

Supply Chain Relational Dynamics in Informal Ecosystems: Exploring the Case of a Developing Country

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Abstract— Most of work have been done to tackle issues of relationships within supply chains in formal and structured markets. In developed countries, these models are representative and help shaping dynamics to go through the development of contextualized solutions. Models developed in such environments are not fully adaptable to informal markets in which dynamics parameters are not the same or are not perceived the same way. This research tends to explore dyadic relational control dynamics and practices developed to cope with informal markets constraints and conduct, namely upon a set of agri-food wholesalers working with their suppliers. It aims at analyzing control modes through Ouchi's framework including market, clan and bureaucracy in relation to operations and finance variables (cost, lead-time, throughput, flexibility) and relational variables (power, trust, altruism) incorporating the market context. Outputs of this research outline, on one hand, the importance of considering relationship control mode depending of the type of ecosystem, and the background of conducting inferential research to crystalize a suitable analysis model.

Keywords— Supply Chain control - informal ecosystems - relational dynamics.

I. INTRODUCTION

In the world economy, a typology is needed when dealing with economic dynamics. Generally, the distinction between developed or industrialized economies and developing economies is used to better apprehend issues in different domains. In developed economies, an eco-system, including business practices and operating models, is formalized and structured making analysis and action easy and clear to companies and their interactions. On the other hand, practices and exchange modes are not always easy to comprehend in developing countries because of the lack of market maturity. This difference remains in the position of these economies in the formalization and articulation process of the economic dynamics.

Economic dynamics is formalized and structured to cope with the environment uncertainty reducing exchange risks. This formalization lets companies perform their activities in a way that master this uncertainty. This can generally be possible when the environment is deterministic or rendered as such. But when the environment is stochastic, formalizing or having a predefined model can cause economic rigidity. Today, companies evolve in interaction with one another to face uncertainty. This interaction can be concretized through the organization in supply chains.

Supply Chains are organizational structures that can be defined supply chain can be defined as a hierarchical, dynamic and process oriented network, consisting of a set of autonomous companies (from the first supplier to the end customer), linked by upstream and downstream flows (physical, informational, financial and knowledge) and driven by different level relationships, established in order to satisfy customers through better coordination and integration, but also by means of greater flexibility and responsiveness (Zouaghi and Spalanzani, 2009). These supply chains come from a

requirement for coordination, flexibility and reactivity among a set of companies. Mentzer et al. (2001) assume that these supply chains exist, whether managed or not.

Supply chain has both formal and informal practices. This allows it to have a certain balance in relation to the uncertainty of the environment. This can also be explained by the theory of transaction costs (Williamson, 1981), where the supply chain lies between a form of hierarchy and a form of market relation in which there is no contract or formal link between entities. When dealing with informal economies, some variables have to be grasped more than others to ensure a certain supply chain stability and performance. A question comes to mind: How is a dyadic relationship between companies constituted in an economy which is partially informal, in order to insure a stability and performance of the supply chain? Or Which relational and transactional factors determine dyadic relationship control in an informal context?

The main issue discussed in the literature has been the significance of the informal sector and its relation to the formal economy. Many studies have contributed to this issue, but there are still contradictions and inconsistent outcomes (Gërxhani,1999). Although the literature is relatively scarce, and need to be analyzed more extensively.

To answer our question, our paper will be structured in three parts. First, we start by highlighting informal sector and its characteristics in developing countries. Then, an analysis of the related literature to dyadic relationship control between Supply chain actors, namely dyadic relationship control between transactional and relational approach, and the intra-organizational control literature: a significant contribution. At the end, we present a case study to come with case evidence endorsing our framework.

II. INFORMAL ECONOMY AND ITS CHARACTERISTICS IN DEVELOPING COUNTRIES

After the 1950s, the phenomenon of informal economy and activities started to attract the attention of economists as well as researchers (Blau and Scott, 1962; Gouldner, 1954). Castells and Portes (1989) state that the informal economy is a common-sense notion. For these authors, the informal economy is not a set of survival activities performed by destitute people on the margins of society. Studies in both advanced industrial and less developed countries have shown the economic dynamism of unregulated income generating activities and the relatively high level of income of many informal entrepreneurs, sometimes above the level of workers in the formal economy (Ferman et al., 1978; Portes et al., 1986). Some activities in the informal sector may derive from the desperate need of a worker to obtain the means of subsistence for his or her family. But a similar motivation could lead a worker to accept lower wages in the formal sector. The informal economy is not a euphemism for poverty. It is a specific form of relationships of production, while poverty is an attribute linked to the process of distribution. Actually, the informal sector concept was born in a study conducted by Hart (1985) in a Third World context and has been the subject of a lot of confusion (Harding and Jenkins, 1989; Gërkhani, 1999). This confusion leaves the measurement of informal economy controversial (Schneider, 2002). In this research, the informal sector will be defined by focusing on the characteristics around which there has been almost complete unanimity of different research fields. Thus, this phenomenon refers to the part of economy which represents an alternative to formal sector or aims to get supplement income within it (Bromley and Gerry, 1979). For (Lippert & Walker 1997, pp.4-6, Schneider, 2002) the underground economy represents all unregistered economic activities, namely legal or illegal activities, monetary or barter transactions, which contribute to the officially calculated Gross National Product (GNP).

