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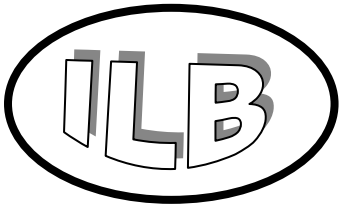

Contribution to an Integrated Analytical Framework for the Study of the Relations between and within Agro-Food Firms

Cesare Zanasi and Cosimo Rota
DIPROVAL, Bologna University, Italy
cesare.zanasi@unibo.it ; cosimo.rota@unibo.it

Introduction

The globalization of markets, increased specialization in customers services, shorter lead times, are among the main factors influencing the change in firms organization. The firms dis-integration[1] is growing, leading to an increased demand for collaborative management along the supply chain. The relationship between economic agents represents a central aspect to be analysed in order to understand this new context which is *"neither a perfectly planned structure, nor a merely spontaneous one"* (Benassi M., 1995).
These considerations are particularly interesting when applied to firms belonging to the agro-food system. They include very different technical-economic typologies as well as cultural and managerial backgrounds. In this context the role of vertical and horizontal relationships in influencing the system efficiency are particularly relevant. A collaborative management of the input and market access can, in fact, allow for a better exploitation of the external economies and flexible specialisation related economies, characterising well organized small and medium agro-food firms networks. The identification of the factors influencing the relationship between firms becomes consequently a priority. The main studies related to the inter and intra-firm relationship includes different approaches: Supply Chain Management (SCM), local enterprises systems (Clusters, Districts), Knowledge Networks, Organization Theory.

1. Goal of the paper

The goal of this paper is to contribute to unify the inter and intra-firm relationship analysis within a single framework.

2. Method of analysis

Starting from a literature survey the different analytical approaches are analysed. They involve two different groups: the first includes studies focused on the type of firms relationship structure (Supply chains, Networks, Clusters and Industrial Districts); the second group includes approaches related to the general theories on firms relationship interpretation (Transaction Costs Economics (TCE), Resource Based View (RBV), Organization Theory). The variables and logical frameworks provided by these different theoretical contributions will be compared and classified in order to find out possible connections and/or juxtapositions. Being an exhaustive collection of the literature on the subject impossible, our main goal is to underline the existence of potentially overlapping and/or integrating approaches examining the contribution provided by different representative authors; the results obtained should help defining a general theoretical framework linking the different interpretative variables.

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1. A firm specialisation in core activities followed by an increased externalisation of processes and services though out-sourcing contracts.

3. Supply Chain Management

The Supply C*hain Management* studies first considered it merely in technical terms, the *managerial processes analysis* was then introduced*,* finally an almost philosophical approach in terms of *knowledge and resource management principles* emerged (Tyndall G. *et al*., 1998). Other interesting definitions consider the SCM as a systematic activity of strategic coordination finalised to a continuous improvement of the firm and supply chain performances (Mentzer J.T. *et al.*, 2001). The role of the organizations in dealing with the relationships taking place within the supply chains is underlined by other authors (Harland C.M., 1996; Christopher M., 2005). The SCM goal of continuous improvement of the firm and supply chain performances (Mentzer J.T. *et al.*, 2001) is realised through and efficient *management of the material, services and financial flows* along the whole of the supply chain (Handfield R.B., Nichols E.L., 1999; Chopra S., Meindl P., 2001). According to other authors the efficient flows management is influenced by the following factors, defined as *indispensable requisites* in the relationship dynamics analysis (Backstrand J., 2007):

- *Product characteristics*

The product characteristics can be described both from the consumer point of view (Kotler P. *et al*., 2001) and the producer's (Lakemond N., 2001). They assume different levels of complexity and criticality (Hayes R.H. *et al*, 1988)[1]. It follows that the products characteristics influence the whole of the supply chain agents' relationships because of their role in the different product's life cycle stages (Miltenburg J., 1995; Fisher M.L., 1997).

- *Knowledge, skill, abilities and internal processes*

Backstrand considers the *knowledge, skill and abilities* of the firms internal resources as prerequisites for the relationship sustainability between supply chain agents (Backstrand J., 2007). They result indispensable in order to manage the *complexity* and *criticality,* above defined, with relation to the firm internal processes, thus linking their role to the product characteristics. The firms internal processes integration is the base for an efficient coordination within the supply chain (Min S., Mentzer J.T., 2004); *knowledge, skill and abilities* can consequently contribute to a definition of a unified intra and inter-organizations relationship analysis.

