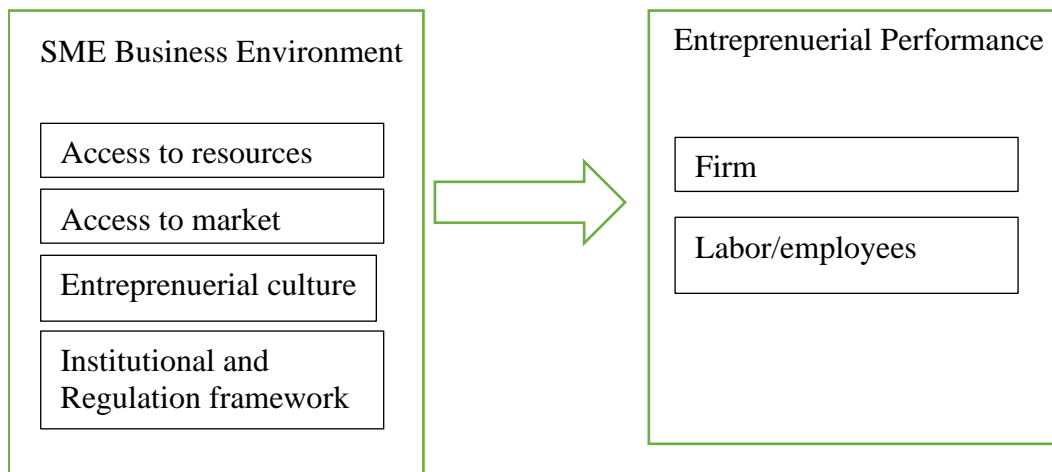


Figure 1. SME business environment: A conceptual framework

The data of these determinants are the secondary data taken from the annual BPS survey results of micro and small industry. Several adjustments need to be made for applying the results of the BPS survey to assess the SME business environment. The selected secondary data is inputted into the regression estimation model. In this study, the coefficients estimation of the business environment determinants uses robust regression.

2. Method

This study uses the OECD conceptual framework by adjusting the research objectives and the availability of secondary data from the BPS, which is based on a survey on micro and small industries. The robust regression provides flexibility in classical assumptions and is not sensitive to the outlier data [24]. In notation, this research model is

$$Y_{it} = x'_{it}\beta_k + \alpha_i + \epsilon_i$$

where $\beta' = (\beta_1, \beta_2, \dots, \beta_k)$, t = number of time periods (for 10 years, 2010 – 2019), and i = numbers of observation (in this context are 23 MSE manufacturing sectors).

In this study, MSE performance is indicated by productivity, which is approximated by MSE output per worker (OUT_MSE/LABOR), and compensation per employee (COMP_MSE /LABOR). The productivity and compensation per workers are influenced by (1) access to economic resources, namely: the number of MSE recipients of banking capital loans (ENTERP_LOAN), the number of workers graduating from college (EDU_LABOR); (2) market access, which is indicated by the number of MSE having the main consumers from domestic communities (CONSU_DOM), the number of MSE whose main consumers are foreign people (CONSU_FOR), the number of companies that use the internet in their business (E_COMM), and the number of companies that establish GVC cooperation (PARTN_GVC); (3) the quality of entrepreneurs, as indicated by the number of entrepreneurs who graduated from higher education (EDU_UNIV); and (4) Bekraf institution (D_BEKRAF).

The mathematical formula of model can be written:

$$\ln\left(\frac{OUT_{MSE}}{LABOR}\right)_{it} = \left(ENTERP_{LOAN\ it}, EDU_{LABOR\ it}, COMP_{it}, E_{COMM\ it}, PARTN_{GVC\ it}, EDU_{UNIV\ it}, D_{BEKRAF\ it} \right) \beta_k + \alpha_i + \epsilon_i \dots\dots(2)$$

$$\ln\left(\frac{COMP_{MSE}}{LABOR}\right)_{it} = \left(ENTERP_{LOAN\ it}, EDU_{LABOR\ it}, COMP_{it}, E_{COMM\ it}, PARTN_{GVC\ it}, EDU_{UNIV\ it}, D_{BEKRAF\ it} \right) \beta_k + \alpha_i + \epsilon_i \dots\dots(3)$$

where,

$$CONSU_{it} = (CONSU_{DOM\ it}, CONSU_{FOR\ it})$$

The variables used in this study are:

Table 1. Variables and Explanation

Variables	Explanation
OUT _{MSE} /Labor	The output per total of the employees for micro and small-scale manufacturing industry in a year (Millions of Rupiahs)
COMP _{MSE} /Labor	The compensation per total of the employees for micro and small-scale manufacturing industry in a year (Millions of Rupiahs).
ENTERP _{LOAN}	Number of MSE recipients of bank capital loans
EDU _{LABOR}	Number of employees who is college graduates
COMP _{FOR}	The number of MSE who's the main consumers are from overseas
COMP _{DOM}	The number of MSE whose main consumers are from domestic
E _{COMM}	Number of entrepreneurs who use the internet in their business
PARTN _{GVC}	Number of companies entering into sub-contracting cooperation, as a GVC approach
EDU _{UNIV}	Number of entrepreneurs holding college diploma
D _{BEKRAF}	The manufacturing sector has correlated creative industries after the 2015 year are 1, while others are zero

This research data uses secondary data from the BPS survey on micro and small industries from 2010 to 2019. This study uses the MSE definition based on labor as defined by the Central Statistics Agency (BPS). Micro business units employ 1-4 people, small business units employ 5-19 people, medium business units employ 20-99 people, and large businesses employ more than 100 people [25].

