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Résumé de l'article

De nos jours plus en plus de joint-ventures (JVs) apparaissent. Elles peuvent être sous certaines conditions une source d'avantage compétitif. Le transfert de connaissances de l'entreprise mère locale vers la joint-venture (JV) n'a pas suscité beaucoup d'intérêt. Notre recherche s'est proposée de mettre en évidence le rôle de l'entreprise mère locale et d'identifier les déterminants d'un transfert de connaissances réussi. A cette fin, nous examinons quatre études de cas. Les résultats de la recherche ont montré qu'il existe quatre principaux déterminants d'un transfert. Autant l'entreprise mère locale que la JV doivent les prendre en compte en vue de mieux réussir le transfert de connaissances.

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ABSTRACT

Today, more North-South Joint-ventures (JVs) are developed mainly to gain greater competitive advantages. Nevertheless, knowledge transfer in North-South JVs did not attract researchers' interest. Even less known is knowledge transfer between the local parent firm to the JV. This the gap we propose to fill. We will try to identify the determinants of a successful knowledge transfer to that end, we examine four case studies. The findings indicate that there are four main determinants of successful knowledge transfer. The parent firm and the JV need to have them in order to succeed in transferring knowledge.

Keywords: Knowledge transfer, Joint-venture (JV), Local parent firm, JV Performance, Interactive learning

Résumé

De nos jours plus en plus de joint-ventures (JVs) apparaissent. Elles peuvent être sous certaines conditions une source d'avantage compétitif. Le transfert de connaissances de l'entreprise mère locale vers la joint-venture (JV) n'a pas suscité beaucoup d'intérêt. Notre recherche s'est proposée de mettre en évidence le rôle de l'entreprise mère locale et d'identifier les déterminants d'un transfert de connaissances réussi. A cette fin, nous examinons quatre études de cas. Les résultats de la recherche ont montré qu'il existe quatre principaux déterminants d'un transfert. Autant l'entreprise mère locale que la JV doivent les prendre en compte en vue de mieux réussir le transfert de connaissances.

Mots-Clés : Transfert de connaissances, Joint-venture (JV), entreprise mère, Performance de JV, apprentissage interactif

Resumen

Hoy en día, se desarrollan más empresas conjuntas Norte-Sur con el objetivo de obtener mayores ventajas competitivas. Sin embargo, la transferencia de conocimientos en las empresas conjuntas Norte-Sur no atrajo el interés de los investigadores. Aún menos conocida es la transferencia de conocimientos entre la empresa matriz local y la empresa conjunta. Este es el vacío que nos planteamos cubrir. Trataremos de identificar los factores determinantes de una transferencia de conocimientos satisfactoria para ese fin, para lo cual, examinaremos cuatro estudios de casos. Los resultados indican que hay principalmente cuatro factores para una transferencia de conocimientos exitosa. Es menester tener la empresa matriz y la empresa conjunta para conseguir el éxito de la transferencia de conocimientos.

Palabras Clave: Transferencia de conocimientos, Empresa conjunta (JV), Empresa matriz local, Rendimiento de la empresa conjunta, Aprendizaje interactivo



Joint ventures (JV) represented more than 5000 outlets in the years 2000's exceeding 5 trillion US dollars per year in terms of corporate investments (Bamford, 2017). The largest 100 JVs currently include Sony-Erickson, Siemens-Nokia and Cadbury-Schweppes and represent more than \$350 billion in combined annual revenue (Prevot & Gallino 2012). As a result, JVs are becoming a popular tool for managing risk in uncertain markets, sharing the cost of large-scale capital investments, and injecting newfound entrepreneurial spirit into maturing businesses and transferring knowledge thereof. There are several reasons that encourage a firm to embark in a JV namely: to consolidate its strategic position, to overcome legal and cultural barriers, to create more values, and to enhance learning and knowledge transfer

Lyles and Salk (1996) and Anh *et al.* (2006) highlighted that knowledge transfer results from the interactions between individuals from the parent firms of advanced countries who are willing to disseminate and share their knowledge with the personnel of the JV in the developing country (DC). Few studies looked at the role of the local parent firm in the knowledge transfer process (Tsang *et al.*, 2004), yet, it can be fundamental: it is no longer simply seen as a one-way movement from the foreign parent firm to the JV. In reality, it refers to a more complex relationship and interdependent links between the parent firms (both foreign and local) and the JV. Against this backdrop, our study contends that an interactive logic of knowledge transfer takes place within a JV set up, involving the three key players: the foreign parent firm, the local parent firm and the JV. Accordingly, our research objectives are: to explore the role of the local parent firm in the knowledge transfer process to the JV and identify the determinants that influence positively this transfer.

