

Supply chain integration: Home industries perspective

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Abstract

This study aims to understand the characteristics of Supply Chain Integration (SCI) in home industries. This research used qualitative with a descriptive approach. Data was obtained by doing interviews with selected subjects. This study shows that not all home industries need a specific SCI platform, but sometimes home industries are less responsive to the needs of more advanced SCI. Therefore, we recommend that each home industry be able to carry out an independent assessment to measure the level of SCI's system and management needs. Also, it begins to implement knowledge sharing as an initial effort to increase the quality of human resources.

Keywords: supply chain integration, home industry, human resources, knowledge sharing
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1 Introduction

Supply chain management (SCM) is a developing scientific discipline that does not have a consensus yet. This lack of consensus is strengthened by evidence that the literature on SCM is still fragmented in various scientific sub-disciplines. Weak consensus is also seen that the majority of empirical studies are used for non-probabilistic samples, diverse research methods with different approaches. Therefore, research findings cannot be compared and take general conclusions [3, 4, 8].

In the midst of the debate about the scientific consensus of SCM, supply chain integration (SCI) got the attention of many researchers both theoretically and empirically. SCI has a goal to carry out internal integration within the company to build effective relationships with the external sector from suppliers, customers, and related supply chains. Some scholars also stressed that SCI is an integrated effort with the aim of minimizing costs, increasing customer service levels and increasing the flexibility of quality responses to changes in each supply chain line [15]. However, there is an ongoing debate in the SCI literature. On the one side, there is a suspicion that a highly integrated supply chain can be very vulnerable when there is a shock and, on the other side, argues otherwise, strong integration will only provide stronger resilience to uncertainty.

Moreover, some literature, which implicitly and explicitly tends to a consensus that SCI will have a good impact on company performance in general. Empirical evidence from large scale surveys shows that SCI will strengthen supply chain resilience [22]. Ariani and Dwiyanto (2013) by taking a small and medium industry in Padang, Indonesia, the research shows the integration process has the most influence on the company's SCM performance variable, followed by information sharing variables, the long-term relationship, and finally, the cooperation variable [1]. Other studies also

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reveal that supplier integration and customer integration have positive effects on knowledge management and technical innovation [2]. Furthermore, scholars also find that SCI fully and partially mediates the relationship between supply chain management (SCMP) practices and SCP. SCI is proven to fully mediate the relationship of three SCMP variables, namely information quality, agreed vision and goals; and delay strategies. Meanwhile, three other SCMP variables, which include supply strategic partnership relationships, customer relationship management, and information sharing, are partly mediated by SCI [13].

Scholars revealed that SCI has a positive effect on company performance in general, but not all industries, especially small scale industries (home industries) can implement SCI optimally due to limited resources. Our preliminary survey of 30 home industries revealed that in the general home industry players use messaging, social media and basic computing applications to overcome system and technology limitations. Then, the fundamental question arises how effectively using these platform applications for the SCI at home industry? In answering these questions, this research is conducting deep interviews with home industry players. This paper contributes to expanding the literature on the use of social media as an SCI ecosystem for home industries.

2 Research Method

This research used qualitative research with a descriptive approach. This study took three industrial home subjects in Malang, East Java. This research was carried out by carrying out several stages: a) preparation of the questionnaire under the research objectives to see the impact of the use of social media as part of the SCI ecosystem in the home industry; b) Deep interview to reveal the primary information and secondary information by the research objectives; c) draw conclusions based on data obtained during the meeting. Malang was chosen as the subject of research because statistics show that the Malang economy is supported by small and medium scale industries, including home industries and MSMEs. Some home industries in Malang are also quite stable in maintaining business performance and sustainability. Therefore, the Home industry in Malang is quite representative of the development of home industry quality.

3 Result and discussion

We present the results of interviews with three research subjects; there are six basic questions related to SCI management and the platform used; including managerial effectiveness and the format of SCI's management; system improvement and automation; and the role of the platform used in maintaining SCI's performance and resilience.

What and how do you manage the supply chain integration? Do you have a special division? X: None of the special divisions, but there is at least one person who responsible for raw materials, production and distribution Y: We don't have a special division, but for the supply of raw materials, there are trusted people, while for distribution and marketing there is a special team Z: Specific division in terms of raw materials and distribution exists because it is not possible to handle it independently.

Do you have a particular system for SCI? X: We do not have a particular system for ordering raw materials. Usually, we communicate conventionally through short messages both in the fulfilment of raw materials and distribution, ... for the investment system, we use manual notes and MS office. Y: There is no special system, raw materials come on a scheduled basis unless there are certain needs that require reducing or adding raw materials, so we just communicate intensely by telephone or text message. ... computerize weekly and monthly reports for daily manuals. Z: There is no specific system, but we use social media, websites, and Excel as the leading platform, especially in product distribution. We also have systematic employees to recapitulate all orders that come in, both direct sales and delivery to distributors.

How effective is the use of the current system in supply chain integration? X: Beneficial, can accelerate the fulfilment of raw materials and coordinate the delivery of goods Y: If there is nothing left WA or telephone and all can be quickly resolved Z: Until now, it's still quite useful, but if the order gets bigger, I'm not sure to continue using social media. It seems like a special system is needed to improve efficiency and reduce human error.

