Information and Communication Technology Development for Entrepreneurs

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Abstract. The importance of time effectivity makes the entrepreneurs implement information technology in their businesses. This study aimed to describe the growing Micro, Small, and Medium Enterprises (MSMEs) based on information technology and communication to improve technical entrepreneurship in Bandung. Developing information technology in modern times is crucial. The method of this case study uses a qualitative descriptive approach which is to collect data through facts, circumstances, and phenomena that occur in Bandung. It can be concluded that the competitiveness of MSMEs in information technology that is centered in Bandung is still low because of the lack of technical mastery in the scope of business travelers. Entrepreneurs in this region are still minimal and can change their minds completely because of the lack of confidence to compete.

1. Introduction

Information technology is a form of technology that is applied to be processed and transmitted in the form of information. This study aims to introduce information technology and communication tasks in developing business about cornering angles of agricultural institutions in Tehran [1]. Information and communication technology is an important part of daily life. This technology has also been helpful in the changes we are experiencing today. The improvement of human resources is very important and able to develop information technology in modern times. Business competitiveness has increasingly depended on the expertise to develop, create, and protect high-tech workers [2]. The endowment of entrepreneurs become one of the alternative solutions to develop information technology and communication in the field of entrepreneurship. Passion is not only limited to entrepreneurs who have academic ingenuity and product inspiration but also in capturing the challenges and risks that are then a reformer hope and growth capability [3].

The utilization of information technology is defined as the use of applications that carry out educational objectives based on the interests of the current knowledge society [4]. Some of the problems that occur when searching for business in the field of information technology are creativity, innovation, and promising finances. According to Mira Sumanti, based on the larger size of data collection we can find that ICT channels in terms of access to the Internet and mobile phones have a significant impact on our business center [5]. The purpose of this study is to illustrate the growing MSMEs and creating effort to improve entrepreneurship in technology.
2. Method

The research method used in this study is a qualitative method of using a qualitative descriptive approach that is collecting and describing data through facts, events, and phenomenon that have occurred. Qualitative research is a study used to describe, acquire, and explain the privilege capacity of an unexplainable influence. The strength that exists in these studies creates hypotheses to find solutions to complex problems. This method is more based on events or facts that occur in the field that prioritizes inspiration.

The results proved that computer-aided assessments could help develop entrepreneurial behavior and skills [6]. Five perspectives on entrepreneurial understanding can be observed as a benefit to the economy (with three-phase models) of new businesses i.e. small business owners; A set of personal behaviors; And, a form of behavior [7]. A good pattern of administrative reform is key to success in shaping a business [8]. A plan developed specifically for the assessment of entrepreneurial potential in the economy and its opening levels is used which is made based on classical methods of evaluating effectiveness [9]. In the concept of entrepreneurship, the use of information technology relies on creativity and innovation that not only relies on high-tech capabilities but also able to develop accounting, economics, entrepreneurship, or online [10]. Without the spirit of entrepreneurship, someone who is reliable in technology but lacks a business spirit will only be a technician if technology is the source of life.

3. Result and Discussion

Although the role of MSMEs is very strategic, intense competition, especially in large corporations and other modern competitors, have put MSMEs in a less fortunate position. In the district of Bandung, most MSMEs run their business in a traditional way including in their production and marketing. Most of them work in industry, agriculture, commerce, and services. The use of technology, especially information and communication technology, has been trying to improve the competitiveness of micro, small and medium enterprises (MSMEs) by emphasizing the management of downstream information (consumer/market), which is suspected to be one of the factors of the weak competitiveness of MSMEs, including upstream (suppliers) as well [11].

Job opportunities provide opportunities for MSMEs with the development of information technology to absorb entrepreneurs by utilizing existing information technology and reducing unemployment in Bandung district. In developing entrepreneurs based on technology, some factors influence the development of businesses which are internal factors (business aspects) and external aspects (components that are outside of business but capable of affecting business conditions). When human resources, financial, production/operational engineering and marketing are managed well and efficiently, they have a significant influence on increasing business success [12].

a. Human Resources

Entrepreneurial experience is key for a businessman. Low-level education is not one of the obstacles to start and expand businesses. High motivation and strong mental motivation are the keys to advancing a business to a higher level. Human relationships are fundamental in developing personal relationships such as communication skills and network development. This aspect is very important because MSMEs cannot be run by a single individual because all businesses still need other people to be positioned as colleagues, employees, and customers. Relationships between people will have an impact on improving work productivity because all targets can be resolved by employees. The success of the relationship between the company (represented by marketing) with employees will have an impact on customer loyalty which can increase sales that ultimately impact the improvement of start-up business [13].
b. Finance

Financial problems are quite sensitive but it's not a big problem not to run a business. Generally, business operators start by using their own money but in their upgrades, businesses use more funding from the family.

