Weaving Small Industry Management Strategy through an Integrative Supply Chain Approach

1Finny Redjeki, 2Adang Djatnika Effendy, 3Eri Novari, 4Mubarok, 5Nanang Suparman
1Universitas Sangga Buana, Bandung, Indonesia
2, 3, 4, 5UIN Sunan Gunung Djati Bandung, Indonesia

Abstract. This study explains conceptually about strategies that use the Integrative Supply Chain System (RPI) approach of corporate management in the midst of hyper-fierce competition in this global era. RPI is an approach taken by the company through integrated partnerships between suppliers, customers and other supply chain members. The application of the RPI concept through empirical research on woven Small and Medium Industries (IKM) in Tasikmalaya Regency, West Java. IKM is a form of business activity that is not only limited to the trading business, but there are activities of the production process with the application of technology, simple organizational management, and collaboration with other parties. This study aims to analyze the influence of three aspects of the advantages of corporate social capital which include aspects of relational capital, structural capital, and cognitive capital on integrative supply chains. The research method is explanatory research which is to explain the causal relationship and hypothesis testing. Data were collected from managers of woven SMIs as many as 200 respondents. The results showed that corporate social capital influences the integrative supply chain.

Keywords: Integrative Supply Chain, Industry, Woven.

Introduction

Companies in the industrial era 4.0 including Small and Medium Enterprises (SMEs) faced with hyper-fierce competition were urged to formulate a choice of a management model that they considered compatible to be able to survive and develop. The corporate paradigm reorientation is based on a number of important and crucial factors namely the globalization flow factor and the continuous demand for product innovation [1]. In the context of operational cost efficiency by reducing non-priority costs, a positive relationship is established with stakeholders who guarantee supply chains [2].

The role of supply chain management becomes very strategic and key factors of effective and efficient companies [3], to face disruptive markets, in the era of globalization with dynamic and aggressive movement characteristics [4]. Improvement of supply chain management is realized by achieving supply chain integration so that better results appear [5], with measurable action elements, coordinating various resources, decisions to be taken, choices, business methods being carried out, managing employees where they are directed to harmonization with supply chain stakeholders within the framework of the process of sustainable cooperation [6].

Integrative supply chain discourse (RPI) in the implementation of modern management functions in small and medium industries is a very significant challenge [7], there are types of benefits that can be obtained when implementing integrative supply chains include cost reduction, increased revenue, more customer satisfaction good, on-time delivery, supply chain cost efficiency, efficiency in the supply and quality control process, efficiency of the final product workflow, work automation processes, product quality standards, improved payment processes, improved distribution processes and increased global competitiveness, and increased demand visibility by each partner. [8].

Modern management strategies require a different approach compared to the previous organizational strategy. According to the view of resource-based strategies or "resource-based views (RBV)" that developed in the modern era, the company's sustainable competitiveness is built by using resources that are unique, scarce, irrevocable, and of high value to the company [9]. To make it happen the company uses a vertical and horizontal integration strategy in order to guarantee the availability of the necessary resources. With the integration strategy, companies make acquisitions or investments in companies that supply the required materials. This strategy can reduce or even eliminate uncertainty over material supply, but it requires large resources in the form of financial, technological and human resources to be invested in subsidiaries supplying raw materials. Such strategies are no longer relevant for post-modern companies and are replaced by strategies that use supply chain systems to build competitive advantage. Small and medium industries have limited resources so they need to establish cooperation with other small industries by increasing the intensity of integrative supply chains [10], [11].

A small industry has developed in Tasikmalaya, West Java, home-based production activities where people are skilled in working on various kinds of handicrafts independently to be sold to collectors in the form of ready-made handicrafts and semi-finished handicrafts. The quality and uniqueness of small industrial handicraft products in Tasikmalaya has been recognized by the national business world and has even been able to penetrate the export market including woven handicrafts, embroidery, processed rattan, household furniture and others that have high economic value (high-value commodity). Commodities of various folk handicrafts are a source of income, a source of employment opportunities and a high contribution to the economic development of the region, especially in the area of production centres.

Data released by the Tasikmalaya Regency Cooperative and Industrial Agency shows that total handicraft production from 2014 to 2017 has increased production annually [12]. However, like other small home industry commodities, household crafts are also very dependent on consumer uptake and supply of raw materials so that production is very volatile. The total number of household handicraft production in Tasikmalaya in 2016 reached 1,528,000 and increased in 2017 by 1,718,600 or 27 per cent. Although there has been an increase in production, it has not yet solved the fundamental problems for the trade-
in handicraft commodities. The demand for various household handicrafts in certain regions or countries has often not been met as expected so that the distribution of handicraft production is not supported by adequate marketing. The absorption of handicraft items has always been a problem in the handicraft market [13]. One of the causes is the accumulation of production of various handicraft products that occur as a result of the increase in the number of craftsmen with a profession from the non-craftsman profession due to termination of employment or are dabbling in the field of handicraft business. While local uptake of handicraft products tends to slope every year. The accumulation of production stock makes various handicraft products experience price pressures at the lowest point so that the most affected are small craftsmen with no choice to receive very small profits or even losers.