According to Gërkhani (1999), the informal sector characteristics could be of different nature: from an economic and a social view, the main features are undeclared labor, lack of social benefits, poor working conditions, the survival goal of participants in informal sector, unreported income and tax evasion, small scale operations with individual or family owners, unregistered or unlicensed activities, the importance of social networks to get into business easily, and finally the flexibility and autonomy when making decisions (these points will be discussed below). Some researchers, such as De Soto (1989), relate the emergence of informal sector to the applied government policies as well as transactions costs.

A lot of theories aimed to explain the relationship between the formal and informal sector. First, the early approaches have seen these two sectors as autonomous, and opposite systems. The concept of "economic dualism" usually has been used (Harding and Jenkins, 1989). Thereafter, the dependency of these two systems has been recognized. This latter could take the form of competition (e.g., unregistered business activities where labor is cheaper and prices are lower) or complementarity (e.g., via sub-contracting activities) between

the formal and informal sectors. Afterwards, an important approach has dealt with the effect of both systems on each other. In this context, Lubell (1991) noticed that the impact is either anti-cyclical or pro-cyclical. As an example of anti-cyclical effect, the rigidity of the formal sector leads individuals to find an alternative and so get involved in informal sector as a sort of earning a living. For the second type of effect, namely, pro-cyclical effect, the explanation of the formal sector generally leads to increase the demand for products and services from the informal sector. Also, some companies in informal sector tend to go into formal sector in order to get more advantages such as getting credit from financial institutions, etc.

In Algeria, the informal sector has proliferated due to an important number of zones with lawlessness. This sector also mobilizes more than 41% of the global employment for the period of 2000-2007 according to OECD. Moreover, according to the study undertaken by Schneider (2002) based on World Bank Data, this sector represents 34,1% of GNP. Thereafter, this ratio has increased to 45,6% of GDP in 2012 according to National Office of Statistics. However, the Algerian informal economy seems to be lower compared to other countries in Africa. Also, the statistics shows that the annual average of commercial transactions without invoice, namely unreported to state tax authorities, is about 51,6 billion Dinars (Not less than 500 Million Dollars). Actually, this sector is overwhelming and it's difficult to accurately pinpoint it regarding its occult and hidden nature, and the related statistics are certainly inferior to reality.

The main reasons for actors, in Algeria, to participate in the informal sector could be mentioned as follow (Sadi, 2005): (1) evading taxes in a way to get cheaper labor and lower prices in order to (2) face local (public or private) and international competition. (3) Circumventing regulations and licensing requirements as long as regulations are rigid, which reduce flexibility in managing activities, and the process of getting license is characterized by slowness and bureaucracy.

As a matter of fact, it is to notice that all these features and characteristics of the informal sector have its implications on supply chain practices and determine the control type that leads the dyadic relationship between supply chain actors.

III. DYADIC RELATIONSHIP CONTROL BETWEEN SUPPLY CHAIN

Supply Chain Relationship is a concept that have been studied by lots of authors, that propose typologies to better apprehend relationship issues. Mentzer et al. (2001) distinguishes between three types of supply chains depending on their complexity, a direct supply chain, an extended supply chain and an ultimate supply chain. A direct supply chain consists of a company, a supplier, and a customer involved in the upstream and/or down-stream flows of products, services, finances, and/or information. An extended supply chain includes suppliers of the immediate supplier and customers of the immediate customer, all involved in the upstream and/or downstream flows of products, services, finances, and/or information. An ultimate supply chain includes all the organizations involved in all the upstream and downstream

flows of products, services, finances, and information from the ultimate supplier to the ultimate customer.

Harland (1996) offer a finer distinction and stipulates that supply chain management is a term that refers to four main uses. The first one concerns the inter-functional integration of materials and information flows from inbound to outbound. The second use treats the dyadic or two party relationships with immediate suppliers. The third one include the management of a chain of upstream suppliers and downstream customers. The last use is the management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers. However, the author highlights the fact that most research on supply chain management that studies issues beyond the dyadic relationship has inclined to be hard and structural in nature. He adds that in contrast, the research in dyadic relationships has evolved more recently into considering softer, more behavioral aspects of relationships.