- *Competitive priorities*

The choices in the process management and the related consequences on the relationships depend upon the competitive priorities defined by the firm according to their goals and market strategies (Berry W.L., Hill T., 1992; Rudberg M., 2004). Summarising the different theoretical contributions on this subject Backstrand identifies five *competitive priorities* which influence the product value for the customer: quality, cost, efficient order management, flexibility and innovation. The choice between one or more priorities will influence not only the level of interaction between firms but also the firm internal processes management (Backstrand J., 2007).

1. *Complexity* is defined as the difficulty of managing the relationship between the different firm processes and related functional areas; *criticality* is the importance of each product characteristic for the processes taking place within the supply chain (Sahay B.S., 2003).

- *Trust, power, time frame, maturity, frequency*

These factors more directly influence the interactions between people and organizations: a) reciprocal *trust* (Corbett C.J. *et al.*, 1999) upon which flexible and informal contractual relationships are based (Kumar N., 1996); b) *power relations*, influenced by the size, the contractual power and hierarchical position of each firm within the supply chain (Cox A. *et al.*, 2004; Watson G., 2001); c) the duration of the relation (*time frame*), positively influencing the relationship if stable and long lasting (Corbett C.J. *et al.*, 1999); d) the *maturity* of the processes involved in the relationship, whose distinctive features are predictability, monitorability, efficiency and effectiveness (Childerhouse P. *et al*., 2003); e) the relationships *frequency*, as a source of competitive advantage in the client-customer relationship (Sahay B.S., 2003).

- *Information flows*

Interdependency and *collaboration* between organizations and individuals are prerequisites for an efficient management of material and information flows within the supply chain (Christopher M., 1998). Other authors underline the growing importance of information flows and of ICTs for an efficient Supply Chain Management (Stank T. *et al.*, 1999; Steckel J.H. *et al.* 2004). In particular the increase in information flows, and their sharing, positively influences the supply chain agents coordination (Min S., Mentzer J.T., 2004) and becomes indispensable in order to grant and efficient materials flow (Christopher M., 1998). However, the ICTs implementation requires *flexibility* in order to "*accommodate individual organizational characteristics*" and to redesign internal structure and external relationships of the organizations (Gunasekaran A., Ngai E.W.T., 2004) encouraging, for instance, product management teams and collaboration within and between firms along the supply chain. Examples are given by the Collaborative planning forecasting and replenishment (CPFR), or Vendor Managed Inventories (VMI) solutions.

4. Transaction cost economics

The Transaction Costs Economics (TCE) approach provides an important analytical framework explaining the firms' organization and their interactions along the supply chains (Williamson O.E., 1975). The TCE approach considers a firm as a governance body whose goal is to grant reliable and efficient contractual relationships. The inter-firm relationship determinants are mostly placed outside the firm boundaries (Schiavone F., 2003). In particular, the TCE approach considers that the necessity to compensate for an increase in transaction costs leads to a firm orientation towards a stronger vertical coordination. Different authors showed that *uncertainty*, *frequency* of transactions the level of *asset specificity* positively influence the transaction costs and consequently the level of firms vertical coordination. (Lieberman B.M., 1991; Stephen M., 1986). In a broader picture the influence of the *product characteristics*, *technology* and *regulatory drivers* on the transaction characteristics (uncertainty, asset specificity and frequency of transactions) are considered; their role in influencing the level of vertical coordination is described by J. E. Hobbs and L.M. Young (Hobbs J.E., Young L.M., 2000).

5. Districts and Clusters

The distinctive nature of an industrial district comes from a high concentration of SMEs in a specific geographical context where a common historical and cultural background creates an homogeneous social environment (Beccattini G., 1987; Brusco S., 1982). within this context the relationship between individuals and firms is characterized by the *cooperation-competition* (co-

