PAPER

Supply Chain Practices in Asian Emerging Countries: A Measurement Tool of Relational Dimensions

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Abstract The organisation and functioning of supply chains constitutes a major issue in contemporary management research. It is true that the way in which various companies will coordinate to supply consumption markets in the best possible way constitutes a key question. Even though the sources of competitive advantage usually refer to successful industrial, commercial and financial strategies, the efforts made by a company to conquer a market can be ruined by recurrent logistical failures. This paper particularly focuses on the relational integration process between supply chain members, whose objective is to improve the level of service quality and reduce the costs. It wishes to propose a measurement scale of relational integration applicable to the specific context of emerging countries, and therefore avoid the rashly use of measurement scales created in the context of Western countries. A research lead with 139 Vietnamese companies in the food industry enables to test and confirm the robustness of the retained measurement scale. Its use may be considered in other emerging countries of South East Asia, for cross-cultural research.

Introduction

For the past thirty years, increasing attention has been paid to supply chain operations. Simply enter the words supply chain management on Google Scholar's search engine to see over two-million results appear. The question of the efficient supply of markets, in ideal conditions of costs, quality, service and responsiveness, becomes highly relevant. Nowadays, who would dare to state that a company that is indifferent to logistics performance could sustainably maintain its competitive status faced with fierce competition? As indicated by Li et al. (2006:107), "effective supply chain management has become a potentially valuable way of securing competitive advantage and improving organizational performance". In other words, logistics performance must not be a goal in itself; it is at the service of strategic choices otherwise made, for example regarding marketing, production or finance. Yet, ignoring the importance of logistics performance risks to lead to corporate collapses, as shown by certain

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website failures which were unable to offer a sufficient level of logistical service to their clients, in contrast with other websites, very efficient on that level (Chen et al., 2014).

To understand the issues linked to supply chain operations, the priority is to abandon a reasoning focused on a unique company, for example the manufacturer. Talking about L'Oréal's logistics performance would be meaningful only if we explore how this company is capable of establishing good relationships with its partners within one or several supply chains. In other words, L'Oréal's logistics performance will depend on that of its suppliers, upstream, and of its retailers, downstream, including potential logistics service providers involved in the management of transport and storage operations. Value creation in the framework of supply chains is, by nature, a collective process (Christopher, 2010; Ren et al., 2015), and the absence of coordination between supply chain members can lead to entropic effects that will harm everyone's profitability. That is why, in the years 2000, a major research stream underlined the centrality of an integrated approach of supply chains, each of the supply chain members having to act by taking into account its own individual interests, for example, the optimal remuneration of its shareholders, as well as the collective interests, such as to supply in the best possible manner to consumer markets.

Globalisation constitutes one of the reasons having led companies to integrate their supply chains more and more systematically. One advantage of this integration is its capacity to design products more rapidly, with equivalent qualities and inferior costs (Näslund and Hulthen, 2012). The importance of supply chain integration has been theoretically and empirically shown through the literature (Frohlich and Westbrook, 2001; Flynn et al., 2010; Chiarvesio et al., 2013; Yu et al., 2013; Ataseven and Nair, 2017). The benefits of integration between supply chain members have been acknowledged in several industries (Flynn et al., 2010); it is now considered as an essential performance improvement factor. In order to assess the maturity with which the supply chain members have assimilated the urgency of a supply chain integration, in particular a relational integration based on the implementation of joint processes in order to achieve a common goal, numerous North American and European authors have proposed different measurement scales. The robustness of these scales are not questionable, however, they are characterised by a strong cultural dimension. Thus, referring to the trust between supply chain members within a North American context may take on a different meaning in the context of an emerging country. Indeed, trust is based on a certain number of attributes that may vary from one country to another (Afandi and Kermani, 2015). When a supplier guarantees the delivery of components on a given date, but does not make any particular effort to achieve this result, this may be seen as a betrayal of trust for its partner in a country A, while one would consider it as being usual business hazards in a country B.