Dyadic relationships types and its appropriate control mode or governance structure is considered as one of the most important issues in inter-organizational dynamics (Kale et al, 2000). Inter-organizational control has received little attention in the literature (Van der Meer-Kooistra et Vosselman 2000; Langfield-Smith et Smith 2003; Nogatschewsky 2003; Dekker 2004; Kamminga et Van der Meer-Kooistra 2006). Literature on Inter-organizational relationship and its control reveals two main dominant paradigms, namely transactional paradigm, based mainly on contract, as well as relational paradigm based on trust and social standards.

- *Dyadic relationship control between Transactional and Relational Approach*

The development of dyadic relationship along with the emergence of outsourcing and collaboration between supply chain members, make management and control issues in the heart of business concerns. Indeed, keeping all members committed in accordance with collective expectations arises as one of the most important topics in inter-organizational literature. The transactional paradigm is based mainly on the transaction cost theory (TCT) that revolves around economic efficiency. This theory considers that each transaction has a cost and suggest three modes of governance structure to manage these transactions, namely market, hybrid and hierarchy according to the uncertainty and frequency as well as the specificity of the transaction (Williamson, 1994).

In this context, the contract seems to be a sufficient condition to maintain a good relationship and to reduce the opportunism between supply chain members as long as reward and commitments of both parties are well identified. In fact, the transactional approach has been subject to several criticisms and doesn't provide an in-depth comprehension and explanation of dyadic relationship governance structure (Larson, 1992). Furthermore, this approach lacks of dynamism as long as it doesn't take into account the social mechanisms of governance, while dyadic relationships are often embedded in a rich and influential social context.

Unlike the transactional approach, transactions should never be seen as autonomous or independent events or ignores the effect of prior interactions between partners (Gulati, 1995;

Ring and Van de Ven, 1992). The relational approach stipulates that previous transactions affect largely the future ones. According to Dwyer et al. (1987) and Macneil (1980), cooperation between partners evolves based mainly on the results yielded from the succession of transactions which are strongly connected throughout the time as long as transactions fall within the context of relational process that has a past, present and future. Klassen and Vereecke (2012) emphasis on the fact that supply chain management has left social concerns last. They add that lots of ground-breaking companies find it difficulties to outline, understand and plan for social matters. Therefore, we have noticed that one of the main factors that drive companies to marginalize management of social aspects of relations with their supply chain partners, in a structured way, is the difficulty to assume relevant inter-organizational relational variables and the dynamics governing them.

Many researchers found that some factors such as reciprocity, inter-personal relationship as well as trust could provide a necessary control system to ensure a good accomplishment of transactions and improve the efficiency for both firms engaged in a dyadic relationship as long as the costs related to formal control and contracts are relatively low (Larson, 1992). Repeated interactions can embed a dyadic relationship in an influential economic and social context, which may strongly influence its formal structure (Dekker, 2004).

- *The intra-organizational control*

Intra-organizational control literature has a significant contribution to come up with pertinent control modes to govern the different situation of dyadic relationships. A deep literature review allows to identify three main modes of control (Hakansson et Lind, 2004) adopted principally from Ouchi's model, namely, markets, bureaucracies and clans (Ouchi, 1980).

According to the first mode of control, namely markets, there are few specific mechanisms and the market dominates. Suppliers or services providers are controlled by the fact that they are put in a systematic competition. Many offers from the market are received and then are compared to each other based on the price and the quality required. The object of control, in this context, is the results (price, quality, delivery time). According to the contingency factors standing behind the adoption of market as a mechanism of control, this latest seems to be efficient when a transaction is highly iterative, and its outputs in terms of quality, price and delivery time is relatively known and doesn't need specific assets. Also, this mode is pertinent when there are many substitutable actors and dynamic environment.

The second mode of relationship structure governance is bureaucracy control. In this mode, contract seems to be good mean required usually by the part that has authority. It contains clear terms of selection and evaluation criteria which are determined beforehand. The object of control are the results as well as the work process. This control mode is efficient when the work process is known, the transactions are moderately repeated, assets are moderately specific, risk is relatively low and future contingency factors are relatively known as long as the environment is relatively stable.

The last mode of control is the clans, also called social control or control by trust. This latest is generally developed over time where a dyadic relationship starts with a control based on reputation and experience of each part, and then, the intensification of communication and joint actions is supposed to stimulate trust between the two parts. In this mode, the focus will be addressed to the capacities and relational behavior of actors. Also, this mode is efficient when the results and the work process are somewhat known, transactions are not often repeated, assets are highly specific, few actors in the market, high uncertainty related to the future contingency factors but environment is relatively stable. We come up with a theoretical framework presented in figure 1.

