



The effect of demand chain management on competitiveness

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Abstract

This study aims to examine the effect of demand chain management on competitiveness. This research is explorative with a quantitative approach. The population in this study were all small and Medium Entreprisses (SMEs) of processed marine products in the City of Probolinggo. The sampling technique is simple random sampling to be representative. This is because the number of population is scattered in several villages and as many as 196 processed marine products. Thus, 70 SMEs will be selected as respondents and Focus Group Discussion participants as well. Data collection was carried out through the distribution of online questionnaires that were valid and reliable. Primary data were analyzed using a technical analysis of structural equation models with the help of a Partial Leastsquare (PLS) data processing program. Based on the results of the analysis shows that there is a significant influence of demand chain management on competitiveness. It means, in order to improve the competitiveness of the SMEs, these business actors can optimize the demand chain management.

Keywords: competitiveness, demand cahin management

Introduction

The dynamics of the economy are full of uncertainty lately, small and medium industries may find the best momentum. This is because the product is quite unique and interesting because it is done with handmade concepts. But of course it must go through various innovations that lead to the increasing quality and product variants produced. Schumpeter (1883-1950), argued that during a crisis is the best momentum for innovation. When everything is difficult, it requires a spirit to break the deadlock of the system order through innovative and creative ways (creative destruction). The aim is to build competitiveness as well as its business performance.

Based on the results of research conducted by Madhani (2014) ^[8], the implementation of the model of demand chain management has many benefits and one of them has a dramatic effect on performance. Other benefits can increase the competitiveness of small industries. In a subsequent study, Juttner, Christopher, & Baker (2015) ^[5] also revealed that demand chain management as a component of KPIs has a dominant influence on business competitiveness. Also, previously Skibniewski & Ghosh (2014) ^[16] explained that demand chain management implementation has an impact on competitiveness as well as small business performance.

Then, from the results of the preliminary study revealed, the small and medium industries in Probolinggo turned out to be relatively large. Based on skundair information, there are 385 units of SMEs and 96 units of which are engaged in processed seafood products (Department of Cooperatives, Mineral Energy, Industry and Trade of Probolinggo City, 2015). Whereas the average number of workers in each small business amounted to 5-45 people, including business owners. Of course, from the aspect of employment, it can be considered quite good, amid the difficulty of getting employment opportunities.

However, the SMEs are faced with many problems. Its growth continues to slow down as the implications of low competitiveness due to the lack of modern management touches so that its management is far from efficient and the quality does not change quickly. Coupled with the growing popularity of similar large-scale businesses with more product variants and also quite interesting. Of course this reality is a serious threat that can interfere with its continuity, including its contribution to the regional economy, both in the aspect of employment up to the possibility of increasing poverty.

For this reason, the development of this sector has become a new foundation. Moreover, Probolinggo City started pioneering as a tourist destination, so it is certainly a potential market for the SMEs. Moreover, at the beginning of 2016 it entered the era of the ASEAN Economic Community, which certainly has implications for the wider market share of the products of the SMEs. But it must be remembered, the increase in market opportunities will certainly be followed by an increase in the competition climate. So, the effort that must be done is to increase its competitiveness by implementing a model of demand chain management on processed seafood SMEs in Probolinggo City, so that it can grow and develop.

The specific purpose of this research activity is to develop and implement the "demand chain management" model for improving competitiveness and business performance in processed seafood produced by the city of Probolinggo. It is expected that with the implementation of the adaptive model, it will be a tool for intervention by the regional government through the Department of Industry and Trade as a leading sector to conduct coaching. In detail, the objectives of this study are as follows (a) conducting demand chain management studies on processed seafood SMEs in Probolinggo City, (b) analyzing competitiveness issues and business performance of processed seafood in Probolinggo

City, (c) drafting a demand chain management model in probolinggo City processed seafood SMEs, (d) formulating and standardizing the model at the same time with its implementation guidelines, and (e) piloting, revising and finalizing the development model of marine processed SMEs based on demand chain management.