The supply chain system of handicrafts of the people includes 4 main actors, namely the wholesalers / wholesalers-traders continue to be distributed to retailers to serve individual consumers or from large traders to large grocery stores [14]. The application of this system makes the traditional handicraft market controlled by collectors, wholesalers and retailers because they have more information about the market than the craftsmen. Information asymmetry is a source of distortion in the market for handicraft handicrafts. This paper focuses its discussion on the implementation of an integrative supply chain system to overcome the distortion of the woven craft market so that price stability is realized.

### Literature Review

The right management strategy can prevent a company from being in a critical condition as a result of competitive pressures and subsequently able to survive and develop [15]. The supply chain can be realized through the transformation of managers choosing the right step to focus on building a distribution network so that the product can reach the consumers [16]. Supply chain management strategy is defined as the accumulation of approaches that include suppliers, business actors, and equipment coordinating with third parties, outsourcing, exchange of information technology effectively efficiently but able to meet expectations of the degree of service [17]; [18]; [19].

The problems of small and medium enterprises (SMEs) in Indonesia are generally the same. Strategies for increasing competitiveness of products that tend to be weak, limited marketing accessibility and capital support. Some strategic steps that can be offered, so that SMEs can maintain and win the competition, namely: 1) Consistently maintaining product quality. 2) Add SME competitiveness through attractive product packaging. 3) Dare to compete in terms of price. 4) Maintaining customer loyalty. In Indonesia, some scientists, practitioners, business people and the government know two different terms about small economic activity units. The Ministry of Cooperatives and Micro Small and Medium Enterprises tend to use the term Small and Medium Enterprises (SMEs), while the Ministry of Industry tends to use the term Small and Medium Industries (SMIs). According to the Regulation of the Minister of Industry of the Republic of Indonesia Number: 13 / M-IND / PER / 2/2013 Concerning Technical Guidelines for the Restructuring Program of Machinery and/or Small and Medium Industrial Equipment Article 1 paragraph (1), (2), and (3) which states: (1) Small and Medium Industries (IKM) are small industrial companies and medium industrial companies. (2) Small Industrial Enterprises (IK) are industrial companies with a total investment of up to Rp. 500,000,000 (five hundred million rupiahs), excluding land and buildings for businesses. (3) Medium Industry Enterprises (IM) are industrial companies with a total investment value of more than Rp. 500,000,000 (five hundred million rupiahs) up to a maximum of 10,000,000,000 (ten billion rupiahs), excluding land and buildings for business premises. This study tends to use the term small and medium industries (IKM). The reason is that IKM is a form of business activity that is not only limited to the trading business, but there is a production process with technology, simple organizational management, and cooperation with other parties [20].

### Methods

The study was conducted in 4 (four) districts in Tasikmalaya Regency, West Java, known as a craft centre, namely the Districts of Rajapolah, Ciawi, Cisayong and Pagerageun. The sample size of 200 respondents was determined based on the Roscoe formula [21]. The measurement scale used is a Likert scale, with a range of 1 (one) for answers that strongly disagree, up to 5 (five) for answers strongly agree. Cognitive, relational, and structural capital variables are measured based on indicators used by Villena, Revilla and Choi (2011) [22]. While integrative supply chain variables are measured using indicators used by the study of Hao et al. (2014) [23].

Data collection was carried out by structured interviews guided by interview guidelines. Data processing using PLS. Validity test (using Cronbach Alpha value) and reliability (using Pearson correlation value) on the research instrument shows that all instruments are valid and reliable.

### Results and Discussion

#### Dynamic Capability of Unique Company Resources

Company resources include both tangible things such as land, machinery, buildings, equipment and intangible forms of knowledge, relationships, reputation. Company capabilities can be divided into 2 (two), namely operational capabilities and dynamic capabilities. The first is the company’s ability to carry out basic functions to maintain its survival. Whereas dynamic ability reflects the company’s ability to respond to changes in the environment so quickly.

The concept of dynamic capability refers to the capacity to renew related competencies in the event of a change in the business environment, make innovative responses if needed because of the demands of time and speed of market entry, rapid technological changes, future competition and difficult market determination. While capability emphasizes the key role of strategic management inappropriate adaptation, integration and internal reconfiguration and organizational skills, resources and functional competencies so that there is a match (match) with environmental changes [24].