• *The importance of relational approach in the context of informal market*

Trust could be defined as an anticipation or a belief that all expectations will be realized (Zucker, 1986). According to Sako (1992), the literature distinguishes three types of trust, namely contractual trust, competences trust and goodwill trust. Contractual trust results from that fact the other party is able to assume and accomplish its responsibilities and obligations. Competency trust results from the fact that the other party has all the required skills and capabilities as well as professional qualifications to accomplish its commitments. Goodwill trust results mainly from the great integrity of the other party and its quality of being honest and strong.

Also, trust could be ex-ante or ex-post trust. Ex-ante trust represents the belief that convinces a company to engage in dyadic relationship with another actor for the first time based on the good reputation or competencies or goodwill of the second party. Ex-ante trust represents the belief built based on past interactions or the satisfaction that is built over time through complicated social interactions with the second party within dyadic relationship.

Adopting transactional or relational approach is conditioned by a set of contingency factors. Also, these approaches are not exclusive, and they are usually combined in a dynamic way according to the contingency factors that companies face. The private nature of actors who are not public justify, somewhat, the use, for organizations, of market and clan as control mode rather than bureaucracy. According to Mintzberg (1982), the most prominent feature of public organizations is the obsession of control through the formalization of procedures, and work rules, power centralization as well as the use of contract, etc. In addition to the juridical nature of actors, another reason raises to adopt clan and market control mode, which is the absence of government presence in business daily life of companies because of the weaknesses of tax authorities. This fact makes companies avoiding formal business with other companies, which is mostly based on contract, in order to avoid taxes, which means, for these companies, a competitive advantage supported, on one hand, by cost reduction as long as these companies pay less taxes, and on the other hand, by margin improvement as long as the great part of margin is not reported to tax authorities.

Also, in a highly informal market, where high level of sales and margin are not reported through the use of fake names with fake trade register, the social aspect becomes more important as long as almost all companies don't accept to engage in a formal and legal dyadic relationship. In this case, the social networks and relational aspect based on interpersonal relationships, trust and sharing values become more and more important (Grossman, 1982; Gerxhani, 2004).

In the same line, within an informal market, the use of trust (goodwill, competency as well as contractual trust) and interpersonal interactions seems to be the only guarantor against an opportunistic behaviour. According to (Larson, 1992, Gulati, 1995), collaborating with reliable and trustworthy actors that have been selected using integrity and willingness as well as competency criteria could represent a rampart against opportunism phenomenon, especially that this collaboration or this dyadic relationship is embedded in a social network. In fact, the reason for which the actors or collaborators, in the informal market, behave as expected is that each one of the dyadic relationship part is afraid to get a social sanction such as the exclusion from the social network or harming its reputation (Granovetter, 1985, Dyer et Chu, 2000).

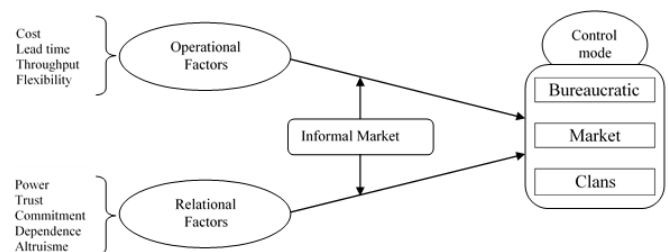


Fig. 1. Theoretical framework.

The relationships between relational factors and market and clan control mode will be stronger for firms in high informal markets than for firms in low informal markets. However, the relationships between financial factors and market and clan control mode will not be stronger for firms in high informal markets than for firms in low informal markets.

The relationships between relational factors and bureaucratic control mode will not be stronger for firms in high informal markets than for firms in low informal markets. However, the relationships between financial factors and bureaucratic control mode will be stronger for firms in high informal markets than for firms in low informal market.

IV. CASE STUDY

We start by presenting the case and then highlight data collection and data analysis. Data analysis will be structured around selection phase, finalizing phase and piloting phase.