ompetition) where the firms in some cases compete and in others cooperate to access the input or consumers market for products and services. (You J., Wilkinson F., 1994). The Cluster is defined as a system of relationships involving firms and institutions in a non clearly specified geographical context. The lack of a close relationship with the local community and of a defined agglomeration index makes the identification of a cluster more subjective than that of an industrial district (Belussi F., 2007). However some of the key factors influencing the clusters' development can be also applied to districts. These factors are: local inputs availability, a sophisticated local demand, an institutional context facilitating the stakeholders relations, *co-ompetition* between the cluster agents (firms and/or institutions) (Porter M.E., 1998); this can be summarised in the clusters' and (districts) capacity of absorbing, create and transfer knowledge (Giuliani E., 2002). These aspects were also comprised in the *industrial atmosphere* first defined by Alfred Marshall (Marshall A., 1920); the industrial atmosphere stems from the presence in a given area of a *community of practices* (Wenger E., 1998) where the learning processes and the knowledge transfer take place beyond the firm boundaries (Belussi F., Pilotti L, 2002).
Other important factors characterising an industrial district are: *trust*, defined as an "*endogenous factor promoting cooperative relationships*" (Belussi F., Caldari K., 2005), and *institutions*, considered as a key element in encouraging efficiency and dynamism in an industrial district (Biggiero L., 1999). The trust component helps translating collaboration and coordination between firms into *sustainable relationships*. To this end it is necessary that the firms share common goals and managerial practices; the willingness to collaborate should then be supported by enough guarantees able to stimulate trust by preventing opportunistic behaviours (Lorenzoni G., 1997). At the same time institutions hold a central role in promoting trust and cooperation within a district (Nohira R., Eccles R., 1992). The reciprocal influence between trust and guarantees provided by institutions on the firms relationships is well documented by an analysis on two industrial district in Italy and Germany (Farrel H., 2005).

6. Network

The term network can assume three different meanings; it can be considered as a structure linking 1) "external units" 2) "internal units" 3) role and individuals within the organization (Boari C. *et al*, 1989). Williamson defines the relations in a network made of "external units" as an hybrid of market rules and hierarchical-bureaucratic relations between firms (Williamson O.E., 1991). Thompson defines it as distinctive new organizational forms where the collaboration agreements within a network are explicit, formal and intentional; this makes it a distinct type of firm relationship when compared to clusters and industrial districts where the relationship are the results of relatively long and "spontaneous" processes (Thompson G., 2005).
The networks analysis shows strong similarities with the TCE approach when considering the main goals of the collaborative relationship within the networks: reducing *uncertainty* and sharing the costs and risks associated to the *assets specificity*. The strategies adopted to reach these goals affect the networks relationship as follows (Camagni R., 1993):

- realization of scale and scope economies: it leads to creating *horizontal synergies* through a "partial merging" of the firms processes; this encourages a co-ompetition relationship where on one hand firms cooperate on well specified processes management, while on the other hand they compete for the input and products market access;
- acquisition, development and use of complementary investment assets: it leads to creating *vertical synergies* to control for instance new production technologies; a new barrier to entry is created and the related profits can be shared;
- control and development of new technologies: it leads to creating *strategic alliances*; the

collaborative relationship, in this case, indicates a common path to the creation of strategic alliances. The network relations goal is consequently the definition of a common *trajectory* to conceive and realize new products, taking advantage of existing complementary assets within the network.

- *Knowledge, trust, ICT*

Developing strategic alliances within networks increases the collaboration between firms and firms-institutions (research agencies, public administration departments). The interaction between knowledge and technological development, typical of this relations, creates the so called *knowledge networks where t*he creation and transmission of knowledge take place at two different levels: a *formal* level (*scientific knowledge, intellectual property, routinized knowledge*) and a *tacit* level (*tacit knowledge); tacit knowledge* has an informal character and is not easily transmissible (Thompson G., 2005). The information flows management identifies the knowledge management as a key factor influencing the inter-firms relationship (Hofstede G.J., 2003; Wal T., Wien J.J.F., Otjens A.J., 2003). The Information and Communication Technologies (ICTs) represent a tool through which the "codified" knowledge influences the collaborative relationship, particularly if it involves firm processes such as design, engineering and quality control. ICTs development is a powerful drive for organizational change, radically transforming the inter-firm relationship and encouraging new forms of organization within the networks (Thompson G., 2005).

