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Abstract

Building on a literature review and an illustration with a concrete example, the goal of this article is to propose an analytical framework of Corporate Social Responsibility (CSR) implementation in food small and medium enterprises (SMEs) putting forward the issue of network effects. Indeed innovation networks and networking activities, as in any innovation process, are major means to enhance and foster CSR in SMEs, but the interests and concrete consequences of the network perspective for innovation capacity enhancement are rarely addressed. To do so we suggest considering CSR implementation as a type of managerial innovation and define by analogical reasoning the main categories of network effects found in the literature. From these, three critical dimensions of network effects are identified: structural, interactive and cognitive, each of them affecting specific dimensions of the innovation process. This analytical framework is synthesized and adapted for CSR implementation and then applied to a case study of a food SME involved in a collective initiative in France, putting in evidence these effects. Finally some managerial implications and concluding comments are drawn.

Keywords: food, implementation, learning, network, SME

1. Introduction

Corporate Social Responsibility (CSR) is as an active approach by which an organization intends to raise awareness of belonging to an environment, the consequences of its intervention in this environment and to correct or anticipate the consequences that are negative (Carroll, 1999; Dejean and Gond, 2004). The food sector, composed largely of small and medium enterprises (SMEs), carries strong characteristics especially in innovation aspects (Gellynck *et al.*, 2007; Hartmann, 2011). Indeed, the food company aiming at a sustainable development is often hampered by the complexity of problems and is not aware of its strengths and weaknesses, both in terms of positioning in its environment, of access to resources, of relationships with strategic partners and with major stakeholders. The issue of implementation of CSR in small and medium enterprises, that is to say, the actual implementation, with the necessary activation of a set of partners and mobilizing human, financial, organizational resources, is rarely addressed in an analytical perspective, especially from a network point of view.

The purpose of the article is to provide an analytical framework and evidence building of network effects in a CSR collective initiative in France targeted to food SMEs. The article is organized into four parts. In the first part (2) we specify the notion of CSR implementation, its context and its specificities for food SMEs. In the second part (3) we specify the network aspects of CSR implementation in relation with theoretical backgrounds. Then this approach is put into context through a case study of a food SME which has implemented CSR with the support of a collective initiative (4). Concluding comments follow (5).

2. Corporate Social Responsibility in SMEs: the network dimension

CSR is a major trend in modern business in which companies are expected to account explicitly for all aspects of their performance, economical, environmental and social. Such an implementation of complex CSR principles encompasses important managerial changes, in practices, processes and structures. CSR implementation in a company is a category of managerial innovation (OECD, 2005; Pitsis

et al. 2012) as these practices and procedures will be new to the firm (Damanpour and Aravind, 2012). As such managerial innovations induced by the implementation of the CSR principles in SMEs mobilized networks of different nature (Cramer, 2005; Fenwick, 2010; Jenkins, 2006, 2009; Perera, 2008, 2009). Their characterization has focused the attention of many researchers (Bonneveux and Saulquin, 2009; Jamali *et al.*, 2009). The works of Bonneveux and Saulquin (2009) for instance highlight the role of the network, seen as a framework 'which fit together resources and capabilities between the internal and external stakeholders', to allow integrated approaches of social responsibility. Thus the group of companies studied by the authors plays a role of coordinator of several families of players, where the territorial dimension (geographical proximity) will have an important task. The existence of the network organization reduces the information asymmetry on CSR and provides a more concrete representation of actions to integrate when a company wants to implement CSR. This experiential aspect of the networking activity is also acknowledged by Cramer (2005) and Fenwick (2010) in their research on CSR implementation at the company level. The network, as a collective actor, is also an interlocutor of the various stakeholders which allows a greater exchange of experiences, knowledge and resources, both tangible and intangible (Bonneveux and Saulquin, 2009).

For Jamali *et al.* (2009) the SME context of CSR implementation adds peculiarities, especially due to the importance of relational attributes and non-formalized rules and procedures. In opposition to large companies, SMEs usually rely on discretionary values and direct interpersonal links with stakeholders. For Jamali *et al.* (2009) 'the weaknesses of SMEs stemmed in turn from a limited integration and institutionalization of CSR processes and limited identification with the business case for CSR, and strategic CSR conceptions and orientations.' Jenkins (2006, 2009) also suggests considering this question of business case as central, suggesting that SME facing CSR needs considering more specifically the following aspects,: need of a change agent, i.e. a business champion able to guide the change process; need of external networks in order to have access to new skills and information; need of internal networks, that will transform and disseminate in-house this new knowledge.