• *Case study presentation*

In order to identify the modes of relationship control applied between customers and suppliers of mass consumption goods and their related contingency factors in Algerian market, we have conducted, during our work in this field from July 2007 to June 2017, an exploratory qualitative study of four companies and the control practices used with or by their

relative customers & suppliers. So, in this paper, only the results of four relationships will be analyzed. The choice of this business sector was not in vain. In fact, the mass consumption goods field is characterized by a huge level of informal relationships, which allow us to highlight the impact of this context on the adopted control mode. Actually, in this field of business, the government struggles to pinpoint and manage this field due to the weaknesses of mechanism of control and resources mobilized for this reason. Also, in this field of commerce, the upstream supply chain is very important; going by the fact that price given by wholesalers to retailers represents the source of competitive advantage and a first criteria to select a supplier. The importance of the supply side or the demand side will contribute to determine the relationship governance structure. Within these companies, we have conducted interviews and analyzed practices executed with purchasing managers in Customer's companies as well as sales Managers in Supplier's companies. The table I shows studied companies:

TABLE I. Studied Companies

Case	1	2	3	4
Company	SLAM	HMCO	AMIR	JOII
	Wholesaler	Importator / Wholesaler	Importator / Wholesaler	Manufacturer
Activity Sector	Agrifood	Agrifood	Agrifood	Agrifood
Percentage of Informal trade with Customers	100 %	100 %	95 %	100 %
Percentage of Informal trade with Suppliers	80 %	90 %	50 %	90 %
Upstream Actors	ORAN	HISP	VETI	CIPA
	Manufacturer	Manufacturer	Trader	Manufacturer
Downstream Actors	CUST	CUST	CUST	CUST
	Retailers / small wholesalers/ and Wholesalers	Retailers / small wholesalers/ and Wholesalers	Wholesalers/ small wholesalers	Wholesalers/ Small wholesalers

In order to get a deep understanding of a dyadic relationships between these actors, it's important to present briefly the four companies as well as their suppliers (Upstream actors) and customers (Downstream actors).

SLAM: a wholesaler specialized in commercialization of a lot of brand of beverages and one of the exclusive distributors of ORA Company. For downstream actors, SLAM has a variety of customers, namely retailers, small wholesalers and wholesalers.

HMCO: a wholesaler commercializing different sort of products related to human alimentary, and one of the customer of HISP Company that sells canned product. For downstream actors, HMCO has a variety of customers, namely retailers, small wholesalers and wholesalers.

AMIR: an impetrator and a wholesaler of many kind of product, such rice, beans lentils and almonds, etc. in addition to the importation activity, AMIR has many local suppliers, who are impetrators too, one of the most important supplier is VETI. Also, contrary to the above companies, AMIR sells its products to Wholesalers and rarely to small wholesalers.

JOLI: a subsidiary manufacturer company of AMIR company, specialized in conditioning dairy products. One of the most important supplier is CIPA, a packing company.

The percentage of informal transactions for the four companies, either from the supply side or demand side, is highlighted in the table above. Also, these percentage has been calculated mainly based on the real amount of sales and purchasing reported without modification or tax evasion from tax authorities. Also, these percentages are approximating.

In order to characterize the control mode adopted by the four companies, we have confronted the companies' control practices revealed through the interviews and the observation as well as documents analysis with related literature, namely inter-organizational control literature, in order to understand which stands mainly behind the control mode in these companies.

Actually, some studies have dealt with the issue of construction process of trust between partners such as Larson (1992). Other researchers, such as Andaleeb (1995) and Demoulin (1997), have studied the relevance of Trust control mode according to relationship characteristics. Other researches have aimed to explain the weaknesses of trust control mode as well as the implications of breaking trust between partners (Nogatchewsky and Beaujolin-Bellet, 2005). Our study aims to enrich this literature by exploring which control mode in a dyadic relationship and its related factors predominate and prevail in the context of informal context.

According to our case study and analysis, it's to notice first that the control processes is permanent or a continuous process, which concerns three main phases of an action or a transaction, namely the phase of before the action or transaction, the phase of the progress of action, and the phase of after the action or transaction (Boisselier, 2005). By applying this process on our case study, and based also on Bouquin' typology (2000), our analysis, will deal with control practices used in the phase of selection collaborators or actors, the phase of finalization of goals (before the action), the phase of piloting transactions (when action is running or progressing), and finally the phase of post-evaluation or feedback (after the action).

• *Data collection*

As shown above, semi-directive questions were used with interviewed managers who were either Managers of the focal companies, Purchasing Managers for customer's companies or Sells Managers for Supplier's Companies. For the customer companies, we have interviewed responsible who are in charge of managing transactions with suppliers or customers mentioned above. A lot of interviews were conducted besides these managers repeatedly. In order to not limit the reflection of respondents during interviews, we didn't present our work as a study on the relationship between customers and suppliers by avoiding using the term of control knowing that this latest is the subject of debates and discussions of researchers.

These interviews consist of several parts. First, we have contextualized the relationship type between the customer and the supplier. Afterwards, we have oriented the interviews in order to analyze the control mode applied by entities, customer & supplier, when analyzing the management

(control) process of the relationship, namely the selection step, the finalization step, piloting step, and the post-evaluation step.

