

# Muslim Micro Entrepreneurs' Competency to Face Challenges in The Industrial Era 4.0

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# Muslim Micro Entrepreneurs' Competency to Face Challenges in The Industrial Era 4.0

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**Abstract.** Micro Enterprises play a crucial role in contributing an economic development particularly in East Java's economic prosperity. Nowadays, the rapid raising in Industry 4.0 is inevitable and put micro enterprises facing a great challenges and forced to push beyond the boundaries to sustain their competitive advantages and the competencies based on knowledge management to succeed as well. The competencies are integrated together in attempt to improve their business performance. In contrast, a study related to Micro Enterprises competence in particular for the Indonesian Muslim Micro Enterprises are still very finite. Therefore, this paper explores some aspects of business competence they have in current situation and another potential competencies needed in facing a novel revolution in the industrial era 4.0. Turning to the methodology used in this research, a quantitative approach utilised as a primary instrument in analysing collected data from 250 respondents distributed in some districts in East Java Province such as Surabaya, Malang, Kediri, Ponorogo, Madiun and Ngawi. The respondents are divided into three categories: owner, manager, and owner-manager also. In addition, this study uses eleven aspects such as accounting, training on achievement motivation, business feasibility study, business plan, finance, human resource management, the use of accounting information and communication technology, leadership training, marketing and promotion, operational/manufacturing management, and business research development to identify the core competency from Muslim micro enterprises. This research contributes on recent description of Muslim micro enterprises competence and future 3 years training needed. Furthermore, the implications of this study and directions for future research are also discussed.

**Keywords:** micro enterprises, competency, industry revolution 4.0.

## 1 Introduction

The raising of technology and human needs accelerates the rapid development of industries which fulfill the needs. It is clearly witnessed that the industries change quickly and transform to the next step of revolution called 4.0. As the consequence, this novel era brings challenges in various fields including the aspects of knowledge, technology, economics, social and politics. Zhou et al. [1] conveyed that the benefits of which can be obtained is effectiveness and efficiency in every activities including business in terms of time, cost, human resources and use of natural resources. In addition, business world requires its human capital to be able to adjust the existing developments, especially in the aspects of mastering technology in their business operations. By doing this, the existing businesses could be improved and even more more

advanced. On the other hand, the downsides of this revolution could be harmful for entrepreneurs who are not capable in utilizing technology and unable to compete in the market places due to the lack of skills needed to measure the issues. Therefore, the inevitable raising of technology and industry should be faced by preparing human resource based on knowledge management and entrepreneurial competencies.

MSMEs contributes a important role in the development of Indonesian economy. This is obviously can be seen from its contribution to Gross Domestic Product (GDP) of the country which was around 60% in both period 2011 and 2012 [2]. In addition, this type of enterprises has potential impact in creating a large proportion of jobs due to its endeavour to the job vacancies around 97% of the total workers in the national level, particularly in the retail sectors such as foods, beverages and tobaccos. Hafni [3] proved that MSMEs have a essential influence in dropping the unemployment rate in Indonesia. This indicates that the MSMEs have crucial upsides in dealing with the unemployment issues in the nation. Therefore, the existence of MSMEs is essential in order to accomplish the national economic targets, in particular, in the East Java province.

In the East Java case, based on the data presented by Central Bureau for Statistics, there were 9.59 million people of large scale to micro scale business people out of a total population of 39.2 in 2018 and are able to contribute 74.36% of Gross Regional Domestic Product (GRDP) of the province. This indicates that business activities particularly micro-enterprises play important role as economic driver in the region. In this case micro entrepreneurs especially Muslim micro entrepreneurs have several challenges to to compete other larger business scale with the competencies they currently have mastered. Therefore, it is necessary to identify competencies possessed by Muslim micro entrepreneurs in dealing with industrial revolution 4.0 challenges.