A major difficulty in studying network effects in the implementation of CSR principles is its complexity and duration (Helfrich, 2010; Maon *et al.*, 2009). Moreover the implementation of the standard itself induces an activation of specific CSR stakeholders, which should not be confused with the creation of (often new) relationships with other types of actors, such as actors facilitating the setting up (consultants for instance) or institutional actors whose role would be to bring the innovation through a collective approach (such as a network coordinator). In other words, there are several categories of learning phenomena that are activated simultaneously, and will vary overtime (Maon *et al.*, 2009).

The process of implementing a managerial innovation such as CSR encompasses both structural and dynamic dimensions. Indeed, a company wishing to implement these principles must reconfigure its place in its environment by mobilizing jointly its individual and organizational partners over a relatively long period of time. In the words of Jenkins (2009), a SME has to 'build a CSR strategy from simple beginnings to a process of learning and networking'. The objective of the approach is to characterize these events in a heuristic manner. To illuminate the complexity and develop a contextualization of these phenomena applied to the food SMEs context (Fort *et al.*, 2005) we propose an analytical approach based on these two dimensions, reticular and procedural, of adopting CSR seen as a managerial innovation. As a highly complex phenomenon, the implementation of CSR in SMEs necessitates the delineation of different categories of effects. Following Agarwal *et al.* (2012) we will consider that the 'social capital of the organization (and its members) might be seen to be a potentially important determinant of the extent to which managers as change agents can engage in the learning, experimentation, reflection and communication (…) as it shapes the organization's access and exposure to new ideas.' These authors, in coherence with the social capital innovation theorists, identified three dimensions which will serve as a basis for the study of the network dimension: structural, interactive and cognitive.

3. Network effects in CSR implementation: theoretical backgrounds

We will consider successively three categories of network effects. The structural effect category finds its roots mainly in the structural analysis of networks, while interactive effects question more specifically the idea of a networking activity that will support or give rise to real innovations. Finally, the cognitive effect focuses on the impact of the time dimension on any networking activity, leading to irreversibility, to path dependency and to the accumulation of new and specific knowledge. A synthesis follows.

Exploring the structural dimensions of innovation networks

For Conway and Steward (2009) the network perspective applied to innovation research has considerably renewed and extended our knowledge on innovation processes. We will consider here the structural branch of these researches, rooted mainly in the social network analysis (Borgatti and Li, 2009; Borgatti *et al.*, 2009). The starting point of the process of structural analysis of networks is to consider any network as a combination of actors and relationships (Borgatti and Li, 2009; Burt, 1997, 2000). In the structural analysis of networks, the actors are not independent but rather interdependent and influence each other. To take into account the unique situation of each member and the network structure as such, the structural approach combines two complementary perspectives: the global network, that is to say its density, the average distance between each of its members, the existence of subsets more or less structured; and the ego network, that is to say the situation of an actor (an individual, a SME) in its environment and its degree of inclusion, its mode of insertion into the global network (Borgatti and Li, 2009, Borgatti *et al.*, 2009; Coulon, 2005). Actors are considered as nodes, and relationships between them as ties. Thus researches on innovation mobilizing the structural analysis of networks (Coulon, 2005) produces representation of innovation processes as maps (Conway *et al.*, 2001) or charts of nodes and relationships (Giuliani and Bell, 2005).

Consequently and in considering the CSR context, two families of components must first be identified: actors and relations (Jonker and De Witte, 2006). An important contribution of this approach for CSR is the simultaneous consideration of all types of actors involved (Cramer, 2005), in the first place individuals (which will constitute a social network) and organizations (the basis for an inter-organizational network). The identification of relationships that these actors have with one another is the second component. In line with social network theorists, these relationships can be of several types: continuous (similarities, relationships, interactions) or discrete (financial flows, knowledge flows), directed or not, measured by value or not, formal or informal (Borgatti and Li, 2009). The process of implementing management system standards such as CSR systematically involves usually two groups of major actors (Abdirahman and Sauvée, 2012, 2013; Abdirahman *et al.* 2013; Hatanaka *et al.*, 2005): individuals (managers, consultants etc.) and organizations (SMEs, standardization bodies such as ISO, the International Organization for Standardization, consular agencies, auditors, governmental bodies, banks, etc.). This adaptation of the approach also assumes that is taken into account the heterogeneity and complexity of the flows and interactions generated in the process, and mainly learning processes of knowledge creation and acquisition (Fenwick, 2010). Finally the network reveals itself, by its structural properties, as facilitating (or hindering) the implementation.