DOI: 10.5373/JARDCS/V12I2/S20201306

Article History: Received: March 07, 2020, Accepted: May 15, 2020

2583
In the last decade, more and more ideas from strategists and management have stated that dynamic capabilities are at the heart of corporate strategy, value creation and competitive advantage. The strategy is the company's ability that must be directed to the needs of users (consumers), is unique so that the products and services produced are valued without much looking at competitors, difficult to imitate so that profits can be determined by ignoring the presence of competitors. The superiority of a company's competitiveness comes from the dynamic capabilities that are rooted in the company's routine activities, inherent in the processes of the company's activities, and are conditioned during the operation or establishment of the company [25].

What is meant by dynamic capabilities is the company's ability to integrate, build and reconfigure internal and external competencies to deal with a rapidly changing environment. Conceptually, studies of dynamic capabilities are based on the concept of resource-based view [26]; [27]. A perspective that concludes that the competitive advantage of companies is built through resources both tangible and intangible.

The right combination and use of the two types of resources can create capabilities (capabilities) that cannot be emulated by its competitors. Thus if we borrow the theory of an "input - process - output" system, unique assets, both tangible and intangible, are input resources that are processed through internal company mechanisms to produce unique capabilities and are needed to create competitive advantage.

The Concepts of Social Capital, Cognitive Capital, Relational and Structural As Antecedents of Supply Chain Integration

The integrative supply chain is an organizational strategic capability that can be a competitive advantage of companies facing global competition, partnering with other companies to gain a market advantage [28]; [29]. The integrative supply chain is defined as the extent to which all activities in an organization and the activities of suppliers, customers, and other members of the supply chain are integrated [30]. Integrative supply chains connect companies with customers, suppliers and other channel members by integrating relationships, activities, functions, processes and locations [31]. Integrative supply chains combine information integration, logistics integration, distribution integration, purchase integration, internal integration, supplier integration, customer integration, process integration and product integration [32]. This requires a high degree of interdependence where supply chain partners coordinate various exchange and production processes to solve shared problems [33].

The key factor for the success of the integrative supply chain is the cooperative relationship between different partners in the supply chain, specifically, trust and commitment of the relationship [34]. It was found that the commitment of the manufacturer's relationship to suppliers can have a positive effect on integration with suppliers [35]. The integrative supply chain in the "farmer enterprise model refers to the practice in which farmers and buyers (companies) integrate strategies, processes, practices and behaviours. Collaboration produces synchronized and consistent activities to meet the needs of end customers [36]; [37]; this is an important part of the integrative supply chain.

Social capital has been widely applied in various studies on operations management and supply chain management areas [38]; [39], human resource management [40], and innovation [41]. But the other side has not been much examined the relationship between social capital and integrative supply chains.

Social capital as an aggregate of actual and potential resources that are bound to create a network that is durable so that it can make the institutionalization of friendship (acquaintance) mutually beneficial [42]. Social networks are not natural but are constructed through investment strategies that are oriented to the institutionalization of group relationships, which can be used as a reliable source of benefits. [43] divides social capital into 3 dimensions, namely: cognitive, relational, and structural.

First, cognitive capital refers to the similarities held by various parties in social capital. The equation includes values, business philosophy, goals and vision. The same values and mutual understanding are important aspects of this dimension. Shared values between actors can be interpreted as the similarity of norms of behaviour and values among various parties [44]. The similarity in values encourages parties to fight for common interests rather than individual interests [45].

Second is relational capital, which is trust, friendship, respect, and interaction that is built by the actors. Friendship, respect, and reciprocity are developed through the success of repeated interactions and repeated transactions [46]. These repeated interactions can reduce dependence on formal contracts and regulations [47]; [48]; [49].

Finally structural capital, this capital refers to the pattern of communication between parties in social interaction. In contrast to relational relationships, the structural dimension is related to impersonal relationships in social networks. In addition to intra-organizational resources and competencies, companies can also achieve a competitive advantage by connecting with other companies in ways that create unique inter-organizational value chains [50].

Several previous studies have shown that there is a direct relationship between social capital and supply chain, which is caused by the formation of social capital in the process of activities between suppliers and buyers along a supply chain path that is mutual and continuous. When there is a trust which is one of the dimensions of social capital in a relationship that is mutual, it will cause the relationship to get stronger and the tendency to keep trying to maintain it and they will have a strong desire to share resources without fear of opportunistic behaviour. from the other (Mentzer, et al., 2011) [51]. In this case, it means that each individual who plays a role along the supply chain path can influence supply chain integration.