Madhani (2015) ^[7] revealed that the demand chain is defined as a network of business processes and activities that help business entities understand, manage, and ultimately create consumer demand. The demand chain starts with customers, works backwards through the entire chain, with suppliers from suppliers. Managing the demand chain is fundamentally different from managing the supply chain. That is because it requires turning the supply chain on it, and taking consumers as a starting point, is not the final goal. The supply chain emphasizes efficiency in the production and logistics processes, while the demand chain emphasizes the effectiveness of the shipping process and the business as a whole. An efficient supply chain provides only half a solution, so, a complete solution is suggested to have an effective demand chain that drives a strategic approach to market response.

Providing customer service in the value chain is largely a domain of two functional regional-marketing and SCM. Collaborative integration between marketing and SCM functions is a business necessary to fully utilize potential service improvements. Supply chains that are able to implement and implement integrated and coordinated marketing strategies at the supply chain level and are focused on the end customers of the supply chain, will gain competitive advantage (Min and Mentzer, 2013) ^[10]. Thus, it is very important to understand the marketing perspective and not solely to focus on SCM's decisions. Keep in mind, marketing and SCM often operate as self-optimizing, independent entities.

One important strategy issue that needs further research is the integration of marketing and SCM activities. Generally, marketing strives to optimize demand, whereas, SCM strives to optimize supply; Marketing is a focused income, and involves identifying and responding to customer needs, whereas, SCM is cost focused, and offers with production and distribution. Marketing combined with dynamic SCM provides greater flexibility to meet customer demands based on needs. A business entity cannot reach its full potential in terms of developing or providing products and services without using marketing insights to form and improve SCM. For example, unnecessary quarterly variability in product shipments on the market led to sluggish sales for part of the quarter followed by end of quarter spikes or rapid sales for a portion of the quarter followed by slack sales at the end of the quarter.

This phenomenon is caused by marketing strategies that are aligned with SCM (Sloan *et al.*, 2012) ^[15]. It is difficult to execute a marketing strategy that meets the customer's unique needs - cost, quality, variety, delivery, and service - if the support capabilities that underlie SCM cannot deliver. Effective marketing strategies demand a sound SCM because it includes a distribution section of the marketing strategy. In an environment by increasing the diversity of customer needs

and requirements, companies must quickly adjust their supply to meet demand.

If the supply chain focuses on material supply, the demand chain focuses on market demand. Traditional supply chain processes focus on efficiency to maintain lower costs, while traditional demand chain processes focus on effectiveness and revenue generation with the aim of satisfying customers. The power of the demand chain that is not related to the strength of the supply chain can result in a high cost base, and slow and inefficient product delivery; while the strength of a supply chain that is not related to the strength of the demand chain can result in sub-optimal results (Jüttner *et al.*, 2015) ^[5]. The demand chain consists of all process requests needed to understand, create, and stimulate customer demand and are managed in demand chain management (DCM). The goal of DCM is to define, understand and demand customers in real time, achieving flexibility followed by rapid response to the entire chain. The demand creation process consists of all activities needed to create demand and is closely related to marketing, while the demand fulfillment process consists of all activities needed to fulfill the demand and closely related to SCM.

Competitiveness basically grows from the value or benefits created for its buyers, which is more than the cost that must be incurred to create it. This value or benefit is available to the buyer, and the superior value comes from offering lower prices than the competitor's price for equal benefits or offering unique benefits that exceed the price offered (Muratovic, 2013) ^[12]. Competitiveness is also a benefit strategy from companies that collaborate to compete more effectively in the market place. Goldsmith (2013) ^[3] states that there are two footholds in achieving competitive advantage, namely resource excellence and position excellence. Atkitson (2012) ^[1] describes competitiveness as a unique organizational position against its competitors. Competitiveness can be obtained most of the resources and capital. The resources in question are the strengths and weaknesses of marketing performance, while capital is defined as the ability of a company to manage its resources to work together as a work team in one department. In other words, the high and low marketing performance will affect the high and low competitiveness of the company. Competitiveness can be created with the right knowledge of the variables that influence it and concrete examples of demand chain management.