We focus on Tunisia, which is the first African country to sign a free trade agreement with the European Union and is a member of the World Trade Organization. Following the so called 'Arab Spring' in 2011, the country has been facing major economic challenges, one of them being to diversify its economy and make it less vulnerable to the variation of the dominant tourism activities. In order to succeed this transformation, the State has been enhancing the global restructuring of domestic firms to raise their level of competitiveness and stimulate the transition from outsourcing to foreign firms to JV partnership expected to provide higher access to new knowledge.

Tunisia has thus become more attractive to JVs with the adoption of new incentives (OECD 2010) and, it is generally recognized that JVs have greater technological absorption capacities through knowledge transfer.

The main issue facing Tunisian affiliates is therefore to what extent could JVs help build competitive capabilities through proper knowledge transfer? To answer this question, section two looks at the literature review with the objective of highlighting the main features of an interactive flow of knowledge and the missing links. Section three examines the conceptual framework we use in our empirical study. Section four presents in detail our research methodology and our results. The final section discusses the results and concludes.

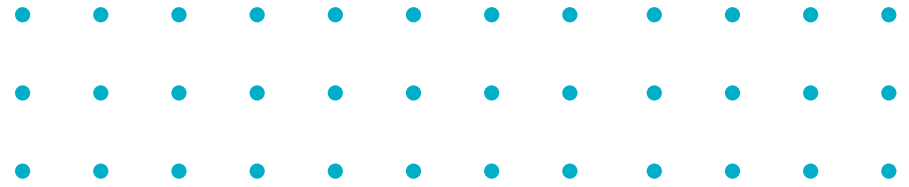
Literature Review

Several dimensions of our research need to be highlighted in this literature review related to the two main concepts: joint-venture and knowledge transfer.

Joint-Venture

An international JV is a legal and a distinct organizational entity created by independent firms (generally two or three partners), by transferring a portion of their resources (financial, human, knowledge, etc.) to achieve a certain degree of complementarity and attain the common objectives (Jolly, 2001). Through the creation of this form of cooperation, parent firms seek to share interests and complement their needs while preserving the autonomy and legal responsibility of the JV. Parent firms are by definition holders of a share of capital proportional to their contributions allowing for a certain level of control over the JV. The JV allows, under certain conditions, the transfer of know-how and industrial technology and allows the local firm to acquire management and production skills and a possible extension of business opportunities to neighbouring countries. JVs can present considerable interest to foreign partners allowing:

1. access to new markets.
2. use of the local parent firm knowledge of the environment for a better insight of the domestic and regional context.
3. easier access to local natural resources in addition, to the possibility of sharing risks and gains with local partners.



Knowledge Transfer

The concept of knowledge transfer has been the subject of several theoretical and empirical studies, whether at the intra-organizational or inter-organizational levels. However, it remains a difficult concept to define. Wang *et al.* (2004 p. 173) consider knowledge transfer as “a process of systematically organized exchange of information and skills between entities”.

Argote and Ingram (2000, p.151), point out that “Knowledge transfer in organizations is the process through which the individual is affected by the experience of another” and consider that knowledge within an organization is embedded in three types of reservoirs: members (the human component), tools (the technological component) and tasks (the goals component). Thus, they consider the organization as a set of combined networks and sub-networks linking the different types of reservoirs. From this perspective, knowledge transfer takes place through moving a reservoir of knowledge from one unit to another or through modifying a reservoir of knowledge within the receiving entity.

Although this conceptual framework has been developed in an intra-organizational context, it could help understand transfer at the inter-organizational level (Carley & Hill, 2001) where Knowledge transfer is considered a crucial step in the knowledge management process (Inkpen & Dinur 1998). In a JV context, Lyles and Salk (1996 p. 4) state that “... foreign parents are seen as reservoirs of both technical know-how and managerial (process-related) knowledge”.