Networking activity as a complement of structural aspects

In the context of the implementation of CSR principles, knowledge transfer to the organization necessitates the mobilization of new cognitive resources and the activation of formal structures. An analytical approach applied to the implementation of CSR is therefore assumed that a better understanding of the learning processes is necessary. For Berthon *et al.* (2007), the mechanistic perspective is an essential step in that 'the transfer of knowledge, considered as the dependent variable, proceeds from an optimal layout between the nature of network and the types of knowledge. The question is often that of a systematic identification of structural and relational properties of the network, as brakes or levers of the knowledge transfer.' But this structural determinism cannot explain alone the implementation process. A subject as complex as CSR implies a set of interdependencies and a permanent adjustment between the actors, their objectives and the context in question (Gabriel *et al.*, 2013; Maon *et al.* 2009). Thus emerges a vision of co-constructed knowledge. In the end, a more complete representation of the relationship between network and organizational learning should show that the network is a 'channel for learning but, recursively, that the network is transformed by the learning taking place. In other words, the network is at least partly constructed by the learning processes, dynamically, deliberately and in an emergent manner' (Berthon *et al.*, 2007).

The ambivalent dimension of the network in the phenomena of innovation is demonstrated by Owen-Smith and Powell (2004), Powell *et al.* (1996, 2005) and Conway and Steward (2009). By distinguishing the network itself from the networking event, they show that the study of the innovation process involves taking into account both the structural dimension and interactivity. For Conway and Steward (2009), there is an interaction between the network as a structure and the networking event taking place in this network, with 'on the one hand, the network may constrain or liberate the patterns of interaction and exchanges between network members; on the other, networking behaviour may serve either to ossify (i.e. fix) the existing network membership and relationships, or create a dynamic in the membership and relationships within the network' (Conway and Steward, 2009). Not surprisingly, researches on CSR have widely adopted this vision (Cramer, 2005; Fenwick,

2010). This vision is developed and nicely synthesized by Berthon *et al.* (2007) in their study of implementation of IT standard projects. These authors point out that in the context of innovations mobilizing large transfers of knowledge, social networks and learning processes are involved. Thus, 'the formal structure of network, but also the quality and relational characteristics that are played out, have a role on the nature of the learning that occurs there' (Berthon *et al.*, 2007). One of the reasons that require the taking simultaneous consideration of structural and relational dimensions according to these authors rely on the fact that the individual, place of learning, is demanding of both resources and information but also demands a sense of belonging and social ties.

The processual dimension of CSR implementation: the cognitive network effects

The implementation of a standard goes through qualitatively distinct stages (Abdirahman and Sauvée, 2012; Henson and Humphrey, 2009, 2010) with an evolutionary perimeter of actors involved in the process. These steps are mostly a reflection of the types of actors mobilized and of their changing status or role from one phase to another. It is therefore necessary to consider explicitly the time dimension and its corollary, namely its influence over the types of actors involved, and over the process of adopting the CSR standard. This reflects the fact that the implementation of CSR is done in the long run and differentially mobilizes actors and resources (Capron *et al.*, 2011). Maon *et al.* (2009) rightly point out that CSR must be 'considered as an organizational change process whose aim is to align the organization with the dynamic demand of the business and social environment by identifying and managing stakeholder expectations' (Maon *et al.*, 2009). These phenomena will change the company, but will also change the environment in turn, engaging CSR as an activity 'evolutionary and recursive that acts on and reacts to and with the business environment' (Maon *et al.*, 2009).

The corollary of such a time dimension in the long run is the impact of knowledge creation and accumulation. Consequently the implementation of CSR within a company, with its deep impacts on organizational structures and management procedures, thus requests an original view of the combination between the implementation process and learning phenomena. Change in organization related to learning is an important body of literature, stemming mainly from the seminal works of Argyris and Schön (1996), and Levitt and March (1988). According to Pawlowsky (2003) and his extensive survey of literature on learning, it is clear that 'there are distinct perspectives on organizational learning that differ in respect to certain basic assumptions', nevertheless this author suggests that it is possible 'to see outlines of a picture that visualizes basic building stones of an integrative model of organizational learning'. His review suggests four different dimensions of learning: system-levels (from individual to network); learning modes (cognitive, cultural, action); learning types (single-loop, double-loop, deutero), and phases. Interestingly it is possible to connect these dimensions with approaches commonly found in the literature on CSR. Cramer (2005) for instance stresses the cognitive and learning aspects of CSR implementation in showing that 'it requires a double-loop form of learning, i.e. a critical reflection on the fundamental values, policy principles and operational procedures'. Similarly, authors such as Crossan *et al.* (1999) and Kleysen and Dyck (2001) put forward the role of network forms of organization in these learning processes, because 'relationships become structured, and some of the results of individual learning or shared understanding developed by groups become institutionalized as organizational artefacts' (Crossan *et al.*, 1999).