In other words, any measurement scale must be contextualised, which implies leading a robustness test with the decision makers of the countries where one intends to apply it. This is what this paper is focused on. The challenge is to formalise a measurement scale of relational integration between supply chain members that may be applied to Asian emerging countries as part of future research on the basis of logistics performance. According to us, the topic is extremely relevant as the new circumstances of globalised economies lead numerous companies of emerging countries to increasingly integrate into the flows of products at a global scale. It is therefore important to have the clearest perception possible on how top managers lead (or do not lead) relational integration policies. If a constant effort is done regarding relational integration, this will send a positive signal to other supply chain members, who will more easily accept to invest in the relationship-specific equipment, without unreasonably fearing the display of opportunistic behaviours. The paper is structured as follows. In section 1, the key concepts linked

to the integration of the supply chain will be clarified, before specifying in section 2 the process and dimensions involved. Section 3 will more specifically focus on the relational integration by proposing a measurement scale tested through a field research carried out in Vietnam.

1. Key concepts linked to supply chain integration

According to Stank et al. (2001), the synchronisation of logistical activities between supply chain members creates value for end customers by reducing the costs of availability thanks to the removal of recurrences in transportation modes, storing, handling, etc. The integration of skills and logistical resources brought by each one is thus an important condition to improve the global performance of the supply chain. However, it should be noted that integration is not a new concept in the field of management, in particular in the framework of supply chain management (Shang, 2009; Gimenez et al., 2012; Danese et al., 2013; Huo et al., 2014; Dufy et al., 2015). According to Paché and Spalanzani (2007), this concept, very widely used by practitioners as well as researchers, nevertheless requires to be clarified. The supply chain integration refers to the configuration of company structures, mainly in the framework of inter-organisational relationships, in such a way for a sufficient alignment to emerge between the strategic targets of partners regarding the transporting of products. Indeed, the integration is supposed to facilitate the rapid flow of materials and goods thanks to an efficient management (Torbianelli and Mazzarino, 2010; Natour et al., 2011).

The concept of integration was formalised by Fayol (1916/2013), who identified the coordination as one of the five critical functions of management. Thereafter, Lawrence and Lorsch (1967) indicated that differentiation and integration were basic principles to understand organisational structures. This explains that integration is often mentioned as one of the key characteristics of supply chain management. Even so, most definitions regarding supply chain management explicitly refer to integration. The research led by Mentzer et al. (2001) thus shows that it constitutes one of the essential actions in order to efficiently manage logistical processes. Lambert et al. (1998) indicate that the aim of integration is to improve the efficiency of the processes linking supply chain members, by allowing the emergence of a rationale for collective action between them. Therefore, it is necessary to apprehend it on two levels: at a strategic level and at an operational level (Mentzer et al., 2001; Frohlich and Westbrook, 2001). This is confirmed by Bagchi et al. (2005) for whom supply chain integration is described as a global collaboration regarding strategy, tactics and operational decision making.

Supply chain integration can be defined as a formal process that associates both the process of an activity with those of companies of another field of activity and the company process with those of one or several other companies. This perspective raises, subsequent to Zhao et al. (2011), the following question: how do supply chain members integrate their unique and inimitable abilities, their expertise and their key skills? Pagell (2004) considers supply chain integration as a collaboration and interaction process where companies work together to obtain the best common results; this issue is particularly important in the context of fast evolving industries (Sabet et al., 2017). Cao and Zhang (2011) underline that the transaction cost theory can explain why a company collaborates with other companies, and how integration activities reduce transaction costs by leading to better performances. They indicate that supply chain integration represents a particularly efficient mechanism of resource and knowledge exchange. This mechanism is described as a standardised routine activity implemented in order to share information throughout departments, services or organisations.