The modern business environment is characterized by an increase in the importance and strength of customers, employees and society in general. So, to achieve optimal business performance it is necessary to pay attention to this reality. Performance is a concept that is widely used in many business organizations. Usually, performance is a measure of how well the mechanism / process to achieve company goals, Moultrie (2016) ^[11] defines corporate performance as how well the organization is managed and the benefits provided to customers and other stakeholders. In several studies revealed, the performance is related to achieving shareholder/investor interests. Neely (2014) ^[13] further describes the dimensions of performance measures, using five key-dimensions that must be assessed including quality, speed of delivery, reliability of

delivery, price (cost), and flexibility. By measuring all these factors, performance will be balanced.

In general, the performance measurement function can be categorized into the following four aspects (Neely 2014) [13]: Position (1) Check. Establishment of status and monitoring of current progress over time and against benchmarks. (2) Communicate positions. Communicate with shareholders, customers or employees by releasing annual reports, etc. (3) Priority confirmation. Performance data provides insight into what is important for business, thus exposing shortcomings that allow organizations to identify priorities. (4) Require progress. Steps can help organizations focus on specific issues and encourage them to find ways to improve performance. Based on some of the central reviews and the results of previous studies, the hypothesis formula in this study is that demand chain management has a significant effect on business competitiveness.

Research Hypotheses

Based on theoreticla background and several provious research, it can be formulated the hypotheses is that demand chain management effect significantly to the competitivenss.

Materil and Methods

In research with objects that do small-scale fish processing of marine fish in the city of Probolinggo using the research & development approach. This method was chosen because in the first phase a study of the development models that have been implemented and then based on the results of a study and deep survey will be formulated an adaptive management model of demand chain to improve competitiveness and business performance of the processed fish in the city of Probolinggo. Furthermore, in the second year, implementation will be carried out to implement the adaptive model that has been obtained from the first phase of the activity, followed by a revision to produce the final model. Operational Definition Variables are (a) The demand chain management model is a

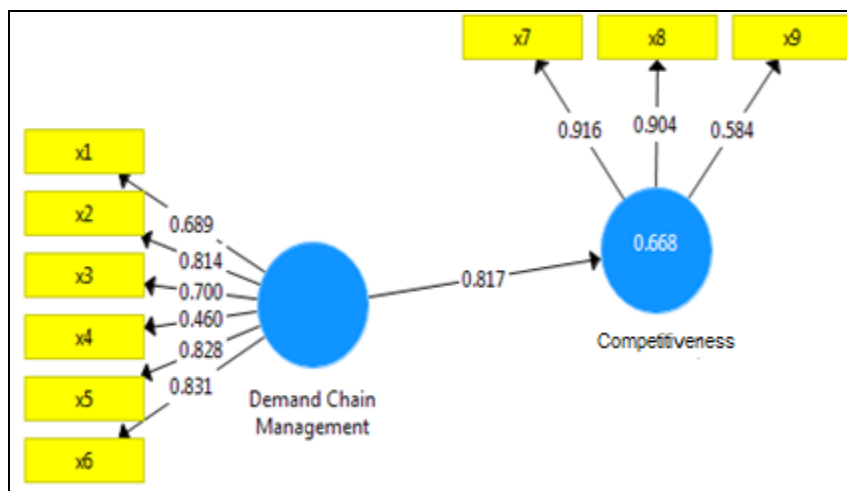
network model of business processes and activities that help business entities understand, manage, and ultimately create consumer demand. The indicators are understanding the market, managing the market, creating a market, fulfilling demand, quick response, supplier collaboration, focusing efficiency & focus on effectiveness, (b) Competitiveness is defined as as a unique organizational position against its competitors using indicators of position excellence, cost leadership and differentiation, and (c) Business performance is how well a business entity is managed and how much customers and stakeholders benefit from its business activities. The indicator uses checking position, communicating position, confirm priorities and compel progress.