Following Podolny and Page (1998), and authors in social capital theory (Burt, 1997, 2000; Inkpen and Tsang, 2005; Nahapiet and Ghoshal, 1998), we will identify some characteristics of these cognitive effects that are paramount in the understanding of CSR implementation. The basic idea for these effects is the fact that at a certain period of its development, learning processes lead to different forms of institutionalization within a formal network, which thus become a kind of 'institution', producing its own rules, norms, values and culture, aspects themselves embedded in idiosyncratic resources and skills. In the terms of Powell *et al.* (1996) the network becomes progressively the 'locus of innovation'. Several authors rightly point out this 'institutionalization' dimension as a crucial stage of CSR development (Chiffoleau, 2005; Crossan *et al.*, 1999; Fenwick, 2010; Maon *et al.*, 2009).

Network effects in CSR implementation: a synthesis

The approach developed of CSR implementation is the delineation of the structural characteristics of network, of the characteristics of the networking activity and of the network seen as an institution. We have seen that this idea of three categories of network effects finds its source in the social capital theory (Burt, 1997, 2000; Inkpen and Tsang, 2005; Nahapiet and Ghoshal, 1998) and has already been developed in the context of innovation in general (Zheng, 2010) and managerial innovations in particular (Agarwal *et al.*, 2012). Nahapiet and Ghoshal (1998) for instance define social capital as 'the sum of the actual and

potential resources embedded within, available through, and derived from the network of relationships possessed by an individual of a social unit (…), it comprises both the network and the assets that may be mobilized though that network'. As suggested by Pittaway *et al.* (2004) and Conway and Steward (2009), the connection has been made between the benefits of network and innovation. But the literature on the role and functions of networks on innovation can be approached through at least two interpretations (Conway and Steward, 2009). In the first one the network is seen as a new way of organizing innovation activities, between market and hierarchy: it is thus the governance aspect that is emphasized. In the second one the network is not considered *per se* as a specific mode of organizing activities benefiting (or not) to innovation. Instead it is viewed as a new analytical lens interesting to focus on because it produces a wide range of effects, of externalities, that will influence the innovation processes. Doing so, the network is tracked via the effects it may produce, as a phenomenon affecting any economic life.

Interaction effects between individuals for instance will probably be more important at early stages of the innovation processes, while structural dimensions are more predominant in well-established network relationships. Finally, cognitive effects will be mainly related to the institutionalization (Crossan *et al.*, 1999) of a formal innovation network, especially when it 'becomes formalized into rules, routines and procedures' (Crossan *et al.*, 1999) which also tends to create path dependency, organizational memory, common resources and sense-making (Weick, 1995). These network effects on innovation are summarized in Table 1.

4. A case study of network effects in CSR implementation

First of all we detail the research protocol and its theoretical foundations, which is mainly an exploratory research based on one case study. Then we explain the context of CSR implementation and the main characteristics of the case study, which is an ongoing regional collective initiative around CSR conducted in France, from a network as a whole as well as from a firm level. Finally the network effects are synthesized, according to our analytical framework.

Case study methodology and research protocol

In the study of a dynamic process involving several actors, it is necessary to implement a research setting in the spirit of a theoretical sampling (Eisenhardt, 1989) and a case study methodology (Yin, 2009). Consequently the approach of the case study adopted is in line with those developed by Yin (2009), Le Goff (2002), Dubois and Gadde (2002) and Eisenhardt (1989). For Yin (2009) the abductive approach to case study is well suited when the phenomenon to be studied is unclear. An exploratory research by the case allows making sense of complex situations. For Le Goff (2002) the heuristic quality of the case study approach is 'likely to update elements deviant or surprising. The case study allows the detection of new phenomena' (Le Goff, 2002). Another key element of the methodological approach adopted is the posture of back and forth between theory and the field, called 'systematic combining' as developed by Dubois and Gadde (2002). For these authors, the case study is simultaneously a tool and a product. In contrast to deductive and inductive approaches, this approach allows to discover new variables and new relationships between these variables, creating a 'fruitful cross-fertilization where new combinations are developed through a mixture of

Table 1. Network effects in innovation process (based upon Conway and Steward (2009), Pittaway *et al.* (2004), Podolny and Page (1998), Coulon (2005), Powell *et al.* (1996), Agarwal *et al.* (2012)).

Structural	Interaction	Cognitive
density	intensity	memory
diversity	nature of relationship	organizational culture
size	symmetry/reciprocity	creation of tacit knowledge
complementarity	multiplexity	norms
position	trust	legitimation
connectedness	formality	sensemaking
pooling of resources		
geographical proximity		

established theoretical models and new concepts derived from the confrontation with reality' (Dubois and Gadde, 2002). Finally we have developed this case study approach as it is well adapted to the context of managerial innovation (Pitsis *et al.*, 2012).