According to Lee (2005), the concept of supply chain integration finds its justification in the fact that the amplitude of interactions in the seller-buyer dyad varies greatly at the mercy of

environmental circumstances surrounding the relationship. The integration has to go beyond a simple mutual adjustment between logistical activities; it should also include other functions of the company, such as product design. For Cagliano et al. (2006), supply chain integration is strictly linked to coordination mechanisms and it implies in particular that the business processes be rationalised and interconnected, both within and beyond the limits of the company (Alfalla-Luque et al., 2012). In a nutshell, literature is wordy regarding this subject, most likely because the manner of approaching supply chain integration strongly depends on the approaches retained by the researcher. Indeed, the questions relate to the integration process itself as well as the dimensions concerned.

2. Process and dimensions of supply chain integration

Supply chain members most often achieve supply chain integration after a certain number of mutual efforts and learning. Indeed, the most natural approach for a company is to improve logistics performance, especially by improving intra-organisational interfaces (between production and marketing, between marketing and finance, etc.). Supply chain management seminal work thus underlines the difficulty and length of going from a compartmentalised vision, company by company, to a transversal vision, on a network's interconnected mode (Christopher, 2010). The dynamic vision of supply chain integration is also complicated by the fact that integration covers several possible dimensions, or several layers, to recall Fabbe-Costes and Jahre (2007). Consequently, it seems essential to clarify these various aspects to understand the stakes of a relational integration and, subsequently, propose a measurement scale of its intensity.

2.1. Process

Supply chain integration is discussed from various perspectives, by evaluating the relationship between supply chain integration and competitive operational performance (Prajogo et al., 2016). Cagliano et al. (2006), for example, make a clear distinction between customer integration, informational integration, logistical and distribution integration, and supplier integration. Differences have also been brought to light based on process types. Simchi-Levi et al. (2007) class integration mechanisms with reference to design and logistical links. Romano (2003) identifies four streams within the literature, with particular emphasis, respectively, on functional integration, logistical integration, informational integration and process-based integration. Finally, at the operational level, integration can be made by inter-functional teams reporting to the manufacturer and the distributor, as raised in the works of Ellram and Cooper (1990) and Cooper et al. (1997).

Academic literature strongly stresses the fact that supply chain integration should be developed in a stepwise fashion (Halldórsson and Skjøtt-Larsen, 2004; Forslund and Jonsson, 2007; Alfalla-Luque and Medina-Lopez, 2009). In a reference article, widely quoted in numerous academic works, Stevens (1989) thus identifies a four-step process, that echoes the contribution of Halldórsson and Skjøtt-Larsen (2004). The four steps are as follows:

The first step is based on the functional independence between supply chain members. This step is characterised by independent management systems, through the recurring incompatibility between functional systems and between management processes, through organisational limits linked to the absence of coordinated flow control, from raw material to end products, and by short-term corporate planning.

The second step sees a functional integration emerge mainly emphasising the incoming flow of products. This step is characterised by distinct business functions, a lack of visibility of the final

demand, an inadequate planning and usually mediocre performances to the extent that we are focused on cost reduction rather than on the improvement of customer service.

The third step is favourable to activity integration concerning the control of the company's incoming and outgoing flows. The emphasis is put on the effectiveness rather than on the efficiency. This step is characterised, on the one hand, by the use of EDI to accelerate responsiveness, rather than to react in retrospect to the failures of the logistical system through a proactive customer management, and, on the other hand, by the formalisation of a medium-term planning focused on tactics rather than strategies.

Finally, the fourth step leads to the widening of the integration field towards suppliers and customers. Cooperation starts at an early stage of the design of a new product and then includes complex exchanges at all levels. This step is characterised by a sharing of information regarding products, processes and changes in specification, exchange of technology and assistance in design, with a focus on strategy rather than tactics.