3. Results and Discussion

The estimation results show the selected independent variables explaining the changing 54%-57% in the productivity of MSE workers and 97%-98% in MSE workers' compensation. In more detail, on access to resources, external loans provide a positive impetus for increasing worker productivity (model 2) and workers' compensation (model 4), especially on MSE who's the main consumer from domestic community. A 1% increase in external borrowing will increase 0.09% of worker productivity and 0.18% increase in workers' compensation. With access to capital and loans, as revealed by Burger et al [3]. and Ogoi, this study also shows that MSE makes technological improvements, such as purchasing machines or equipment that simplify the production process and increase worker productivity [26]. Meanwhile, in export oriented MSE, the increasing access to export loans has only increased worker productivity (model 1) and has not yet had an impact on increasing workers' compensation (model 3). This finding is also in line with the opinion of McLean & Charles which states that increasing access to loans increases export opportunities [27]. This study shows the low influence of access to loans on productivity and workers' compensation. In the end, Bank Indonesia, which holds the monetary authority, needs to make tailor-made loans for MSE and opens alternative financing based on financial assets. This issue has also been suggested by research by Burger et al [3]. and the ILO for cases in Indonesia [4].

Table 2. Estimated Productivity and Compensation per MSE Worker

Variable	Method: Robust Least Squares			
	Dependent Variable: LOG(OUT_MSE/LABOR)		Dependent Variable: LOG(COMP_MSE/LABOR)	
	(1)	(2)	(3)	(4)
Constant	-10,3948 ** (0,2190)	-10,1856 ** (0,1803)	-5,3554 ** (0,2882)	-5,8957 ** (0,2293)
ENTERP_LOAN	0,0012 ** (0,0005)	0,0009 ** (0,0004)	0,0009 (0,0007)	0,0018 ** (0,0005)
EDU_LABOR	0,0045 (0,0043)	0,0003 (0,0005)	0,0027 (0,0056)	-0,0038 ** (0,0006)
CONSU_DOM		-0,0012 ** (0,0004)		-0,0020 ** (0,0006)
CONSU_FOR	0,00004 (0,0004)		0,0006 (0,0005)	
E_COMM	0,0016 ** (0,0006)	0,0012 ** (0,0004)	0,0003 (0,0008)	0,0015 ** (0,0005)
PARTN_GVC	0,0007 * (0,0004)	0,0003 (0,0004)	0,0011 ** (0,0005)	0,0001 (0,0005)
EDU_UNIV	-0,0043 (0,0055)	0,0011 ** (0,0004)	-0,0029 (0,0072)	0,0073 ** (0,0006)
D_BEKRAF	0,3607 * (0,2165)	0,7337 ** (0,1945)	-6,8268 ** (0,2849)	-5,2576 ** (0,2475)
Rw-squared	0,5398	0,5719	0,9741	0,9810

The education factor of the workforce has not yet contributed to the productivity and compensation of MSE workers. The study finds that the value of the compensation to be paid is not proportional to the increase in the company's income. Only because these workers are college graduates, they demand higher wages, but they have not been able to contribute to the company's high income. For every 1% increase in the number of college-educated workers, the overall compensation per worker decreases by 0.38%. In microeconomic theory, the marginal product of labor decreases and is in the third state in the production function. This finding is supported by the results of the OECD survey which shows that more than 78% of adults in Jakarta have low performance and more than 50% of adults in Jakarta have scored below one for literacy and numeracy [28]. Correspondingly, Allen says that many job positions are still filled by workers who are less qualified and less skilled [29].

In market expansion, the use of the internet and online sales have increased the productivity and compensation of workers, especially MSE, which is orientated towards the domestic market. Every 1% increase in MSE using the internet or online sales increases 0.12% of worker productivity and 0.15% of workers' compensation in domestic market oriented MSE. It is interpreted that the use of the internet and online sales media of MSE has increased competitiveness compared to MSE who have not used it. However, referring to other studies, these findings do not automatically increase the overall MSE output. In other words, the size of the market share has not changed when the use of internet technology is still limited to the use of e-commerce business-to-consumers. The business actors, who use e-commerce business-to-consumer technology, can seize a larger market share and reduce the market share of business actors, who have not yet used internet technology. The size of the market share grows bigger when the use of e-commerce business to business. Amornkitvikai et al. prove that the use of business-to-business e-commerce increases the export market share of SMEs in Thailand [9], while Taylor & Owusu show that the adoption of business-to-consumer e-commerce has also not increased its export market share in Ghana [10].