In practical terms, the data were collected from questionnaires and interviews designed as part of the research protocol of the FP7 European project called NetGrow. In this project the data collection is done through two complementary approaches: one focusing on the approach of the global innovation network, and the other on the approach of a focal company (called ego network). The actors of the global network are classified into four categories: network coordinator, business firms, governmental bodies, research organizations. The network centred on a focal firm is approached through four sections: identification of key phases of innovation, identification of partners (individuals and organizations), nature of trade (knowledge, finance, etc.), and nature of interactions (social relations, flows of trade, knowledge, information and resources).

For the case study, this is a total of six semi-structured centred exploratory interviews (Romelaer, 2005) that were conducted face to face. Two interviews were done with the network coordinators, an interview with a government representative, and interview with an expert (considered as a research organization and knowledge transfer centre) and two interviews with members of one food SME (quality responsible and production responsible). After taking into account the specificities of the case, the research protocol of the NetGrow project was adapted. The nature of information collected by type of actors is specified in Table 2. The interview guide of this research highlight the actors involved in learning and the means of the learning. Then, we characterize the learning phenomena as well the means for interaction, their support and their content. The categories of actors contacted are the coordinator of the network, a company, a public body and the experts. Each actor has been interviewed during one hour. The interviewing protocol has two stages: the first one concerned the network manager, the second one focused on the SMEs.

Context and main characteristics of the case study

The field of our case study investigation is developed simultaneously at two levels: firstly at the network level called 'Destination Développement Durable' (Sustainable Development Destination; 3D) in the Aquitaine region in France and secondly hand at the SME level with a SME member of this network, the company Vignerons de Buzet (VdB).

3D is born from the initiative in 2005 of the Regional Federation of Agricultural Cooperatives in Aquitaine (FRCAA) and the French Association for Standardization (the French branch of ISO, the International Organization for Standardization: Afnor). The 3D network is formalized by a contract of partnership between these two entities (Abdirahman and Sauvée, 2012; Abdirahman *et al.*, 2013). This collective effort has allowed thirteen food companies to embark on the path of sustainable development and to be accompanied constantly in their will the set up CSR principles, mainly based upon the ISO 26000 standard defining CSR guidelines for companies (Abdirahman and Sauvée, 2013; Capron *et al.*, 2011; Perera, 2008, 2009). This new ISO 26000 standard has been launched internationally in 2010 and translated for the French food sector by Afnor

Table 2. Nature of information collected according to the categories of actors.

Subjects in questionnaires	Categories interviewed			
	Coordinator	Company	Public body	Research center
Network profile	X			
Network inception	X		X	
Network activities and members	X	X	X	X
Network and member evolution	X		X	
Network configuration and links	X	X		X
Network governance and management	X		X	
Performance	X	X	X	X
Innovation phases		X		

and professional bodies in 2011, creating a strong dynamic in the sector around this issue.

Thus a group of companies was created with common values and shared ambitions to structure a wide range of actions in coherence with their priority stakeholders (mainly consumers, buyers, local authorities, insurance companies, environmental groups, etc.).

At the 3D network level, the main drivers in Aquitaine were, with the participation of agribusiness, to anticipate the evolution of regulations and prepare for the new constraints of CSR rather than suffer afterward without taking the time to prepare. But the food SMEs were lacking at that time of sufficient knowledge, of internal resources such as human resources devoted to CSR issues. More importantly, the food SMEs in the Aquitaine region were not aware of the new values and social norms that such an approach necessitates.

Progressively the 3D network has several important roles. Mainly the key pivotal role of 3D network is to provide the 3D tool. It is essentially the creation of common services built around three themes:

1. The training, for SME managers, in the preparation of the process of implementing CSR principles.
2. The availability of a diagnosis tool linked to a pool of specialized experts that leads to the offer of the comprehensive consulting services for SMEs taking into account the principles of CSR synthesized in eight criteria. The consultants are trained in CSR by the network drivers to become 3D experts.
3. The communication (website, brand name, communication tools vis-à-vis stakeholders).

VdB is a wine cellar cooperative founded in 1953 and located in the Lot-et-Garonne district in the South-West of France. This is an SME which includes 234 growers and has 88 employees. The activities of the cave are from the grapes production to the marketing of wine bottles. To do this, the cooperative has two winemaking sites, two aging cellars and two packaging lines. The annual production is around 90,000 hl. Much of the production (estimated at 80%) is devoted to France; the remaining 20% are exported to European countries, Japan, Russia and Canada. The SME is engaged in the 3D network and this initiative is in line with all strategic actions already taken by the company in terms of certification (Agri Confiance®, a quality and environmental standard set up by French cooperatives based upon ISO 9001 and ISO 14001 standards). The antecedents of the SME in terms of certifications and their former collaborations with the network drivers in the case of AgriConfiance® certification are factors of maturity and most trusted determinants for their decision to adopt CSR principles through this network. The lack of resources, including financial, is a constraint requiring the implementation of a strategy to support new practices (Berger-Douce, 2007). SMEs benefited, like other companies, of funding from the governmental body (DIRECCTE) via the 3D network and also received complementary funding from the Aquitaine Regional Council.