Empirical Evidence of Social Capital Relations - Integrative Supply Chain - Business Performance

The study was conducted in 4 (four) districts in Tasikmalaya Regency, West Java, known as a weaving craft centre, namely the Districts of Rajapolah, Ciawi, Pagerageung, and Singaparna. The sample size of 200 is determined based on the Roscoe formula [52]. The measurement scale used is a Likert scale, with a range of 1 (one) for answers that strongly disagree, up to 5 (five) for answers strongly agree. Cognitive, relational, and structural capital variables are measured based on indicators used by Villena, Revilla and Choi (2011) [53]. While integrative supply chain variables are measured using indicators used by the study of Hao et al. (2014) [54].

Data collection was carried out by structured interviews guided by interview guidelines. Data processing using PLS.

DOI: 10.5373/JARDCS/V12I2/S20201306
Article History: Received: March 07, 2020, Accepted: May 15, 2020
Validity test (using Cronbach Alpha value) and reliability (using Pearson correlation value) on the research instrument shows that all instruments are valid and reliable.

The results showed that relational and structural capital had a significant positive effect on integrative supply chains. While cognitive capital has no significant effect on integrative supply chains. But cognitive and also relational capital has a significant positive effect on business performance.

The results of this study indicate that cognitive capital has no significant effect on integrative supply chains. Cognitive capital is indicated by indicators of shared values, shared philosophies, shared goals, and shared vision has no significant effect on supply chain integration. The results of this study differ from previous studies which state that cognitive social capital facilitates the exchange of resources because buyers and suppliers see the potential value of the integration and pooling of their resources (Nahapiet and Ghoshal, 1998). This provides a framework of reference for behavioral norms and a general understanding of shared goals in order to increase commitment to exploiting synergies and reducing the possibility of conflict (Inkpen & Tsang, 2005). This previous study explained that the joint goal of improving operational and strategic performance regarding integrative supply chains include good operational cycle times (Hult et al., 2004), cost, quality, delivery, and good flexibility (Krause et al., 2007).

This difference indicates that the craftsmen and partners do not yet have a shared vision for the common interest in improving the integrative supply chain or in other words the craftsmen and partners do not yet have a high level of cognitive capital to achieve common goals in the integrative supply chain. The results of this study are in line with the results of research Vilenna et al., (2011) [55] which explains social cognitive capital has an insignificant effect on the collaboration of buyers and sellers (also called integrative supply chains). This can be caused by fears of parties taking the personal opportunities of a particular group (opportunist) and known as the dark side relationships (the dark side of a relationship).

On the basis of this, it can be concluded that in this study craftsmen and partners do not yet have a high level of cognitive capital to achieve common goals in the integrative supply chain.

Relational capital is the key in every other activity in supply chain integration [56]. This is based on the theory of distribution (Forresster, 1958) which emphasizes the importance of integration or interrelation relating to the flow of information, the flow of goods/services, labour flows, financial flows and the flow of capital goods between stakeholders, which are then adopted into the theory integrative supply chain. Then [57] explained that the integrative supply chain is a systemic and strategic coordination activity between various business functions of business actors in the supply chain, which aims to improve individual performance and supply chain performance as a whole. Thus the main points of integrative supply chain activities can be summarized in two main activities namely integration and coordination. Referring to the theory of integration [58] and the theory of coordination (Malone and Crowston, 1994) [59], both are formed by the same activity of sharing information.

Conclusion

Relational and structural capital has a significant positive effect on integrative supply chains. Woven craftsmen who live in rural areas still uphold the value of kinship and cooperation so that they have high relational and structural capital. However, in order to be capitalized into valuable assets and to have a greater bargaining position, they should not act individually but instead join in a forum, namely the plaited craftsman group or a group of artisans. This institution will represent the craftsmen in the integrative supply chain system whose bargaining position is relatively comparable to other actors in the system. Cognitive capital has an insignificant effect on integrative supply chains. Variables that are measured by the similarity of values, vision, goals show a low significance effect on integrative supply chains. The woven craftsmen seem not to have the same values, vision and goals. To increase this capital it is necessary to carry out intensive socialization of the values, vision and goals that must be adopted by the craftsmen. Integrative supply chain variables significantly influence business results. Information is one of the supply chain objects that most determines the effectiveness and efficiency of the system. Through an integrative supply chain, a good flow of information will be created between the actors involved in the supply chain system. Thus through the integrative supply chain, coordination in the system can be done well so that it has an impact on improving the results of the craftsmen’s business. However, to build an integrative supply chain system it is not enough to rely on intangible assets such as cognitive, relational and structural capital. Tangible assets such as Information Technology (IT) infrastructure are needed to make this happen. Thus the role of government is needed to help provide the IT infrastructure needed to build an integrative supply chain system.

References


DOI: 10.5373/JARDCS/V1212/S20201306
Article History: Received: March 07, 2020, Accepted: May 15, 2020

2586