7. Resource-based View

In spite of being included in many studies on *strategic management*, the RBV is still not fully defined both from the linguistic and the conceptual point of view (Schiavone F., 2003). From the linguistic point of view there are many other methodological approaches which can be considered as different names for the RBV: Competence-based View, Dynamic Capabilities Framework, Knowledge based Theory and the Organizational Knowledge Creation (Siano A., 2001). From the conceptual point of view it is currently carried out an attempt to include the RBV in the mainstream of the Organization Theory approach (Foss K., Foss N., 1998) integrating the Transaction Costs Economics (TCE) to the RBV (Dosi G., Marengo L., 1999; Pitelis C., Pseiridis A. 1999). TCE neglects in fact the role of the *internal resources* of a firm in influencing the type of contractual relationship (Schiavone F., 2003). In spite of a lack of a general agreement on the RBV definition and implication it is possible to identify in *Resources, Capabilities and Competences* (Bellini E., 2000) and in *Knowledge* the main variables contributing to the inter-firm relations analysis.

- *Resources, capabilities and competences*

The *Resources* are the assets, under the firm control, used to define and implement its strategies (Amit R., Schomaker P.J., 1993). They are considered the source of the firm competitive advantage (Teece D.J. *et al.*, 1997); they should be *unique* (Rumelt R.P., 1984), *heterogeneous* and *imperfectly transferable* (Peteraf M., 1993). The *uniqueness* and *heterogeneity* of the resources available within the firm are considered the theoretical foundations of the Resource-based View (RBV) (Rumelt R.P., 1984; Wernerfelt B., 1984; Barney J.B., 1991, 1995). Some authors identify five types of resources: financial, physical, human, technological and organizational (Hofer C.W., Schendel D., 1978). The resources owned by the firm, feed a cyclic dynamic process influencing the firm behaviour; each resource is at the same time the result of the previous resources availability and the cause of future resource availability (Vicari S., 1992).

Capability: is the firm ability to use and organize the resources (Makadok R., 2001); it is *"a function of the tacit understanding, skills, and resources that a firm accumulates over time"* (Mahoney J.T., 1995). Other authors introduced the *Firm-specific dynamic capabilities*, as the firm's ability *"to integrate and re-configure internal and external organizational skills, resources towards changing environment"* (Teece D.J. et al., 1997); they are a potential source of durable, not easily imitable, differences between the firms (Teece D.J., 1990).
Competences: refer to the firm ability at coordinating resources and capability through organizational choices involving the whole of the business functions (Prahalad C.K., Hamel G., 1990). Competences involve the governance process and collective learning across levels, business units and functions inside the organization (Prahaland C.K., 1993). They generate a strategic advantage for the firm if they are linked to the firm capacity to innovate or to intensify inter and intra-firm relationships, and difficult to imitate and transfer, as a consequence of a specific interactions of different individuals and value systems within the organization (Hoopes D.G. et al., 2003).
*Knowledge: s*ome authors consider the integration of knowledge the essence of organizational capability (Grant R.M., 1996). It is a key factor able to reorganize resources, capabilities and competences within the firm (Leonard-Barton D., 1992); in particular a central role in the development of the firms relationships and growth is played by the organizational learning, stemming from everyday activity generating dynamic knowledge accumulation (Salvato C., 1999).

8. Organization Theory

Two parallel schools of thought characterize the Organization Theory. One is the theory of the "*scientific* organization of labour" (Taylor F., 1967), reductionist and lacking in consideration of human psychology; the second considers the individuals, their relations and integration into a social structure as the foundations of a system based on *feelings* (Maraschini F., 2002). This second approach assumes the heterogeneity of the individuals, social and organizational processes and inspired the psycho-social analysis within the firms. The contributions of this approach to organization theory can be grouped into three main topics (Maraschini F., 2002):
Human Relations: the social nature of working or business relations adds an unavoidable element of complexity that an organization should harmonize with its technical and economic goals;
Subjectivity: the organization should understand the individuals needs, fuel their motivations and promote their creativity;
New-human relations: resources, promotion of capabilities and transmission of knowledge are the main aspects of the Organizational analysis.
In this context the complexity of human behaviour and the dynamic nature of individuals behaviours are key factors, stating *"the social nature of organizations against any technological determinism"* (Maraschini F., 2002). The theoretical contributions following this line of thought can be found in different areas of study related to: organizational culture, psychological contract, KSA (Knowledge, Skills, Abilities) and Human Resource Management (HRM).
- *Organizational culture:* Organizational culture is defined as a "*distinctive constellation of beliefs, values, work styles and relationships that distinguish one organization from another"* (Harrison R., 1993). Three interrelated dimensions identify it as: *"a socio-cultural system of the perceived functioning of the organization's strategies and practices, an organizational value system and the collective beliefs of the individuals working in the organization"* (Marcoulides G.A., Heck R.N., 1993). These definitions suggest that organizational culture is influenced by, and in turn influences, the organization members behaviour. In detail the following actions are influenced by the organizational culture: *conflict resolution, coordination and control, reduc-*