- *Data analysis*

According to the methodology used in this paper, we have first identified the control modes that govern inter-organizational relationships from the literature. For our work, Ouchi's typology (1980) seems to be very useful since it distinguishes between three modes of control that could be exercised not in an exclusively manner, but in a complementary way. Also, we have adopted the management process of Bouquin (2000), namely selection, finalization, piloting, and post-evaluation. For the analysis of different Customer-Supplier relationships (the company with its suppliers and customers), we have made two levels of analysis. First, we have identified the control types associated with different phases of the management process, and then we have proceeded to analyze the contingency factor of these relationships that explain the results. In the following lines, we will propose to interpret the results in two stages. First, we analyze how the management process is organized, and then we identify the modes of control related to specific types of relationships.

- *Selection phase*

This step is clearly different from one company to another and from one supplier to another depending on several factors. According to the first interviewed wholesaler "SLAM", the criteria of selection of the supplier were clearly defined, neither the quality nor the price were important for SLAM, but only the payment terms or mode was taken into account. This reality is due principally to the fact that SLAM was in the beginning of his lifecycle activity that was characterized by a low level of sales, and then a difficulty with Working Capital Requirements. The selection of supplier ORA C was based on several factors. First, he was very solid financially as well as his product and organization quality. Adding to this, there was a relational factor behind this choice; one partner in SLAM has personal relationship with sales Manager of ORA C who has willingness to cooperate with SLAM. This evidence tends to confirm the proposals of Granovetter (1985) on the embedding of personal relationships in economic transactions. The purchasing Manager of SLAM commented this situation and said:

"The choice of ORA C has been taken after a depth thinking, we had a financial problem in the beginning of our activity, we needed a supplier that could give us his hand and could allow us to pay on installment in order to reinvest in other product that are sold very quickly, and"

On the other hand, the criteria set by ORA C to select their customers (Distributors) are based on economic factors such as solvability of SLAM, as well as his commercial competitiveness, and its market share.

In fact, even though ORA C and SLAM wanted to clarify their selection decision by using indicators on financial & commercial performance of each other, but this was impossible because the major part of activities in both companies was informal. As a result, there was no document that reflects the real financial image on the activities. This

reality has brought both companies to use trust as the principle mode of control to choose their partners. The purchasing Manager of SLAM confirms this fact by saying:

"Even though we were passing by a difficult period because of our little financial resource, but we have tried always to give a good image on our company, because you know, in this kind of market [informal], we should focus first on the reputation and appearances, because with this, all companies will run to work with you".

The statements of Sales Manager of ORA C confirm that their selection decision of SLAM as an exclusive distributor of their product was principally based on trust, and in this context he said:

"Our choice of SLAM was not made without reason, we have asked some colleagues in the market that were already in relationship with SLAM, they reassured us of its reliability and credibility and especially its commercial capabilities. Moreover, we have visited several times SLAM Company and we could get an idea about the organization and its position in the market".

According to wholesaler "HMCO", that commercializes different sort of products related to human alimentary, the criteria of selecting suppliers was very clear. HMCO was solid financially and looks every day for profitability and then suppliers whose products are well sold. HMCO has identified criteria such as delivery time, product availability, and product variety. In other words, the predominant criteria of HMCO to select their product are profitability of products and reactivity of supplier. The same thing as mentioned above, as it is always in the informal context, no document or rapport could support either HMCO or HIS C to take decision of selecting each other or to make a contract to control each other. As a result, they both resort to personal criteria based on competence trust, and goodwill trust. Both of companies have a good reputation. For downstream actors, HMCO select their customers mainly on their reputation in the social network as well as their solvability that appears effectively after a number of transactions.

Contrary to SLAM and HMCO, the company AMIR usually deals with foreign traders to import a variety of products from different countries all over the world. To select the supplier, AMIR has the following criteria for this: supplier reputation, payment terms, and price. In this context, the purchasing manager said:

"Actually, as the nature of our work requires to deal with foreign traders, we should be careful...we usually choose the supplier who already knows the nature of Algerian market, and who accepts our terms of payment, who is willing to collaborate with us, to help us improve profit ...and without forgetting price and delivery time...."

On the other hand, we have asked the owner of VETI, about how he has accepted to tart business with AMIR company, and for this, he said:

"I Have a good understanding of Algerian market; I've been working with Algerian impetrators for 20 years...I know exactly how they work.... for AMIR company, I accepted to work with them after having asked well reputed business men who know AMIR...Also, as there will be a detailed contract

between us, I think that this is a sufficient guarantor to start business...”

According to AMIR customers, they have been all selected based on their reputation within the social network.

- *Finalization phase*

This phase consists in defining goals of each partner, and translating them into actions (characteristics of transactions), as well as determining necessary means and resources that allow to achieve strategic objectives of both companies. Also, each company should clarify responsibilities for customer and supplier as well as defining criteria in order to evaluate the performance which allow making a judgment on the effectiveness of keep relation with the other partner (Bouquin, 2000).