Financial aspects are closely related to cash flows/financial flows in the business. Business success is determined by the competency of the financial section's job in allocating funds according to the needs. Finance management can be done as efficiently as possible and linear to the financial policy and with the company's objectives both in long and short term. Aspects of financial competence or commonly referred to as financial management in the form of Pro forma income stated that the sales budget should be arranged in the early stages of development so that it can focus on operational costs. The evidence required to measure financial sector competence is the preparation of monthly, quarterly, and yearly income reports [14]. Employers should also pay attention to the financial ratios so that the company's financial condition can finance all transactions that occur in the company/business.

c. Technical Production and Operations

The raw material of production is always available at all times because it uses local raw materials. The use of modern technology is also not fully done so that the products produced are still in limited capacity. This aspect can be seen in the business's real operating system. Business success is realized when the technical aspects are optimal. The concrete form of a production system or computer-based work system with high accuracy and efficiency produces products or services that have high competitiveness in the market which generates great profit for the company.

d. Market and Marketing

Marketing is an aspect that requires funding to bring revenue through customers who transact. The activities are undertaken by the marketing team through strategies and concepts that can focus on the solution, the target market or the message clearly conveyed to consumers about the products produced by a business. The targeted marketing strategy will automatically increase the business success of MSMEs. Marketing is the path to presenting a business that is owned to customers/consumers [14].

The resulting product demand will be relatively good in communities where small production capacity exists only in local marketing areas as seen in Figure 1.

![Graph showing internal factors](image_url)

**Figure 1.** Internal Factors That Affect the Entrepreneurship That Will Be Implemented
e. Government Policy
Various efforts have been made to develop the business, one of them is assistance in funding. Preparation of business locations that are centered on one area has not been considered important because generally, micro business actors always move their location elsewhere.
Help and attention are needed from the government and related institutions for MSMEs to grow and develop because they have a very vital role in development and economic growth and also because they are the largest part of the national economy. It can be proven to be a reliable safety measurement in times of crisis through mechanisms for creating employment opportunities.

f. Social, Economic and Cultural
Socio-cultural and economic factors influence the performance of MSMEs where the level of income of the community supports the growth of these businesses, which directly impacts the purchasing power of the community towards the produced products. The business climate and investment also become very influential when their business gets fresh funds in order to have the opportunity to develop a business that they have been established for years. The results of this study indicate that there is a financial dependence on the bosses which causes an absence of independence to grow better and optimal. Even though the economic growth in Bandung district is quite good in developing micro-enterprises, it will not directly and significantly increase the income of the surrounding community as seen in Figure 2.

Figure 2. External factors that affect the entrepreneurship that will run

g. Role of Certain Institutions
The low level of funding received by businesses indicates that the precautionary principle in providing capital assistance is also applied in business. The participation of various parties, both government and relevant agencies are still needed and expected to increase their performance which will impact on the growth output of MSMEs as seen in Figure 3.
The product of MSMEs from Bandung indicates that someone has a business spirit but have not implement information technology in their business (Figure 3). Business activities in Indonesia are identical to MSMEs, these activities have a major influence on the development of MSMEs on the basis of information technology and the increasing pace of the economy in Indonesia. In addition to developing technology, MSMEs can also expand employment and reduce unemployment.

Usaha Masyarakat Kecil dan Menengah (UMKM) or MSMEs are entrepreneurs that currently getting attentions from the public because of their popular business and have enough space to develop business ideas (Table 1).

Table 1. The number of MSME companies in Bandung Regency (2016-2017)

| Industrial Type                    | Number of Companies | Work Force |
|-----------------------------------|---------------------|------------|
| Food Industry                     | 1,781               | 9,117      |
| Clothing Industry                 | 858                 | 1,535      |
| Chemical and Building Materials Industry | 882             | 1,503      |
| Metal and Electronic Industry     | 931                 | 987        |
| Craft Industry                    | 1,069               | 4,823      |
| **TOTAL**                         | **5,521**           | **17,965** |
Most companies delve in the food industry and the lowest is in the clothing industry. The number of industrial companies in 2016-2017 period was recorded in a total of 5,521 companies which have the total work-force of 17,965 people. However, there are many people who are still unemployed. In order to provide promising jobs is to develop the MSMEs using information and communication technology.

4. Conclusion
This case study explains on how to develop information and communication technology in entrepreneurship. It can be concluded that the low interest and competitiveness of MSME products in Bandung is due to the little-to-no mastery of information and communication technology among business actors. Technology development is necessary and it is proven by the current research which have two factors that can influence the development of entrepreneurs in Bandung namely internal factors and external factors. Internal factors that influence the development of information technology-based entrepreneurs are human resources, finance, technical production and operations, target market, and advertisement. As for external factors are in the form of government policies, social, economic, cultural, and also the role of certain institutions. Most companies in the 2016-2017 period delve in food industry which reached the amount to 1,781 companies and the lowest industry is in clothing industry. While in the same period, there are more human resources than the number of companies available.

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