Based on the discussion above, this research will articulate the entrepreneurial competencies among Muslim micro entrepreneurs in the East Java province. This study is encouraged by the need to assess the level of entrepreneurial competency in order to face challenges of the industrial era 4.0. In general, the objective of this paper is to explore further information related to the readiness of Muslim micro entrepreneurs with their competencies in facing the challenges. By doing this, perhaps the observed identification can be utilised in initiating government policies and programmes related to the issue.

## 2 Literature Review

Prasetyo and Sutopo [4] observed that business sector was placed in the second rank after manufacture based on the total research conducted about the industry 4.0 chalanges. This indicates that business sector has an essential impact on the development of technologies and industries in the future. Hence, many experts defined several competencies that should be improved in attempt to achieve a better business performance in the inevitable industry revolution. The most cogent way in understanding the relationship between competency and business performance is its positive impact. For this purpose, Sidek and Mohamad [5] observed that all managerial competency dimensions such as technical, generic and conceptual skills had significant influence on small business growth. In addition, Tehseen and Ramayah [6] conveyed the importance of entrepreneurial competencies for business performance based on the conceptual framework. Furthermore, Bismala [7] determined the management model of micro enterprises which adopted the corporate management aspects such as production, human

resource, finance, and marketing. Suyono [8] discovered that the owners of SMEs realized the importance of the implementation of strategic planning, decision making, evaluation and control in their business management. A study conducted by Li [9] found empirical evidence that business owner commonly have higher level of entrepreneurial competencies compared to the managers and they both could be categorized by their entrepreneurial competency level. This means that both theoretical and practical issues support the importance of competency particularly knowledge management in business sustainability. Therefore, the competency should be a crucial factor in developing businesses.

Another important competency is information technology. Wardhana [10] proved that digital marketing strategy has a significant implication about 78 per cent on the SMEs competitiveness. In contrast, Purwana et al. [11] found that MSMEs are not familiar with social media as the medium of business, in particular, marketing purposes due to the lack of technological skill. Even though they were poor in this skill but they showed great interest in using social media for marketing their products. This indicates that they need information technology skill in order to develop their enterprises. Therefore, this kind of competency is extremely required for improving MSMEs competitiveness in the foreseeable future.

Eventually, a study concerned on competitiveness conducted by Yeh and Chang [12] examined six competencies; opportunity exploration, opportunity exploitation, organizing, strategic, relationship, and commitment competencies among micro-enterprises in Taiwan. In addition, Lantu et al. [13] determined six main variables that shape the competitiveness of MSMEs; resource availability and business environment, business capability, policy and infrastructures, research and technology, financing and partnership, and performance. Hence, the existence of competency and its correlation with competitiveness is one of the primary issues discussed in many academic papers and seminars.

### **3 Research Method**

Objective of the study is to assess the level of entrepreneurial skills among Muslim micro entrepreneurs in East Java Province (Ponorogo, Madiun, Mantingan-Ngawi, Kediri, Surabaya, Malang). To meet the objective, a descriptive research has been carried out. The data was collected from both primary as well as secondary sources. The former was collected through a structured questionnaire. The items included in the questionnaire were based on the previous surveys conducted by various researchers. Probing questions were also the part of the instrument used.

Population of this research covered the enterprises in the province which mounted 250 micro entrepreneurs, selected randomly formed the sample for the study. Questionnaires were distributed to all the respondents, even though three respondents provided incomplete data. To deal with this issue, the missing data was corrected by imputing missing data through statistics tool package. By doing this the final respondent number that was considered for the result remain 250.

The collected data was tabulated using Microsoft Excel spreadsheet with appropriate coding. In addition, the data was also analysed using Microsoft Excel and SPSS 20. The entrepreneurship competency of Muslim micro entrepreneurs were assessed using different type of competencies including accounting, business motivation, business feasibility study, business plan, financial management, human resource management, information and communication

technology, leadership, marketing and promotion, operational / manufacturing management, and business research development.