Participation in the GVC has proven to open up new opportunities in the global market. In overseas market oriented MSE, every 1% increase in MSE joining GVC will increase worker productivity by 0.07% while workers' compensation by 0.11%. This finding supports the research results of Hidayat et al. [14], ADB [15], Urata & Baek [16]. GVC provides increased export opportunities because it facilitates the transfer of knowledge from technologically advanced foreign buyers. The optimised productivity is the keyword for participating in the global market, and as a learning medium for exporting all types of exports related to various types of participation in GVC.

The education level of MSE entrepreneurs, which is orientated towards foreign markets (model 2 and model 4), has made a positive contribution. Every 1% increase in employment of university graduates can increase 0.11% increase in worker productivity and 0.73% in workers' compensation. This finding does not contradict the previous findings, because it shows that entrepreneurs who graduate from college have a higher chance of exporting than entrepreneurs who do not graduate from college. Meanwhile, entrepreneurs who graduate from universities with a domestic market orientation have the same opportunities as entrepreneurs who graduate from non-university. Thus, research suggests entrepreneurs who hold a college diploma orientate themselves to foreign markets.

The existence of Bekraf has brought the development and growth of the creative economy in Indonesia. However, does the existence of Bekraf also play a role in the development of MSE, where creative economy actors are dominated by small-scale business players? In general, Bekraf institutions have indirectly increased worker productivity, especially MSE, which is orientated towards foreign markets. Every 1% additional Bekraf's indirect role has increased worker productivity in export-oriented MSE (model 2) by 73% and in domestic-oriented MSE (model 1) by 36%. However, the policy of establishing a new Bekraf institution is concentrated on increasing the value of production output. The Bekraf Institute has not increased the number of MSE entrepreneurs [30]. Although the Bekraf institution primarily aims to produce creative economy entrepreneurs, the creative economy includes knowledge-based economic activities in which the "creative industries" - advertising, architecture, arts and crafts, design, fashion, film, video, photography, music, performing arts, publishing, research and development, software, computer games, electronic publishing, and TV/radio – developing existing businesses including small-scale businesses. Based on the FGD conducted in order to complete this research, one case in particular, namely Rapel [31]. Rapel is an application to sell inorganic waste that still has a selling value and is sorted by type and by the waste owner as the user of the application. Rapel, which is established in Yogyakarta, aims to address social problems. Piyungan landfill is closed for a week and as a result, TPS in Yogyakarta is full of garbage and smelly. Rapel's creative application, which is a liaison between inorganic waste disposal actors and inorganic waste processing actors, has opened up opportunities for small-scale businesses to become actors or collectors who come to the house and collect, weigh and then appreciate the waste by sorting process, and open collaboration with the end buyers such as PT Tetra Pak Indonesia, which has wastage treatment. Therefore, the development of the creative economy will also develop existing micro, small and medium scale businesses.

Bekraf institutions, indirectly, increase the gap between productivity and workers' compensation. Every 1% addition to Bekraf's indirect role increases the gap from 5.3 to 6.8 times between productivity and workers' compensation. However, at a macro level, the growth rate of labor productivity in the manufacturing and primary sectors is relatively low compared to the growth of labor productivity in the service sector [32]. Additionally, to the low level of labor productivity in various sectors in Indonesia, the growth rate of labor productivity is also relatively low compared to other countries. This issue means that the increase in the gap is not only caused by the existence of the Bekraf institution but can also be caused by labor problems in Indonesia. Hence, this issue needs further study.

4. Conclusion

Based on the above study, the MSE business environment has not shown optimal performance. In terms of resource access, this study shows that the capital loans still have a low effect on worker productivity and compensation. Likewise, the education factor of workers has not yet contributed to the productivity and compensation of MSEs, while the entrepreneurial education level has made a positive contribution to MSEs oriented to foreign markets. Participation in GVC has proven to open up new opportunities in the global market, while the use of the internet and online sales has increased the productivity and compensation of MSE workers in the domestic market. Meantime, the existence of Bekraf has affected the development of MSEs that are global market-oriented, but indirectly enlarges the gap between productivity and workers' compensation. Therefore, it is necessary to improve the performance of productivity and compensation of MSE workers through increasing access to finance, access to markets, skills, and education of entrepreneurs and labor and institutions.

Acknowledgement

The author gratefully acknowledges the financial support from research grant KEMDIKBUDRISTEK no. 016/ST-DirDPPM/70/DPPM/PDUPT - KEMDIKBUDRISTEK/VII/2021. We would like to express our gratitude also to everyone for helping this research.

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