Adoption of Information Technology in Business Performance of Small and Medium Enterprises Woven Fabric

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Abstract- Many SMEs (Small and Medium Enterprises) owners still does not understand the importance of Information and Communication Technology (ICT). IT is used in variated field. Nearly all of the SMEs using IT for the administration processes. The government believes that the success of the SMEs development will strengthen the foundation of people's economy, because what is done by the SMEs until today is generally based on local resources, it does not depend on the imported resources. Weaving, in several regions of Indonesia, is flourishing to fulfil the national fashion material demand. The problems from this study are (1) To identify Information and Technology adoption and reviewing the information technology adoption variables on woven fabric SMEs in Indonesia (2) To analyse the connection between information technology adoption variables on woven fabric SMEs in Indonesia (3) To recommend the technology adoption model to the woven fabric SMEs in Indonesia including the implementation. The aims of this study is to give a recommendation through technology information adoption model which moderated by the Cloud SaaS to encourage the competitiveness of woven fabric SMEs in Indonesia. The total sample from all the woven fabric SMEs in Indonesia is 83 units as measured with census sampling technique because not all province had woven fabric SMEs.

Keywords- **IT Adoption, Business Performance, Cloud SaaS, SMEs.**

I. INTRODUCTION

As mentioned in the Presidential Decree number 28 year 2008 about the national industrial policy, the visions of nasional industrial development is ensure Indonesia as the resilient industial country by 2025. As a new advanced industrial country, The industrial sector of Indonesia must fullfil several basic criteria, such as: 1) Has the role and high contribution to the national economy, 2) SMEs has balanced ability to the large enterprises, 3) Has solid structured industries (detailed and deep industrial tree), 4) The developments and market creations are initiated by the advanced technologies, 5) Has acquired resilient service industries which acts as a support to the international industrial competitiveness, and 6) Has gained competitiveness that is able to take on the full liberalization with the countries of APEC. During 2010 until 2020, the industries are obligated to grow with an average of 9.43% with a growth of small enterprises, medium enterprises and large enterprises respectively a minimum of 10.00%, 17.47% and 6.34%. According to the BPS data, the export value of fashion products in 2015 reached USD 12.11 billion with USA, Europe and Japan as the main market. Furthermore, the fashion industry contributes 1.21% to national GDP. Meanwhile, as a labor-intensive sector, the fashion industry is capable to provide employment for two million people or 14.7% of total employment in industrial sector (http://www.kemenperin.go.id/artikel/16945/Fesyen-Jadi-Ujung-Rantai-Nilai-Tambah-Industri-Tekstil).

SMEs in Indonesia has very important role because it contributes a great deal in GDP and emplyoment. Information technology (IT) can help SMEs to cut costs by improving their internal processes, faster communication with customers and better products distribution through online network [12].

Information and Communication Technology (ICT) can help businesses gain better access to information and expertise, reach new markets and customers (or more generally, stakeholders), to manage the business more efficiently and effectively, and develop the knowledge and skills required to run a better business.

The characteristics of small companies, as well as the inherited condition from the small company environment are the major obstacles in IT adoption [12].

Implementation and application of information technology is a significant driving force behind many socio-economic changes as result of advances in technology. The Indonesian government is currently working to develop the entrepreneurship in Indonesia. They aware, that the number of job seeker growth is not comparable with the job availability. In other words, if the number of SMEs continue to escalate from year to year, then, the contribution of SMEs to Indonesian economy will also be increased.

During globalization, the competition among enterprises is escalating thus requires businesses to continuously hone their creativity in creating new innovations, produce a quality products and develop good sales strategy, these are necessary to attract the consumers and to achieve profits profusely.

Utilization and commercialization of Information Technology (IT) is more widespread throughout the world, the adoption of IT can generate new business opportunities and benefits. Currently, both of the large enterprises and small and medium enterprises (SMEs) are looking for ways to strengthen their competitive position and increase their productivity [13].