The issue of CSR brings three major challenges for any food business (Abdirahman and Sauvée, 2013; Hartmann, 2011): (1) the creation of a pool of specific resources; (2) the need to communicate its sustainable practices with stakeholders; (3) the creation a community of practice (in the sense of Wenger, 2000) leading finally to the creation of an organizational culture. In this sense, the 3D network can be seen as a virtual place that matches a learning platform for food SMEs, a communication tool with stakeholders and a set of resources that provide the socio material basis for this community of practice. Thus this collective learning process creates a dynamic favouring the appropriation, at the firm level, of social and environmental issues.

Table 3 summarizes the main basic components found at the network (whole network) and individual (ego network) levels. These building blocks are differentiated in two parts. First of all one should consider the resources that have been developed in house. These resources are mainly virtual (embedded in the intranet system) but are also found in the specific human expertise of CSR consultants. The 3D network is a bundle of specific resources exclusively available to its members. But, more importantly, the 3D network is also an infrastructure of communication channels that can be activated by the network managers and the members. In other words the communication channel of the network brings an opportunity of communication, which is, as we will see, conditional to the expression of networks effects.

Network effects in CSR implementation

In order to delineate precisely the network effects that occur in CSR implementation, it is necessary to proceed in two steps. The first step identifies the main qualitative phases of CSR implementation, each of these phases being considered as a specific contextual environment with regard to the mobilization of formal network(s) and of networking activities; the second step crosses these phases with the network dimensions and their main identified effects on innovation processes.

Table 3. The main resources and communication channels for CSR implementation in the 3D network.

Levels	Resources for interaction and learning	Modes of interaction/exchange
Organizational	3D website sustainable development reports identification guide of the stakeholders human resources: pool of CSR experts	formal intranet adhesion by members elaboration and diffusion through website web diffusion to 3D members direct interpersonal exchanges
Individual	specific knowledge on CSR (3D experts) CSR training resources cross auditing	self-training through common resources training sessions: external (in the community of practice); internal (in the companies) interpersonal exchanges

The processual dimension of CSR implementation: the phases

The identification of distinct phases which have been chosen for the 3D case study is based upon previous researches on CSR and on quality standard implementation (Abdirahman and Sauvée, 2012; Henson and Humphrey, 2009, 2010; Maon *et al.*, 2009). Concerning CSR, Maon *et al.* (2009) propose four phases, based on a critical review of literature articulated with case studies: awareness, challenge, set in motion, re-appropriation, each of these phases differing itself in successive steps, which are identified by analogical comparison with the management standard implementation (Abdirahman and Sauvée, 2012). Phase 1 includes a single stage at which the organization seeks to increase its awareness in the value of CSR to define its business strategy. The key role of the leader is often mentioned, that it responds to external partners (stakeholders such as NGOs, market pressure ...) or internal partners (increased weight of the values held by certain employees or groups of pressure within the company). This phase will be labelled as the antecedent phase in the case study. Phase 2 will lead to the decision to implement CSR (decision phase in the case study) and differs in four steps. First the company must question the meaning of its commitment to society and to its relationship with key stakeholders. In particular it is necessary to identify what are the social issues specific to these stakeholders and what are the critical resources involved. In a second step the company must develop its own vision and a concrete implementation of this vision. A third step is the audit as such, where the company, for each of the three CSR pillars, compared with those of competitors and the expected standards. Finally a fourth step is the establishment of integrated strategic plans for the implementation of CSR principles. Phase 3 called set in motion is divided into three steps. This phase will be identified as the 'set up' phase in the case study. The first step is the actual implementation of actions to be taken, a step that involves active networking in order to acquire the necessary material and immaterial resources. The second step covers all activities of internal and external communication for the implementation of CSR. The third step is the one to evaluate the results obtained from the dashboard of indicators. Phase 4 consists of a single step called institutionalization: this is the post evaluation phase of the case study. For Maon *et al.* (2009) this crucial phase should provide answers to the question of the sustainability of the action. Given the constraints, including competitive pressures, market risks or demotivation of employees that could result in medium term to a questioning of the strategy, the organization must have a clear commitment of resources, incentive mechanisms and official permanent controls leading to a continuous quality improvement.