Coming back to our cases, in this phase, SLAM has discussed with ORA C the main important point related to their business, namely price, quantity, cost (transport principally) and delivery time. In order to not to let place to a possible opportunism by the ORA C, especially concerning the product price and transportation charges, SLAM has investigated prices and costs as well as transaction organization besides other distributors of ORA C. we can notice that SLAM has controlling his partner by resorting to the market (Control by the Market). In this context, the purchasing manager of SLAM said:

“Even though we put trust in ORA C Managers and we’re sure about their willingness to cooperate and work with us, but concerning the price, we are informed about daily price of all products that we sell, including ORA C products.... We have our information network to know about that”.

As the relationship between these two parties was in the first phase of life cycle and in order to assure the commitment of SLAM managers, and their willingness to cooperate with ORA C, this latest has decided not to take a risk and has accepted to sell product to SLAM in credit on condition that this latest accept to sign a contract which is renewed on a quarterly basis (every three months) and determines quantities that should be sold as well as terms of payment. It is to notice that ORA C has formalized the relationship by making a contract. In other words, the company has applied a bureaucracy control in order to ensure the commitment of customer. However, it is important to show that ORA C would never be able to do this procedure if it was not in position of power. A responsible of SLAM has explained this by saying:

“We are in an informal market, almost all wholesalers don’t pay taxes, so, signing contract means paying taxes, and this means reducing profit compared to other Customer of ORA C that buy in an informal way. How can we accept this if we were not really in need of financial resource, but we have accepted because we can reinvest this resource on other products characterized by more profitability”

Contrary to SLAM & ORA C, the wholesaler HMCO could come to an agreement with HIS Company by which the customer pay all the order before receiving products. In other words, the customer proceeds to the payment without any document that proves this transfer of money. When analyzing from customer side, it can be concluded that, for raison of profit, and because of the informal context of the transaction,

HMCO had only one manner to control HIS C, which is developing interpersonal relationships with supplier and putting trust in them to reduce supplier’s opportunism and can engage them for long term relationship. One manager of HMCO commented this situation and said:

“We know that there’s a risk, but almost all our operations are made in the same way....By doing this, we will keep our margin the same as the other wholesalers on one hand. Also, we know that the reputation and the image of HIS Company in the market will never let HIS C managers betraying us on the other hand. It’s an old company, it has always existed with these traditions, and it will be forever”

Concerning AMIR with trader VETI, for each transaction, a sales contract with all details of shipment and payment terms on it should be signed by both parties. Also, the price is determined beforehand in order to avoid any kind of conflicts. Also, as the level of trust is low, a bureaucratic control has been adopted and everything is formal. According to AMIR customers, for some products, an informal agreement between both companies has been hold, by which AMIR sells its customers products with a determined Unit Margin (5 dinars/kg for example) and asks them to sell whatever the market price. It is to notice that, in this case, both companies use control by trust because there is only transparency and commitment of both parties and their reciprocal trust that can ensure the durability of the relationship because there’s no accounting systems that allows to track the sales. But, if any sign of opportunistic behaviour appears, the relationship might be broken up quickly.

- *Piloting phase*

This phase consists in observing by both companies the progress of transactions, evaluating the actual situation as well as anticipating the future to assess what remains to be done. The aim of this process is to take corrective decisions in terms of adjustment of means to new situation or reviewing initially defined goals (Bouquin, 2000).

In this phase, companies use different tools of monitoring the relationships. Generally, wholesalers focus on results and profit they get by maintaining their relationship with the supplier or their customers. In other words, they are interested in product price, quality and delivery time, which reflects control by Market and bureaucracy for their formal transactions (the case of SLAM with ORA and HMCO with HIS). Moreover, they also attached great importance to partner’s behavior, commitment, involvement, transparency, which reflects control by trust, such as the case of HMCO with HIS or AMIR and JOLI with their customers. The development of personal relationships appears as an important means to create a climate of confidence. For the case of AMIR and VETI and the case of SLAM with ORA, this phase is characterized by a widely observed complementarity between formal and informal control to build confidence for organizational cohesion (Guibert & Dupuy, 1997). For the rest, the market and trust seem to be the most important mode to control practices with suppliers and customers as well.

- *Post-evaluation phase*

This phase is considered as a feedback or represents the phase of taking lessons from the past. At this stage of process,

each company reviews its practices with its relative collaborators, suppliers or customers, namely the previous transactions, in order to assess the pertinence or the relevance of its control mode practices. For SLAM company, even if a detailed contract has been signed with ORA, but SLAM couldn't respect the contract terms. In this context, SLAM manager said:

"Actually, the contract signed with ORA was very rigid and didn't give us any flexibility to catch up or to go over our problems and difficulties that we had with our customers...".