Do you feel that we need to make a special system of supply chain integration? X: Needless. For now, it will even cost money. Y: I don't think yet. It's complicated for us. Instant messaging is enough Z: Yes, especially in the distribution. If the admin feels overwhelmed in serving orders and the addition of employees is also less effective. I think we will think about that. It might be expensive in the beginning, but we can maintain the quality of service.

Does the ongoing ecosystem have resilience in the face of shocks? X: Until now there are rarely problems both in terms of raw materials and distribution, maybe because the scale of production is still low so I don't know yet Y:

Precisely because of personal relationships, the level of vulnerability is lower. If the system does not necessarily give a quick response, but if it is personal it can. Z: Relative, but until now the complaint about the purchase of goods can still be resolved even though the response is sometimes slow but it is still fine. However, if the transaction has doubled. I feel the need for a special system and the addition of employees.

Do, and how does the system use help your SCI performance in your business? X: Yes, it is beneficial in terms of coordinating the fulfilment of raw materials and order processing Y: Beneficial, it makes easy and saves cost and time. Z: Social media is beneficial starting from establishing relationships with customers to sales performance.

Table 1: Matrix of SCI Assessment

Indicators	X	Y	Z
Management SCI	Yes	Yes	Yes
Platform	No	No	Yes
Basic platform (social media and basic computation)	Yes	Yes	Yes
Intention of SCI system upgrade	No	No	Yes
SCI resilience	Yes	Yes	No
Performa SCI	Yes	Yes	Yes

Based on the interview and meta-analysis summary in Table 1, it can be concluded that the home industry has proper management for the integration of the raw material supply process, production, and distribution. However, it has not yet been supported by a proper system. Generally, this is because it is not necessary and adds to the burden of operating costs. The home industry still does not refuse if it is possible to upgrade the SCI system someday. Two of three respondents tend to believe that the existing system using social media and essential computerization has good resilience. They believe that it can communicate personally with suppliers and distributors. Meanwhile, one of the home industries feels quite vulnerable and needs more reliable SCI management. However, the three subjects claimed that the social media and basic computing they used were very supportive of the business they were running.

The findings in this study show that companies do not always insist on the use of sophisticated integration systems because they may not meet the needs in the supply chain starting from vendors, companies, and distributors. However, sometimes small-scale companies such as company X look quite late in this process of intrusion because, in the management area, the system that has been built has begun to be ineffective. Still, there has not been any concrete action to accelerate. Therefore, we emphasize that there needs to be an assessment in every company, especially the home industry should understand the level of needs. Hence, the system that is built will be beneficial and does not burden the company's finances.

The subjects in this study do not review explicitly and implicitly state that human resources are one of the reasons they haven't yet improved the company's SCI system. Still, we cannot deny what is meant by the discussion of small-scale industries also on the source of human resources. A lot of literature shows that human resource is one of the problems that inhibit the growth of small and medium scale industries ([20, 24]). We appreciate that the home industry in this study has good human resources, although less aggressive. One of the subjects claims that the SCI improvement program has been prepared even though the plan has not been executed. Empirical results reveal that human resources have significant direct and indirect effects on SCI, which in turn plays a mediating role in the relationship between human resources and the supply of management results. SCM does not only directly improves SCMO but also increases Customer Satisfaction and organizational operations [9].

Therefore, home industries must pay attention to human resources, because human resources are assets owned by home industries to satisfy customers so that they can improve the performance of the home industry. How to improve the performance of human resources to be more productive and aggressive can be by providing motivation and communication that will affect employee performance ([17, 6, 11]). In addition to motivation and communication, training can also improve employee performance ([7, 16]). Another factor that can affect employee performance is compensation, by providing compensation in accordance with the wishes of employees will be able to improve employee performance [11].

Knowledge sharing is one of management optimization that can be implemented to optimize human resources which is not only for large scale companies but also for small businesses [21]. Knowledge sharing is the most important component and stage in knowledge management [12, 14]. Knowledge sharing is one of the most important processes of knowledge management which refers to the communication of employee knowledge, experience and skills in groups or

organizations [5, 10]. Knowledge sharing not only produces opportunities to maximize organizational capabilities to meet their needs but also creates effective solutions to achieve competitive advantage (Reid, 2003). Knowledge sharing provides all the important skills and knowledge for individuals to work or achieve goals more efficiently. The increase in knowledge sharing will ultimately increase literacy from finance to digital technology; this will undoubtedly have an impact on improving the quality of human resources and company performance. Furthermore, knowledge sharing makes the transfer of information and knowledge work; even if there is no innovation, there is at least a transformation of knowledge. Sharing knowledge can open the way to deal with various problems, so that problem solving, especially in non-routine issues, will be more efficient and effective ([19, 23]). Information exchange will increase the level of knowledge and supply chain integration efforts will get more attention from home industry players.

4 Conclusion

In general, it can be concluded that the awareness of home industry actors who are the subject of research is still quite low and some subjects feel the need to improve the SCI system but they do not have concrete steps yet. Subjects in the study are of the view that cost is the main problem in the absence of SCI. However, this study argues that in addition to the cost of the problem also lies in the quality of the human resource. Therefore, we suggest that the home industry conducts detailed assessments to see the needs of the SCI and implement knowledge sharing as an initial effort to improve the quality of human resources.

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