Crossing phases and categories of network effects

We decrypt the phenomena of complex learning processes of adopting the principles of CSR of one food SME called VdB. We have highlighted the phenomena in considering, according to our analytical framework, the three categories of network effects, namely structural, interactive and cognitive. We focus successively on the four main phases as defined previously: antecedents, decision, set up, post evaluation. From a global point of view, the implementation of CSR can be interpreted as a collective process of creation, transfer, adaptation and dissemination of primarily explicit knowledge contained in the CSR principles into tacit and adapted knowledge at company level. As summarized in Table 3, the learning phenomena at the core of the CSR implementation are the existence of a pooling of assets coupled with various networking activities: in the 3D case study, the resources are put in common for all SMEs joining the network, allowing the creation of cumulative

effects for the learning of CSR new practices. From an analytical point of view, it is possible to delineate according to our framework the network effects of the process of implementing the principles of CSR, which are in practice intertwined at the individual/organizational level and at the level of the network as a whole (cf. Table 4 for a synthesis).

- The structural effects
  The idea of structural effects is to put forward the nature, diversity, position of actors (individuals and organizations), involved in the process, and the content of the links between them. During the antecedent phase the main structural aspect is the existence of community

Table 4. Network effects of CSR implementation in a dynamic perspective: a synthesis.

Network effects	Phases			
	Antecedents	Decision	Set up	Post evaluation
Structural	• Size and origin of the SME community (agricultural cooperatives in Aquitaine region) • Geographical proximity of founding members (FRCAA and Afnor Aquitaine)	• Organizations: small size and diversity of core members (SME, FRCAA, Afnor) • Individuals: SME managers and network coordinators at FRCAA and Afnor Aquitaine	• Organizations: Increase of the size and of the diversity of the network: 13 SMEs, 3D experts, network coordinators, external consultants • Individuals: extension of interpersonal networks both inside and outside the company	• Informal network of the 3D community of SMEs and affiliated partners (mainly external consultants) • Dyad organizational network between VdB and certification/evaluation body
Interaction	• Previous exchanges between members around common projects • Proximity exchange at local/regional levels • Previous communication channels and interactions with consultants in environment • Formal meetings to increase awareness about CSR issues	• Interactions between 3D network coordinator and VdB managing director • Interactions between managing director and quality responsible	• External exchange workshops (VdB, other SMEs, consultants) • Internal exchange workshops (employees, directors) • Cross audits between SMEs including VdB • Direct communication and shared experiences around 3D tools • Training periods with 3D experts • Evaluation audit with Afaq	• Permanent internal interaction between employees, quality responsible, managing director at VdB • Frequent interactions with other SME managers within the 3D community • Exchange in occasional CSR seminars
Cognitive		• Adhesion to the 3D charter (explicit knowledge about CSR)	• Memory: accumulated explicit knowledge about CSR practices (sustainable reports) • Progressive emergence of a 3D organizational culture shared experiences	• Cumulative phenomena: – accumulated knowledge by 3D experts – accumulated knowledge through real experiences shared by SMEs – deepening of the organizational culture through emergence of a community of practice

of agri-food companies constitutive of the FRCAA, the regional federation of agricultural cooperatives of the Aquitaine region. This professional community, already formally organized, is the basic component of the network. Then the formal agreement between FRCAA and Afnor creates a dyad of institutional actors, well balanced between the two as the initiative has been launched commonly. The geographical proximity of all actors, all of them installed in the Aquitaine region, is also to acknowledge.

During the following phases, the pivotal role of the 3D experts is the main structural effect. Indeed, at the individual level, 3D experts are involved in this phase because they accompany SMEs in the implementation of CSR principles. They play a key role in ensuring the essential functions of the translation of the standard (Abdirahman and Sauvée, 2012; Brodhag, 2011) in that they facilitate the passage of a normative content of its implementation in the actual practices of SMEs, as we will see below. Another important structural aspect is the existence of formal links between experts who have a contract with the network coordinator. Thus there is a collective and structured interface between experts and all SME members of the 3D network, which will form the basis of networking activities: this is the complementarities of the two facets, as emphasized in the literature (Berthon *et al.*, 2007; Conway and Steward, 2009).

Concerning the position of the VdB company within the network, it evolves during the process from peripheral to central: from a position as an undifferentiated member of the federation, the company is progressively moving toward a status of singular actor during the emergence and development of dedicated exchange with experts.