Based on the mandate of the Ministerial Decree No.78 / IND / PER / 10/2007 on Improving the Effectiveness of Small and

Medium Industry Development by The One Village One Product Approach, requires every county that has a traditional weaving industry to have a weaving center based on One Village One Product (OVOP). The producers are required to have a unique weaving motif that continues to grow dynamically on many aspects. There are development issues found in the previous period, as the Directorate General of SMEs cq the Directorate of Clothing SMEs set a traditional weaving development program as one of the priority programs based on OVOP development in four regions, among others; Limapuluh Koto (West Sumatra), Palembang (South Sumatra), Pekalongan (Central Java), and Klungkung (Bali). The issues that are still faced by traditional weaving nowadays are; 1) The products do not have high competitiveness 2) Not capable of being a supplier for the domestic market with specific product standards 3) entrepreneurial spirit and utilization of partnerships with large industry still not optimally accomodated, and 4) lack of knowledge / market information, including low accessibility to capital sources so will be constrained to fulfill massive orders.

Fig. 1. Growth Woven Fabrics Industry in Indonesia

Indonesia is a plural society that has a high value of cultural diversity that are passed from generation to generation as a reflection of national culture. One of it is cultural heritage is weaving. Weaving is part of the cultural diversity which is also cultural heritage that must be preserved because it enrich the characteristic of the Indonesia with the diversity of its motif and pattern [14].

Weaving, in several regions in Indonesia, are rapidly growing to meet the national fashion material demand. Creativity in the creation of diverse style and design is very attractive to meet the consumers / markets demand. Creative economy is a comprehensive analysis of the new economy based on creative people, creative industry and creative city [15]. The purpose of this study to provide recommendations through a model of information technology adoption moderated by Cloud SaaS to encourage the competitiveness of the SME fabric woven in Indonesia.

II. Literature Review

A. *IT Adoption*

Nowadays, information technology (IT) is universally regarded as an important tool in improving the economic competitiveness of a country. They agree that IT has a significant influence on the productivity of companies [1]. Information Technology (IT) is a technology used for storage, processing, and distribution of information by electronic means [6]. Use of Information Technology can improve the competitiveness such as the Internet, provides many opportunities for SMEs to compete with larger companies [2].

Information Technology (IT) include Information Systems (IS), Information and Communication Technology (ICT) and the Internet, as well as its infrastructure, including computer hardware and software, and technology that process or transmit information to improve the effectiveness of individuals and organizations [3]. ICT has had a profound impact on the company and the business environment that lead by information from the economic network [4].

Information Technology (IT) plays an important role in improving productivity and efficiency in the organization, government and research. Adoption of Information Technology has driven the productivity of state economy and create more jobs [5]. The increasing use of information technology (IT) have reinforced the importance of research on IT / information systems (IS) adoption and decision-making behavior.

B. *Business Performance of SMEs*

The most common indicators used to measure performance are efficiency, growth and profits [7]. Business performance has been reported as a result of organizational objectives that are achieved through effective strategies and techniques [8].

Productivity and efficiency of an organization is obtained by satisfying employees and be sensitive to both the needs of the psychological and socio-emotional in comprehensive manner [9]. Dimensions of business performance uses the dimensions of the profit rate, sales growth, product quality, service quality, customer maintain rate, new products that succeed in the market and ROI [10].

Variables that affect the performance of the business are entrepreneurial orientation, innovation, organization learning, market orientation, marketing ability, customer value, total quality management practices, information technology adoption, customer retention practices, internal environment, business strategy, branding, enterprise resource, management capabilities, moral consciousness, product management and knowledge transfer [11].

C. *Cloud-SaaS*

Boards of directors and executive management of organizations are responsible for IT governance becoming an integrated unit of managing the organizations. They should also ensure that IT can be used to maintain and expand strategies and goals of organizations [28]. IT governance is the limit of components building the system through the implementation of a series of procedures and mechanisms in organization activities. IT governance does not only lead to specific

decisions, but it also determines the makers and the contributors [29].

There is a level of consensus emerging around the characteristics of cloud computing, or the capabilities that must be adhered to an offering to be considered a cloud. These include : Pay as you go – payment is variable based on the actual consumption by the customer ; Highly abstracted – server hardware and related network infrastructure is highly abstracted from the users [17].

For SaaS Cloud providers to host software as a commercial offering and to enable seamless execution of crucial business operations of companies, there are many critical QoS parameters that SaaS management system needs to take into account. In particular, as Cloud computing environment is considered to be dynamic and elastic, customers QoS requirements cannot be static and need to be dynamically updated over time with business requirements [18].

SaaS refers to "the capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from varioius client devices through either a thin client interface, such as a web browser (e.g. web-based e-mail), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings [19].