tion of uncertainty, motivation, competitive advantage (Brown A., 1998). Three attributes a firm's organizational culture must have to generate sustained competitive advantage: being valuable, unique and imperfectly imitable (Barney J.B, 1986). Different types of organizational culture, and corresponding interpretative models, have been explaining its influence on the relations *within* the organizations (Handy C., 1999; Hofstede G., 1991; Wallach E., 1983; O'Reilly C. *et al.,* 1991). Some suggests that there are a number of subcultures within an organization (Martin J., 2002) and they apply to functions, teams and individuals (Handy C., 1999). This implies that "*to be effective, the culture must not only be efficient, but appropriate to the needs of the business, company and the employees"* (Wallach E., 1983).

- *Psychological contract:* it is considered as a vital tool (Millward L.J., Hopkins L.J., 1998) to effectively analyze a central aspect of the organizations: the relations between the employer and the employees (Coyle-Shapiro J., Kessler I., 2000). Its origins date from the 60s but only in the 80s different studies contributed to its conceptualization and definition as *"an unwritten set of expectations operating at all times between every member of an organization and the various managers and others in that organization"* (Schein E.H.,1980), or as *"an individual's beliefs regarding reciprocal obligations"* (Rousseau D.M.,1989). The psychological contract is informal and constantly evolves according to the relations each individual entertains with the organization he/she is part of. *Subjectivity* and *reciprocity* of obligations assume a central role in defining the behaviour of each individual within the organization (McDonald D.J., Makin P.J, 2000).

- *Human Resource Management: i*t is considered a "strategic partner" which is involved in the marketing, administration, and financing activities within a firm (Dulebohn J.H. *et al*., 1995). It has a pervasive role and its influence goes beyond the personnel recruiting, training, compensation and performance appraisal. The main theoretical contributions to the study of HRM can be grouped into three areas (Ferris G.R. *et al*, 1999):

*Strategic perspective.*The strategic role of Human resources within a firm is considered by the RBV approach (Barney J.B., 1991, 1995). According to the RBV the sustainability of competitive advantage originates from the rarity, inimitableness and non substitutability of the resources.

International perspective. The main object of the analysis is the individual (Ferris G.R. *et al*., 1999); its goal is to integrate the complexity of the "external environment" (legal framework, institutional context, etc.) to the socio-cultural characteristics of the individual, in different geographical areas.

Political perspective. It concerns the analysis of the *organizational policies* influence on the recruitment processes, evaluation and promotion of the personnel.

Building a theoretical framework able to explain the diversity between organizations seems to be a common goal of these three different approaches. The argument is supported by other authors indicating that future research developments should investigate the *diversity* of the organizations (Ferris G.R. *et al*, 1999). Diversity is defined as the result of a joint action of many factors including the socio-institutional context, the organization culture, the social cohesion within groups, the individual skills capacities and abilities. These factors influence the relations dynamics at different levels: the firm, the function within the firm, the teams and the individuals (Ferris G.R. *et al*., 1999).

- *KSAs (Knowledege, Skills, Abilities):* HRM is involved in personnel recruiting, in particular the measure of the individuals level of *Knowledge, Skills* and *Abilities* (*KSAs*). There are many types of *KSAs*: social skills, teamwork knowledge and several personality traits like conscientiousness, extroversion, agreeableness and emotional stability (Neuman G.A., Wright J., 1999; Morgeson F.P. *et al*, 2005). While the personality traits have a more general influence (Barrick M.R., Mount M.K., 1991; Hough L.M., 1992), the individuals abilities are more influential on the performances of the team (McClough A.C., Rogelberg S., 2003). Two main categories of

KSAs have been identified (Stevens M.J., Campion M.A., 1994, 1999). The first is *Interpersonal KSAs* which, in turn, includes three sub-categories of individual skills positively influencing the collaborative attitude within the team: Conflict resolution skill, Collaborative Problem Solving, Communication Skills. The second is the *Self-Management* KSAs; it includes two sub-categories for the abilities, influencing an efficient and effective management of the team work: Goal Setting and Performance Management, Planning and Task.