The population in this study were all small and medium-scale industries in Probolinggo. The sampling technique will be carried out with proportional random sampling to be representative. This is because the number of population is scattered in several villages and as many as 96 SMEs processed by sea products. So, 96 SMEs players will be selected as respondents and FGD participants. In other words, the technique of determining the number of samples is done by census (Sugiyono, 2014; Ferdinand, 2013) [2].

In accordance with the research flowchart, the first step will be to compile the questionnaire and continue the validity and reliability test. Furthermore, distributed and primary data will be analyzed by desk analysis and Structural Squation Model (SEM) Analysis. With the Partial Least Square data processing program, information on the relationship between variables in this study will be obtained.

Results

Based on the results of the structural equation model analysis with the help of the Partial Least Square (PLS) data processing program, it was revealed that the link between demand chain management and competitiveness is presented in the following figure.



Source: Primary Data Processed, 2018

Fig 2: Relationship between Demand Chain Management and Competitiveness

Based on Figure 2 it was revealed that all factors loading both demand chain management and competitiveness were greater than 0.40. Its meaning, the instrument used in this study is

valid and also reliable. Then demand chain management has a positive effect on competitiveness with a coefficient of 0.817. While the amount of competitiveness is determined by the

demand chain management of 66.80%, the rest is determined by other factors.

Table 2: Path Coefficient

Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O...	P Values	
DCM -> DS	0.817	0.825	0.037	21.932	0.000

Source: Primary data processed, 2018

Whereas according to table 2 about path coefficients it was revealed that Demand Chain Management had a significant effect on competitiveness. This is because the T Statistics value is 21.932 greater than 2.0 and the P value is 0.00 smaller than 0.05. Thus, the hypothesis which states that demand chain management has a significant effect on competitiveness is declared acceptable.

The findings of this study stating that demand chain management has a significant effect on competitiveness in line with the results of Stock, Boyer & Harmon (2010) ^[14] research, in its article Research opportunities in supply chain management. Also, supporting Miles & Snow (2013) ^[9] revealed that demand chain management has an impact on performance and competitiveness. This opinion is also supported by the results of Veerendrakumar, Narasalagi & Shivashankar, K. (2015) ^[17] research, which suggests that demand chain management has an effect on competitiveness in small businesses in India. In addition, the findings of this study are also in line with Skibniewski J. & Ghosh V., (2014) ^[16], in his article Value creation through integration of supply chain management and marketing strategy. In fact it was also strengthened by the opinion of Veerendrakumar, M., Narasalagi, & Shivashankar, K., (2015) ^[17] that the management of demand chain management contributed greatly to the achievement of business competitiveness.

Elic & Tesic (2016) ^[4] on the publication of his research on the relationship between supply chain management strategy, marketing, logistics and company performance for breweries in Serbia stated that business competitiveness can be built through demand chain management. Then reinforced by Vencataya *et al.* (2017) ^[18] agreed with the findings of this research. This was revealed in his article Assessing the Impact of Supply Chain Management on Competitive Advantage and Operational Performance: A Case of Four Star Hotels of Mauritius. Recent research conducted by Kumar & Kushwaha (2018) ^[6] on supply chain management practices in fair price shops in India and operational performance: an empirical study is also in line with the findings of this research. Hasibuan *et al.* (2018) also strengthens the findings of this research. This was revealed in his article on Performance Analysis of Supply Chain Management with Supply Chain Operation reference models.

Conclusion

Based on the analysis of the results of research that has been done, it can be concluded that demand chain management has a significant effect on business competitiveness. The meaning is, when Small and Medium Industries SMEs want to be more competitive, it is necessary to optimize the management of demand chain management (DCM). An important business governance by integrating marketing activities and Supply

Chain Management (SCM). It should be understood that the marketing department seeks to optimize demand, whereas, SCM strives to optimize supply. The marketing section is income focused, and involves identifying and responding to customer needs, whereas, SCM is cost focused, and offers with production and distribution. Marketing combined with dynamic SCM provides greater flexibility to meet customer demands based on needs. A business entity cannot reach its full potential in terms of developing or providing products and services without using marketing insights to shape and improve supply chain governance.

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