## 4 Result and Discussion

Identifying the competence of Muslim micro entrepreneurs is conducted by using eleven type of competencies inquired to the respondents. Those eleven competencies are designed by the previous literatures related to entrepreneurial skills. By asking any types of training joined and involved from both government and non-government organizations in the following competencies: accounting, business motivation, business feasibility study, business plan, financial management, human resource management, information and communication technology, leadership, marketing and promotion, operational / manufacturing management, and business research development.

### 2.1 Accounting competency

Table 1. Accounting competency

	Frequency	Percent (%)
Yes	40	16
No	210	84
<b>Total</b>	<b>250</b>	<b>100</b>

Presented in Table 1 is the accounting competency from Muslim micro entrepreneurs. It is clearly witnessed that the majority of respondents (84 per cent) have not any skills related to the accountancy. This is proved that they have not received any trainings and education regarding with this issue. Additionally, this also means that their ability to run the business based on accounting principle is low which is only 16 per cent of them who applied accounting system in doing their business. Therefore, Muslim micro entrepreneurs are still lack of accounting competency.

### 2.2 Business motivation competency

Table 2. Business motivation competency

	Frequency	Percent (%)
Yes	58	23.2
No	192	76.8
<b>Total</b>	<b>250</b>	<b>100</b>

Table 2 informs the business motivation competency of Muslim micro entrepreneurs. This competency is essential in order to face challenges in industry revolution 4.0. in addition, it is also a main factor for entrepreneurs to survive in their business activities. It is obviously seen that the majority of them (76.8 per cent) do not have business motivation. This indicates that

most of the respondents have a potential weakness which harms the sustainability of their business. By contrast, it is only about one-fifths of them who have the business motivation. Regarding with this issue, it would be benefit to look deeply the reason behind this fact. Another assumption could be inquired such as the current businesses are categorized as primary business or as secondary or only as a side job initiated by females besides their primary task as household managers. Therefore, motivation is a key factor in the sustainability of enterprises particularly micro enterprises.

### 2.3 Business feasibility study competency

Table 3. Business feasibility study competency

	Frequency	Percent (%)
Yes	58	23.2
No	192	76.8
<b>Total</b>	<b>250</b>	<b>100</b>

It is clearly observed from Table 3 about the competency on business feasibility study that the majority of the Muslim micro entrepreneurs (76.8 per cent) do not have any feasibility study competency on their proposed business. This explains that most of them established their start-up without any valid and sufficient information supporting their business project. In fact, market analysis, production and promotion cost estimation are important to start every businesses. Hence, it can be concluded that business feasibility competence has a significant impact on business performance due to its profit and marketing potency.

### 2.4 Business plan competency

Table 4. Business plan competency

	Frequency	Percent (%)
Yes	51	20.4
No	199	79.6
<b>Total</b>	<b>250</b>	<b>100</b>

According to Table 4, the business plan competency is still low which is only 20.4 per cent or around one-fifths of respondents who knew and practiced a planning in starting and operating their business projects. In contrast, a huge number of them claimed that they do not have any skills in planning their business activities. This indicates that the Muslim micro entrepreneurs operated their business with no standards and targets. As the consequence, the development of their businesses could be slow and difficult.

### 2.5 Financial management competency

Table 5. Financial management competency

	Frequency	Percent (%)

Yes	52	20.8
No	198	79.2
<b>Total</b>	<b>250</b>	<b>100</b>

Table 5 articulates the financial management competency among the respondents. It is obviously witnessed that most of them (79.2 per cent) do not have this kind of competency. This explains that the majority of respondents could not manage their business finance. This may cause the lack of capital and unclear financial statement as well. Therefore, many micro enterprises are not bankable due to their inability in explaining their business financial condition throughout financial reports. Not only will this competency cause limited access to conventional financial institutions, but also access to the Islamic financial ones.