9. Classification of the variables (Table 1)

The variables so far described have been classified according to their influence on different environments and different types of actions:

- *Context*: Variables related to the *context* both internal and external to organizations, influencing their relations;
- *Relations* variables *qualifying the relations* between organizations and between individuals;
- *Firm: the internal variables defining the organization and the characteristics of the resources*; they influence both the relations between and within the organization.

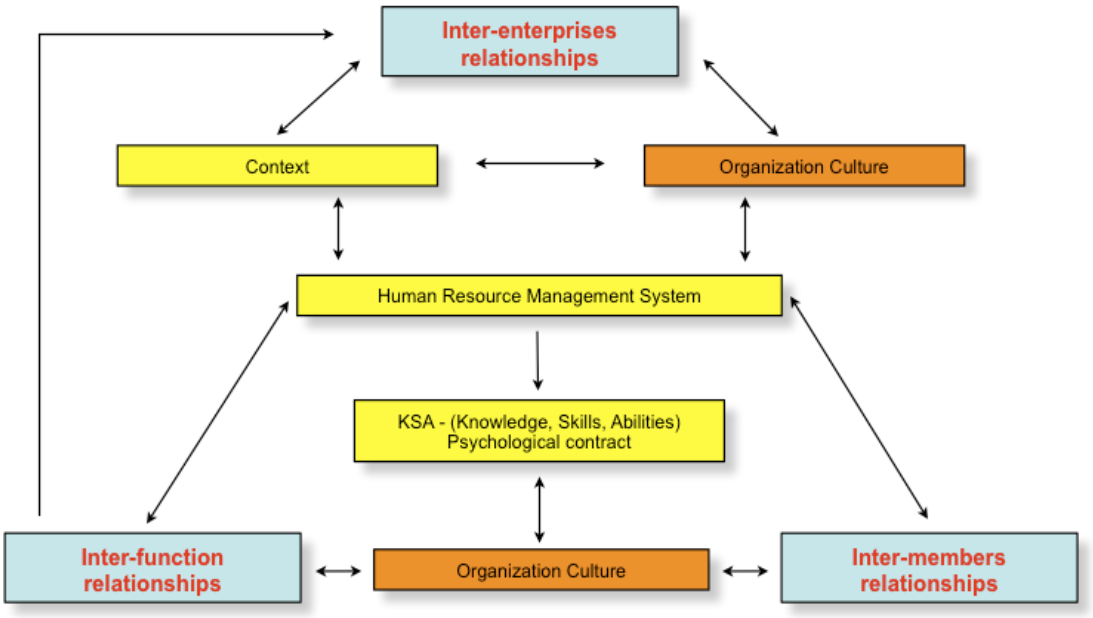
The different approaches have been classified according to their reference to the structure of the firms relationships (Type of relationship) or general theoretical approaches to organizations relations (General Theories). The approaches examined showed common aspects both from the theoretical design and from the interpretative variables point of view. Their comparison showed that the boundaries between the different variables and between explanatory theories are fading; it suggests the possibility to define an analytical framework connecting the inter and intra organizations relations. This relates to the concept of "*extended enterprise*" (Christopher M., 1998, p. 265-267). The necessity to organically define the functions relationships within the firm, and with other functions belonging to connecting firms, emerged from our survey and is supported by other studies (House R. *et al*, 1995).

Table 1. Variables classification

	Inter-firms				Intra-firms	
	Type of relationship			General theories		
Variables	**SCM**	**Network**	**Cluster District**	**TCE**	**RBV**	**Organiz. Theory**
Context						
Legal, social and political environment		x	x			x
Laws & Regulations				x		
Investment specificity		x		x		x
Inputs and resources availability			x			x
Technology - ICT	x	x		x		x
Cooperation-Competition		x	x			
Strategic and market orientation	x	x	x		x	x
Product's characteristics	x		x	x		x
Relations						
Frequency	x			x		
Uncertainty		x		x		
Trust	x		x			x
Power	x					
Time Frame	x					
Maturity	x					
Firm						
Organization culture					x	x
Communication-Flows Information	x	x	x		x	x
Knowledge	x	x	x		x	x
Knowledge, Skill, Ability	x				x	x
Psychological Contract						x
Human resource management					x	x

10. The analytical frame work (Scheme 1)

The variables, and corresponding relations mechanisms, have been organized in a theoretical framework, following the indications coming from the survey.
The relations considered involve organizations, functions and individuals. Teamwork interactions can be described as follows:
Context – Organization culture – HRM: the focus is, in this case, on the role of the human resource management processes in influencing the capacity of the organization culture to understand, and adapt to, the context as also stated by other authors (Schein E.H., 1984; Van de Steen E., 2004).