2.2. Dimensions

Through an extensive literature review, Alfalla-Luque et al. (2012) finally indicate the presence of three essential dimensions to understand the stakes of supply chain integration. First of all, supply chain integration is based on the willingness demonstrated by all actors (Simatupang and Sridharan, 2005; Cagliano et al., 2006; Childerhouse and Towill, 2011; Ralston et al., 2015). Then, supply chain integration implies the implementation of collective processes (Lambert et al., 1998, Bagchi et al., 2005; Stevens and Johnson, 2016). Finally, supply chain integration cannot come true without a management data sharing, as well as human and material means, to improve resource orchestration between supply chain members (Liu et al., 2016). In order to clarify current reasoning, Fabbe-Costes and Jahre (2007) chose to refer to the notion of integration layers. The aim is to distinguish four levels for which integration is a major stake, that is to say the flows, the processes and activities, the systems and technologies, and the actors: The physical, informational and financial flows, taken on an individual basis, but also and mainly jointly: thus, information flows enable to manage physical flows, while financial flows bring the proof that supply chain creates value for the various stakeholders. The processes and activities, whether they are operational processes (from product design to waste disposal, as well as production, distribution, after-sales service and recycling), management processes (target definition, forecasting, planning, monitoring and evaluation), as well as support processes supporting the others.

Systems and technologies, components of the supply chain both for its management of physical and information flows (separately and jointly), the interconnectivity and interoperability of technologies and systems implemented being considered as necessary, in particular to reduce the availability delays. The actors, at the centre of multiple and varied interactions, with individuals and teams implied in the supply chain management, which implies to communicate, work together, develop shared structures, implement a certain strategic, organisational, structural and cultural compatibility.

According to Ireland and Webb (2007), agreeing with Fabbe-Costes and Jahre (2007), the dimensions of supply chain integration include three levels, that implicitly refer to precipitated layers. The strategic level is that of the company's intention to integrate their actions and adjust their interactive behaviours; this includes both short-term, for example, the total visibility of flows, and long-term targets, for example, the increase of collective adaptation abilities. The operational level concerns product integration and processes between companies, for example, by enabling suppliers to take responsibility for activities of product design, by helping them understand the

complexity and the impact of coordinated processes; the interpersonal relationships play here an essential role, because personal affection, individual communication and credibility have a positive influence on supply chain integration (Wang et al., 2016). Finally, the technological level is that of sharing knowledge and abilities within the supply chain, an important topic that is underlined by Leuschner et al. (2013).

The input of Forslund and Jonsson (2007) distinguishes informational integration and organisational integration within the supply chain integration approach. Informational integration refers to the scope of information and knowledge exchange in the design, processes management, planning, monitoring, exchange of technology, and the optimal coordination of resources. Organisational integration refers to the sharing of ideas, institutional culture, decision-making and skills, all things encouraging the spread of a climate of trust strengthening inter-organisational links. Thereafter, Kim and Lee (2010) propose to refer only to two dimensions: strategies and systems. Regarding strategy, it is the degree of common construction of a business plan regarding the demand to be served. Regarding systems, it is the common construction of compatible communication systems between them to facilitate the long-term planning of supply chain operations. Table 1 synthetises the main dimensions of supply chain integration.

Table 1 Dimensions of supply chain integration

Authors	Dimensions	Description
Lee (2000)	Informational	Sharing of information and knowledge between supply chain members
	Decisional	Changes in decision-making at the level of work and resources
	Organisational	Organisation of close relationships between supply chain members
Saeed *et al.* (2005)	Strategic	Sharing routines, knowledge and new ideas to improve the functioning of the supply chain
	Operational	Frequent coordination at the level of processes and activities through a regular sharing of information
	Financial	Joint investment in supply chain members' common projects
Ireland and Webb (2007)	Strategic	Intention of supply chain members to integrate their actions and adjust their behaviours
	Organisational	Product and process integration between supply chain members
	Technological	Knowledge and skill sharing through supply chain members
Van der Vaart and Van der Donk (2008)	Strategic	Tangible activities underlining the importance of collaboration between supply chain members
	Organisational	Positive attitude regarding partners to make a long-term joint planning
	Operational	Frequent face-to-face visits, with a formal regular assessment of partners
Kim and Lee (2010)	Strategic	Joint forecasting of demand and planning of operations between supply chain members
	Informational	Compatible communication systems between supply chain members for the forecasting and the planning

Source: Adapted from Leuschner et al. (2013).