SaaS is the best way for small and mediumsized enterprises to realize informatization by making use of advanced technology. While, SaaS is definitely not just suitable for small and medium-sized enterprises, but all the enterprises with different scales can make a profit from SaaS. [20]. SaaS providers can set up all network infrastructure and soft hardware operation platform needed by informatization of enterprises, and they are responsible for a series of work including previous implementation and later maintenance, by this way, companies can use information systems through internet without the need of purchasing soft hardware, constructing machine room, or recruiting personnel [20]. Managing IT properly enables innovative business transformation through efficient reduction of transaction costs, interaction, and addition of incentives [21].

III. Proposed Research Method and Hypothesis

This study conducted by Descriptive Research which aims to obtain a insight or characteristic of a variable. Initial condition of the adoption of information technology are determined by using a questionnaire to be answered by woven fabric businessmen. While the verificative research aims to determine the relationship between variables through a hypothesis test that is based on field data (field study). This study uses mixed method (quantitative and qualitative).

The population of study is woven fabric business which supported by the information technology in the business processes. Total population of woven fabric business in Indonesia is 83 business units spread across 34 provinces in Indonesia. Sampling is done by selecting a province that had woven fabric business.

The primary data collection techniques done by interviewing and distributing questionnaires. Interviews are conducted to the owner of woven fabric business to determine the extent of information technology adoption in business processes, the benefits gained for the woven fabric business, the perception of the use of information technology, the impact to user attitude when information technology used, quality of service, and sales growth.

Secondary data is collected from Provincial Cooperative and SMEs Service, woven fabric business incubator, and SMEs and Large Enterprises Development Data at Ministry of Cooperative and SMEs of Republic of Indonesia.

The conceptual framework of thought in a comprehensive manner should be developed based on the fact about the problems that exist in the business unit of woven fabric, linkage between variables theoretically, reviewing the previous studies and testing by using the analystic method to ensure that this study can be in accordance with the objectives, then develop conceptual framework comprehensively. Based on the framework above, a research paradigms is formed. Research paradigm is expected will be a reference in solving the problems presented in this study. The research model which is empirical research framework, describes business performance of woven fabric business in SMEs is influenced by information technology adoption variables through a Cloud SaaS, IT Resources and IT Capability (see Figure 2).

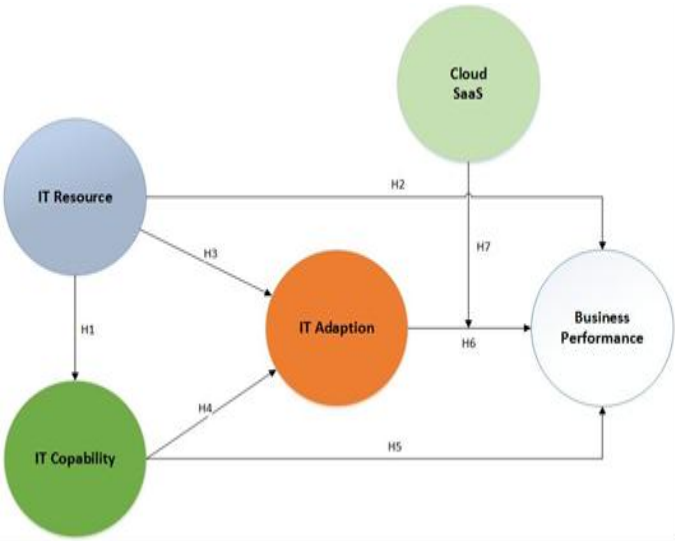

Fig. 2. Proposed Research Model

Hypotheses tested in this research are as follows:

a. H1: IT resources has influence on IT capability.
b. H2: IT resources has influence on the business performance.
c. H3: IT resources has influence on IT adoption.
d. H4: IT capability has influence on IT adoption.
e. H5: IT capability has influence on business performance.
f. H6: IT adoption has influence on business performance.

g. H7: Cloud Saas has influence on IT adoption and business performance.

IV. Conclusion and Perspectives

The research proporsal is generated in the limited form of models to improve business performance of woven fabric SMEs through the IT adoption. The novelty of research is on the influence of IT adoption moderated by Cloud SaaS.

Perspective of this study could be the solution that will address the needs of SMEs in information technology that can improve business performance of the SMEs business processes by optimizing its resources.

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