- *Context – HRM:* the HRM related activities are influenced by the context in which the firm operates. Two main categories of factors influence the HRM: *internal* to the firm (technology structure, size, organizational life cycle stage, business strategy) and *external* (political and legal environment, unionization, labour market, product and industry characteristics, national culture). Our assumption is also supported by other authors (Jackson S.E., Schuler R.S., 1995).
- *Organization culture – HRM – KSA:* according to the *social context model* the organization culture influences the strategies and the implementation of the Human resource management; the values behaviors and beliefs, belonging to the organization culture, in turn define the KSA levels and the psychological contract. In turn the HRM can be considered part of a "maintenance subsystem" (Katz D., Kahn R., 1978) reinforcing norms and values of the organization culture (Bowen E.D., Ostroff C., 2004).
- *HRM – organization culture – inter-members/inter-functions relationships*: the organization culture links the HRM to a successful inter and intra-organization relationship (Bowen E.D., Ostroff C., 2004). A successful relationship, defined by its sustainability, involves sharing the same values, goals, motivations and individual expectations (Handy C., 1999). As previously stated, values, goals, motivations and expectations characterize the *psychological contract* and the *level of KSA* at different levels of the organization structure (functions, teams, individuals); they are in turn influenced by the HRM (Jackson S.E., Schuler S.E., 1995; Rousseau D.M., Gleller M.M., 1994). At the same time the *psychological con-*

tract and the *KSA* levels are influenced by the *organization culture* as a determinant of the organizational behavior (by identifying the main goals, work methods, how members should interact and address each other, and how to conduct personal relationships (Harrison, 1993). The firm management should then match the different organizational cultures, and related human resource management, coexisting in the organization[1]. The definition of the most appropriate organization culture for the different functions is important not only to the intra-firm relations but also when the organization external relations are considered. Increasing levels of coordination within the supply chain, for instance, need an increased integration between processes (and functions) belonging to different firms (Backstrand J., 2007; Lambert D.M. *et al.*, 1996; Cagliano R. *et al.*, 2004).

11. Relations

The theoretical framework illustrated by Scheme 1 considers the variables trust, uncertainty, frequency, time frame and maturity as important factors qualifying the nature of the relations. Recent studies considered conceptually similar variables as able to define the *relations sustainability* or "*sustainable collaborative inter-enterprise relationships (SIRs)* as a positive attribute reflecting upon the supply chain relations efficiency (Fischer C., Reynolds N., 2008) The relevance of *sustainability* and *collaboration* as indicators of "successful relationships" was previously stated by other authors (Handy C., 1999), (Backstrand J., 2007) and (Christopher M., 1998). So far the causal relationship between "relations" and the variables influencing its sign and value has not been fully considered. Within our theoretical framework the 1) inter-firms, 2) inter-functions or 3) inter-members "*sustainable collaborative relationships"* can be considered as three dependent variables whose sign and value is influenced by the interpretative (independent) variables reported in scheme 1. The same authors defining SIRs developed an approach to their measurement adopting Structural Equations Models (SEMs) (Reynolds N., Fischer C., Hartmann M., 2008). Differently from a regression analysis, where the dependent variable is directly linked to a set of independent variables, the SEMs allow for designing a path of the different variables cause-effect relations. This also allows for linking the three dependent variables in an organic interpretative model including both inter and intra-firms relations.

12. Conclusions

These survey showed first of all many variables in common between approaches coming from different disciplines; furthermore the non overlapping variables can be integrated contributing to a broader picture of the variables influencing the organization relations; in particular a theoretical design for the identification of connections between the inter firm and the intra-firms relations was made possible. According to this new framework a statistical analysis should be performed to qualify and quantify the variables influence on the Relations Sustainability, which emerged as a suitable definition for a successful relationship. To this end the structural equation models (SEMs) seem to be the right tool.

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1. The R&D and Administration functions, for instance, generally need different organizational cultures: in the first case a *task culture*, where team work prevails, is more adequate; in the second case, where hierarchies and rigidly defined roles are demanded, a *role culture* results more appropriate. When considering the marketing function the most appropriate organization culture is not so clearly defined, being a mix of different types. Different HRM strategies should then be applied to different functions.

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