3. Measurement scale of relational integration

The development of measurement scales is an important step of most research in management that have chosen an approach of deductive nature. A measurement scale is a tool enabling to measure the judgement, opinion or perception of the people interviewed on a given subject. Even if the issue of bias in measurement scales remains important, the tool can be useful to approach the manner with which the respondents, in this case, top managers, will build their business reality and draw conclusions to take decisions. An important number of measurement scales have been developed and tested in the context of relationships between companies, in BtoB marketing, strategy, as well as in supply chain management. The aim is to propose a specific measurement scale of relational integration and then to test it from a research led in an emerging country: Vietnam.

3.1. Proposed scale

Collaboration between supply chain members is usually admitted to increase the efficiency of operations, improve customer service and insure a decrease of the cost of making products available. This applies in particular to the collaboration on sales forecast, where companies spend their precious resources to guarantee a satisfying answer to unexpected environment evolutions. Collaborations in the logistical process refers to the joint actions taken by partners such as assortment planning, definition of joint promotion planning, stock management and automatic restocking from retail counter outputs (Simchi-Levi et al., 2007). As such, we can refer to relational integration, in other words, an integration based on the building and maintenance over time of a close and durable relationship between supply chain members to improve the value creation process.

Relational integration requires from supply chain members the will to create structures, frameworks and measurements that encourage a certain behaviour from organisations towards the achievement of a common goal. This includes the sharing of confidential information on strategies led and on operational information for the control of daily activities (Kasemsap, 2017), as well as the creation of financial links that make companies dependent in fine on mutual performances (Stank et al., 2001). According to Rodrigues et al. (2004), suppliers, manufacturers and distributors are thus encouraged to identify and establish partnerships with companies that share a common vision and pursue converging targets relative to the interdependence and collaboration. This collaborative perspective is essential to the development of efficient structures within the supply chain, aligning functional operations of several companies as part of an integrated system (Puigjaner and Laínez, 2008).

In previous research, relational integration was operationalised in different manners according to the authors' targets. For example, Hsu et al. (2008) adapt measures that have already been used by Svensson (2004), Corsten and Felde (2005), Kannan and Tan (2006), and Golicic and Mentzer (2006) for the operationalisation of the variable relative to the field of buyer-supplier relationships and their impact in terms of performance. Within the literature dedicated to the issue of relational integration between supply chain members, the variable is mainly seen as a unidimensional construct. The measurement scales developed by Hsu et al. (2008) and by Jayaram and Tan (2010) seem particularly relevant given their robustness; consequently, we retain them as part of our investigation (see Table 2). The general question asked to top mangers is: Indicate your extent of agreement with the following propositions characterising the relational integration between your company and your partner. The scale ranges from "I strongly disagree" to "I strongly agree".

Table 2 Indicators of the "relational integration" (RI) variable

Code	Items	Type of scale	Authors
RI_01	My partner shows flexibility to answer unexpected changes in demand	5-point Likert	Hsu et al. (2008)
RI_02	My partner uses an assessment system to measure customer satisfaction	--	
RI_03	My partner shares confidential information with my company	--	Jayaram and Tan (2010)
RI_04	My company develops sincere and frequent communication with my partner	--	
RI_05	My partner conducts actions for the purpose of bringing answers to my company's complaints	--	
RI_06	My partner shows flexibility to answer my company's changing needs	--	

3.2. Selected sample

The sector selected for this investigation is that of manufacturers in Vietnam's food industry. This choice is due to two reasons. On the one hand, the sector represents 20% of the country's GDP, and the growth of the domestic food demand is estimated to 10% per year. It has therefore achieved to maintain a positive growth despite the difficult context (diseases, bad weather, global economic crisis, etc.). In addition, in upstream, the sector still employs nearly 70% of the active Vietnamese population, and that it is affected by a rapid modernisation of production and logistical techniques, including the increasing use of logistics service providers (Limbourg et al., 2016; Nguyen and Nguyen, 2017). On the other hand, as showed by Colin and Paché (1988), the food industries have developed innovative approaches in various Western countries regarding management flows to reduce the costs and improve customer service. This largely explains the low added value earned on the merchandising of food and agricultural products, and in particular, convenience products, that imposes on businesses a monitoring of logistical costs to improve profitability. The investigation was done in Vietnam in February and March 2014.