## 2.6 Human resource management competency

Table 6. Human resource management competency

	Frequency	Percent (%)
Yes	44	17.6
No	206	82.4
<b>Total</b>	<b>250</b>	<b>100</b>

Presented in Table 6 the competence of human resource management from the Muslim micro entrepreneurs. It can be seen that less than one-fifths or around 17.6 per cent of respondents are capable in managing human resources in their enterprises. This means that the level of the competency is low. In other explanation, it is obviously observed that the majority of them about 82.4 per cent do not have any abilities in human resource management. In addition, it can be explained that most of them could not arrange potential staffs or even unable to develop their business due to the lack of this skill.

## 2.7 Information and communication technology competency

Table 7. Information and communication technology competency

	Frequency	Percent (%)
Yes	50	20
No	200	80
<b>Total</b>	<b>250</b>	<b>100</b>

Based on the presented data in Table 7, it is easily understood that the majority of respondents (80 per cent) are illiterate in the term of information and communication technology. Only few of them around one-fifth have been familiar with this advanced technology in operating their businesses. This illuminates that most of Muslim micro entrepreneurs are not competent in using both information and communication technologies, in particular, for developing their business performance and marketing as well. In addition, most

of them are much more familiar with traditional method in the way of marketing and communicating with costumers.

## 2.8 Leadership competency

Table 8. Leadership competency

	Frequency	Percent (%)
Yes	54	21.6
No	196	78.4
Total	250	100

Regarding leadership competency, Table 8 articulates the percentage from the respondents who declared that they have leadership competency. It is clearly fond that only about one-fifths from the respondents who have this type of competency, while it is around 78.4 per cent of them who are lack of this skills particularly in doing their business. It could be possible that the number and the type of staffs may effect the level of leadership.

## 2.9 Marketing and promotion competency

Table 9. Marketing and promotion competency

	Frequency	Percent (%)
Yes	71	28.4
No	179	71.6
Total	250	100

Based on the Table 9 above, it is clearly observed that the majority of Muslim micro entrepreneurs (71.6 per cent) are incompetent in marketing and promoting their products. It is about 28.4 per cent who are capable doing their business through marketing and promotion activities. This indicates that most of them could not develop their businesses due to the lack of marketing and promotion skills. In addition, to face industrial revolution 4.0 analysing the market and mastering it should be the main consideration for every enterprises. Hence, most of the respondents would face a big challenge in marketing and promotion their products.

## 2.10 Operational and manufacturing management competency

Table 10. Operational and manufacturing management competency

	Frequency	Percent (%)
Yes	34	13.6
No	216	86.4
Total	250	100



Based on the Table 10, it can be seen that the operational and manufacturing management competency among the respondents is still low. It is proven from the fact that only around one-tenth (13.6 per cent) of them who could manage their business operation and manufacture, whereas about 86.4 per cent of them are not able to measure this issue. Therefore, practical issues in corporate management such as operational and manufacturing managerial skills should be another critical consideration in operating businesses.

#### 2.11 Research and business development competency

Table 11. Research and business development competency

	Frequency	Percent (%)
Yes	36	14.4
No	214	85.6
<b>Total</b>	<b>250</b>	<b>100</b>

Presented information from Table 11 shows the research and business development competency among the respondents. It is clearly observed that the majority of them (85.6 per cent) could not develop their business based on research and development approaches. This means that most of the respondents are doing and developing their business without research and business development due to the lack of this type of skills. It would be rather difficult for micro enterprises to increase their business performance in the industrial revolution 4.0.

## 5 Conclusion

Majority of Muslim micro Enterprises in East Java (around 81%) do not yet have competence in 11 aspects examined. It is observed that the lowest competence they have is operational and manufacturing management competency at 13.6 per cent, followed by research and business development at 14.4 per cent. Furthermore, it is found that marketing and promotion competency is placed on the top competencies which is at 28.4 per cent, followed by business motivation and leadership at 23.2 and 21.6 per cent respectively. Eventually, overall, this study indicates that Muslim micro Enterprises in East Java need to improve those competences in attempt to face the challenges of the era of industrial revolution 4.0.

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