- The interaction effects

  As shown by authors such as Pawlowsky (2003), interactions form the basis of learning and as such must be carefully investigated. In the antecedent phase, previous important projects conducted within the federation (such as AgriConfiance®) has led to significant interaction activities with various consultants in the domain of environment, opening the path for other innovative projects. Concerning the CSR project in itself during the antecedent phase, the VdB company has received mainly information and soft knowledge about awareness to CSR issues and the broad content of CSR principles. At this stage, the SME uses intranet and is not challenged to do more. Therefore the type of learning is single loop, by drawing an analogy with the works of Argyris and Schön (1996), because at that stage the changes involved are absent or limited. The decision to implement CSR occurs through exchanges at the individual level between the network coordinator and the VdB managing director, and between the managing director and the quality responsible.

  During the set up phase, 3D experts, strongly in interaction with SMEs involved in the process, have played both roles of adapters and of diffusers of the CSR principles. At the individual level, the quality manager is the appropriate partner for 3D experts. In our case study, the VdB company learned through these interactions. The company also learned thanks to the cross audits within the 3D community, by adaptation/translation of its practices. As such, the company has progressively identified its sustainable practices internally and corrected or gave rise to other practices referring to the 3D tool. These practices have involved changes or creation of new procedures, instructions and staff training on certain themes of CSR. In this case we have an example of the double-loop learning, in the sense of Argyris and Schön (1996): the company sets up procedures which will induce deep changes in the managerial practices and in the strategy.

  During the post evaluation phase, the company wants to obtain recognition of CSR practices internally via AFAQ, an evaluation/certification organization. The AFAQ 26000, a CSR assessment tool, is applied in interaction with the company through a formal auditing activity, in order to meet the requirements of the evaluation. It is to be noticed also that during this phase the permanent improvement process is backed up by an intense interpersonal networking activity between employees of the company, exchanges orchestrated by the quality responsible.

  The interactions are mainly done through informal relationships (or virtual direct contacts between business leaders and quality managers) that will induce a phenomenon of imitation and emulation. This interaction effect put forward the key role of the constitution of informal social networks which roles should be more clearly acknowledged in the future. The main interactive mechanism at the company level is mimicry, defined as observation, comparison and self-evaluation of strategic behaviours. We will see that these mechanisms will lead eventually to the creation of a common organizational culture and shared values.

- The cognitive effects

  Not surprisingly, the cognitive network effects are mainly identified at the 3D network level, where the major resources are found. We have seen that the FRCAA organization has created a website called 3D in which companies can download and communicate their

sustainability reports. The companies also have access to the 3D tool developed by FRCAA in collaboration with Afnor, and to the identification guide of stakeholders.

First of all, the cognitive dimension emerges through the creation of an organizational memory within the network. Indeed the establishment of this collective memory is permitted by the publication of SME sustainable reports on the 3D website, thus open to the public. In parallel, the creation of the common intranet contributes to the emergence of a virtual centre accessible simultaneously to all members of the 3D network. This intranet platform reduces the risk of opportunistic capture of the resource by members in placing them at the centre of the network.

The cognitive dimension of the 3D network is also found in mass and cumulative effects: knowledge is progressively stored on the intranet and thus accumulates over the years. Finally a community of practice (Wenger, 2000) encompassing the SMEs involved in the 3D network has emerged, through a common use of 3D tools, the development of shared values and norms, the identification of the companies to the brand name. It induced a creation of an organizational culture which can be considered at its early stage of development.

5. Some managerial implications and concluding comments

We propose in this article an analytical framework of the implementation of CSR in food SMEs which aim is to identify the main network effects. From a literature review, we highlight the key components of the CSR implementation, in their structural and processual aspects, starting point for the construction of this framework. This framework is then applied to an example of a collective initiative of CSR implementation in a food SME in the Aquitaine region in France.

The proposed framework has two major advantages. Analytically, our research allows a better understanding how organizational and individual variables actually fit together and explain the implementation of CSR principles in a particular SME context.This framework is also an analytical tool useful to identify and to characterize the functions of different groups of actors: indeed it reveals synergies and complementarities at different levels. In doing so, from a managerial point of view, this framework constitutes the embryo of a learning tool, highlighting the strengths and weaknesses of formal networks as well as of networking activities. Indeed, SMEs are often identified, because of their size, isolation or lack of resources, complexities of rules and procedures, as experiencing difficulties to implement CSR. In the spirit of the NetGrow project, it could be further developed in the future for accompanying SMEs in their will to implement CSR. More precisely the analytical framework could help to better characterize objectively the role and place of SMEs within their web of partners and to identify resources and skills having a greater impact on the process, in relation with the critical phases.

Considering the perspective of research, this exploratory approach must be complemented by a replication to similar situations of other SMEs in the 3D network, and to other situations of managerial innovations in collective initiatives (such as other ISO standards, organic farming labels, private standards like IFS and BRC), in order to reinforce the value of these preliminary results.

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