To determine the nature of problem occurred with SLAM, ORA Manager made a comment:

"it's really difficult to solve this problem, you see.. even if with a contract, we couldn't monitor our sales...SLAM had problem of solvability, but how can we know? if all its financial and accounting statements doesn't reflect the reality".

The problem of SLAM is that some customers betrayed the trust that SLAM put on them. As a results, SLAM changed a little bit its practices and asked some customers to give them guaranties such as a bank check, as unique way in informal market. For SLAM, this could replace a contract. this practice could be seen as an informal bureaucratic mode.

According to HMCO and JOLI with their suppliers and customers, a market and clans have been always used to reduce opportunism. For AMIR, business seem to be perfect as well as the control mode adopted to master its transactions.

After analyzing the management process and control practices of the four companies, we can notice that a combination of control mode has been raised. The first combination englobes the trust and market that have been used by all companies, especially for their informal transactions. A second combination joins the bureaucracy to market and trust control. The analysis shows that bureaucracy has appeared only in the formal business of SLAM and AMIR companies. The figure 2 could relatively summarize which mode of control is pertinent according to market characteristics.

don't have a power of negotiation, they accepted because they don't have an alternative. the third result that social network and inter-personal networks as well as the social sanction are more important than bureaucratic control, especially when this latest expose the companies that adopt it to tax authorities, which influence, afterwards, negatively on the competitive advantage and profit of these companies because of the fact that the majority of their rivals don't pay taxes, and can offer attractive prices.

Also, the results highlight that the use of trust was predominant in the context of informal sector. Also, for the cases where this trust has been betrayed, such as the case of SLAM with its customers, a revisited bureaucratic mode has been adopted to deal with the implications of informal market. Also, we can say that the failure the companies have in managing their dyadic relationships is mainly due to a wrong governance structure or control mode between actors as we have seen with case of SLAM with its supplier ORA where SLAM has accepted a contract and a small margin because of its difficulty to get financial resources. However, SLAM couldn't stand up for a long. An effective control based by capabilities and goodwill trust, and developing inter-personal relationships that enhances communication between the two parties would be very useful to go over the difficulties faced by SLAM.

In the same line, the results show that the nature of companies as privet ones and not public as well as the lack of government institution in economic life are relatively standing behind the use of trust by these actors. Also, the substitutability of suppliers or customers presents one of the sources of power in addition to financial resources of the actor (supplier or customer). We can say that the relationships between relational factors and market and clan control mode will be stronger for firms in high informal markets than for firms in low informal markets. However, the relationships between financial factors and market and clan control mode will not be stronger for firms in high informal markets than for firms in low informal markets.

The framework presented most important elements to make the supply chain community aware of the importance of the social part when apprehending supply chain issues. Nevertheless, like all research works, our framework presents a number of limitations. We can cite two main ones. The first is related to the conceptualization of the inter-organizational relationship control modes and the empirical qualitative study in a specific sector; namely the agri-food sector, the use of different sectors might allow us to avoid, consequently, the risk of bias that may arise from the studied sector. The second limitation is related to the nature of empirical study to test the theoretical proposed framework. Our results have been provided from interviews analysis and observations, a quantitative study for a large number of actors might give different results.

Finally, we conclude by saying that both transactional or operational and social approaches have to be included in the cognitive map of a supply chain manager to monitor their relationship with other collaborators. Also, these managers should find the best combination of control mode in order to

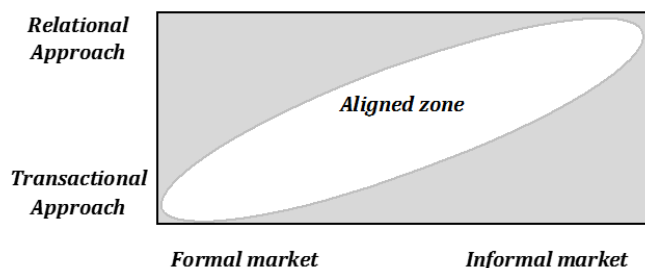


Fig. 2. Alignment Zone between Market Characteristics & Control Mode Factors

V. CONCLUSION

In conclusion, the results show a higher use of clan or trust control joint to a market control to govern the dyadic relationship between partners in the sector of agri-food, a sector which is characterized by a high level of informal transactions. Also, the result show that the use of bureaucracy was only in the context of formal activities, and in both cases, namely AMIR and more particularly AMIR, the companies

reach performance. Supply chain performance is conditioned by social relationships that represent in the main its essence, especially in the informal sector.

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