To compile a list of food manufacturers in Vietnam, we contacted the food industry department of the Ministry of Industry and Trade. The Ministry provided the contact information of 700 food manufacturers for which general information was available (name of transport or logistics manager, address, telephone number). A questionnaire was mailed to the transport or logistics manager identified, given the slow development of Internet communications. One week after the mailing, we contacted the businesses by telephone to confirm that they had received our questionnaire and invited them to complete it. We received 98 responses after one month, but four were eliminated because several values were missing. To improve the response rate, manufacturers were contacted again by telephone and the respondent was invited to participate. We consequently received an additional 45 responses. In total, we received 139 usable questionnaires, for a response rate of 19.8%, which is very

satisfactory compared with the studies usually conducted in Europe and North America in the supply chain context. In our survey, of the 139 business respondents, 68 were located in the south (48.9%), 42 in the north (30.2%), and 29 in the center (20.9%) of the country.

The size of our sample can be considered as fully acceptable on a methodological level. Indeed, the testing of the measurement scale of relational integration is based on the method of partial least squares (PLS). Two main estimation techniques of structural equation models are used in management sciences: techniques based on the co-variance and techniques based on the variance. Although the first approach remains the most popular in marketing (Hair et al., 2009; Reinartz et al., 2009), an increasing interest regarding the PLS regression method has appeared in the past few years, given the advantages it contains. On the one hand, it does not require the multivariate normality of data, unlike the method based on covariance. On the other hand, it is more appropriate for a small sample of less than 250 observations (Hair et al., 2009; Reinartz et al., 2009), which is the case here.

Company size was measured by several criteria. Our research uses the two criteria: (1) number of employees; and (2) sales turnover. Regarding the average level of number of employees of food manufacturing industries in Vietnam, the businesses in our sample are larger than average. As Table 3 shows, 20.9% of businesses surveyed have fewer than 100 employees, 38.8% of businesses surveyed have between 300 and 499 employees, 10.8% of businesses surveyed have between 500 and 999 employees, and only 4.3% have over 1,000 employees. The overrepresentation of large businesses may be a source of bias in the analysis, yet we can assume that their leading-edge supply chain management practices can provide valuable information on evolution underway in Vietnam since the liberalization of the national economy. Nonetheless, Vietnam has generally not yet seen the development of sophisticated supply chains, which is also the case in other emerging countries like Bangladesh and Pakistan (Schotter and My, 2013).

Table 3 Characteristics of manufacturers in our sample

Categories	Sub-categories	Number of firms	%
Number of employees	Less than 100	29	20.9
	101 to 299	35	25.2
	300 to 499	54	38.8
	500 to 999	15	10.8
	Over 1,000	6	4.3
	Total	**139**	**100**
Sales turnover (billions de VND, 1 US dollar = 22.000 VND)	Less than 1 billion VND	29	20.9
	1 to 10 billion VND	33	23.7
	10 to 200 billion VND	59	42.4
	200 to 500 billion VND	11	7.9
	Over 500 billion VND	7	5.0
	Total	**139**	**100**

3.3. Testing of the measurement scale

We begin with an analysis in principal components with six items. The KMO is equal to 0.8 indicating a good match of data with the factorial solution. The Bartlett's test of sphericity indicates a strong significance (Sig. 0.000). The MPE is entirely satisfactory with the value of 0.213. In addition, the result of the test of component matrix shows that this variable has two dimensions. The first dimension has five items, which are RI_02, RI_03, RI_04, RI_05 and RI_06. However, the second dimension has only one item, which is the item RI_01. We should therefore delete it. We continue with the second analysis in principal components. The Table 4 shows the final results of the analysis in principal components without RI_01. A new extraction without the item RI_01 shows an improvement of the total explained variance (58.7%). The KMO of 0.809 shows a good match of data with the factorial solution. Bartlett's test of sphericity shows a strong significance (Sig. 0.000). The MPE by item is 0.75. Consequently, the data can be factorised.

Table 4 Analysis of the measurement scale of relational integration

Items	Factorial contribution	R^2
RI_02	0.747	0.559
RI_03	0.717	0.514
RI_04	0.866	0.750
RI_05	0.716	0.513
RI_06	0.774	0.599
Cronbach's alpha	0.822	
Unidimensionality	Yes	
Explained variance	58.7%	
Factorisation	KMO = 0.809; Bartlett's test $p < 0.00$; MPE > 0.75	

Regarding the issue linked to the identification of scale dimensionality, Kaiser's criterion suggests to retain only one dimension, explaining 58.7% of the total variance. The scree test indicates the presence of a dimension. The R2 are all greater than 0.5. As planned, the items are, spread on a factor, the factorial contributions are greater than 0.716, which shows the good unidimensionality of the measures. Cronbach's alpha is equal to 0.822, which also shows the good reliability of the measures. Consequently, we selected this solution. It leads to a five-dimension measurement scale that can be used in an analysis of the level of relational integration between partners of a supply chain for emerging countries that are more or less similar to Vietnam, in particular in South-East Asia.

Conclusion

To what extent are supply chain members capable of collaborating with each other in order to improve the functioning of the supply chain in which they are involved? The question is important for both clients and suppliers. Indeed, if supply chain members perceive an atmosphere of distrust, where each one tries to profit from its position without caring about other players, it is very likely that the supply chain will be taken over by entropic forces. In other words, each supply chain member seeks to value its own individual interest, even if it means resorting to opportunistic behaviours such as the withholding of data or being dishonest

about its real activities. It would obviously be unwise to deny the existence of a distrustful atmosphere in the operation of supply chains; furthermore, the works of Cox et al. (2003) on power regimes consider that the situation is common as soon as the sharing of the value created within the supply chain is perceived as unfair. It is important to admit that the absence of collaboration can, on the long run, have disastrous effects on the level of quality of service that is offered to clients, for example with an important number of stock-outs resulting in a loss in sales.

Consequently, having a robust measurement scale of relational integration between supply chain members is interesting, both for the researchers and the practitioners. For researchers, the measurement scale enables to assess the atmosphere within the supply chain and, therefore, offer crossed analysis. These analyses can compare supply chains linked to distinct products within the same country; they can also identify differences or similarities between countries in a cross-cultural perspective. For practitioners, a measurement scale enables to have a diagnostic and audit tool. Therefore, knowing if the current (or planned) partner leads activities in order to provide an answer to its client's complaints or accept to share confidential information with it will give a good idea of its will to commit to a collaboration strategy. A measurement scale can therefore constitute an excellent decision support tool regarding the choice and monitoring of partners. However, the retained measurement scale would need to be sufficiently relevant to adapt to the studied environment. Yet, we must admit that various works carelessly import measurement scales that are tested in a given context, for example, in Western countries, to a radically different context on the economic, social and cultural levels, for example, in emerging countries.

The goal of this paper was, very modestly, to propose a measurement scale of relational integration between supply chain members that could be correctly applied to emerging countries. To do so, we based our study on existing literature and then tested the measurement scale retained from a field study in Vietnam. This country was not randomly picked. Indeed, it has undergone radical transformation since 1986, with the Doi Moi [renovation] reform, to change its economic model, from a planned economy to a market economy. The result is the opening of borders to several foreign companies that actively participate in the modernisation of supply chains (Duong and Paché, 2015). From this point of view, the case of Vietnam is a symbol of rapid change that should interest all researchers studying other emerging countries in South-East Asia. We can therefore hope that the measurement scale retained and tested in the paper will be used in future research on relationships between supply chain members. This would enable progress to be made on cumulative knowledge on logistical strategies that become emancipated from dominant Western models.

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