Based on the premise that knowledge can be transferred, distributed and newly created, individuals within or between organizations can ensure replication (reproduction) and integration (combination) of knowledge (Kogut & Zander, 1992). In the previous literature, the knowledge transfer phenomenon within a JV can be categorized into two groups. The first one studied knowledge transfer from parent firms to the JV showing that this form of cooperation can be, under certain conditions, a space that responds to principles of learning organization (Senge 2006) and for learning and cross fertilizing of knowledge. The structure of the JV allows for the presence of staff from the local parent firm, which promotes face-to-face contact and communication that help to cope with the most subtle aspects of the knowledge to be transferred and which favours the internalization of knowledge by a parent firm (Chen *et al.* 2012).

The second group focused on reciprocal knowledge transfer from the JV to the parent firm. The staff of the parent firm is exposed to the ideas, concepts and new working methods and experience acquired in the field through learning by doing, using, and interacting (DUI) (Lundvall, 2003) and thus they enhance their own skills.

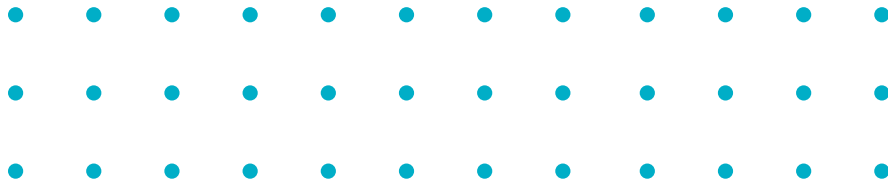
The JV can then be an important vehicle for the parent firms to acquire knowledge and inversely, the staff of the JV can acquire and develop knowledge from the staff of the parent firm, who possesses special expertise (Yong *et al.*, 2015). In some cases, parent firms can exchange information and knowledge directly between them (Michailova & Mustaffa 2012, Rabbiosi & Santangelo 2013).

Most of the research done in developing countries examined the knowledge transfer process of the parent firm in a developed country to the JV in a DC (Tsang *et al.* 2004, Anh *et al.*, 2006).

Similar studies were conducted previously in this respect: Khan *et al.* (2015), using a set of variables, highlighted the role of socialization in knowledge transfer from JVs to local suppliers in Pakistan, though, he neglected the role of the local parent firm in the transfer process. Few studies have only looked at knowledge transfer from the local parent firm to the JV considering that its Knowledge, expertise, and experience represent sometimes an important incentive for a foreign firm to create a JV with the local firm (Immelt *et al.* 2009).

In our specific case, we will try to identify the determinants of a successful knowledge transfer between the local parent firm and its relationship with the JV and contend that these determinants need to be in order for the interactive process to have an impact on the knowledge transfer.

This is our main hypothesis and our added value as no similar study has been done before and the only piece of research conducted in the Tunisian context has focused on knowledge transfer from a foreign parent firm to a JV (Belazreg, 2007). In fact, a successful knowledge transfer is observable through the changes it induces in the receiver. Argote and Ingram (2000) argue that: “Knowledge transfer in organization manifests itself through changes in the knowledge or performance of the recipient unit. Thus, knowledge transfer can be measured by measuring changes in knowledge or changes in performance.” (p.115) and show that the measurement of knowledge transfer is difficult because knowledge is anchored in different reservoirs mentioned above.



The Conceptual Framework

JV creation is often part of the strategic foresight of parent firms operating in a new and a specific environment.

The study of knowledge transfer needs to take into account this specificity and the interdependencies and interfaces between the local parent firm and the JV itself. This is the specific aspect of our current contribution and an added value. The relationship between the local parent firm and the JV is examined through the lenses of five main categories: the characteristics of the local parent firm, the characteristics of the JV, the characteristics of the relationship between the two, the characteristics of the strategic, cultural and organizational dimensions and the characteristics of the communication tools supporting the transfer mechanism.

Characteristics of the Local Parent Firm

Openness of Managers

In a JV context, Inkpen (2000) defines openness as “the willingness and ability of JVs to share information and communicate openly”. The open-mindedness of the respective managers is a fundamental element to ensure communication in a learning context. In the context of strategic alliances, partners may sometimes be less transparent or open than others (Hamel, 1991). For Gupta (1987), open-mindedness reflects the degree to which the relationship between the parties are open and without protocols: openness in such a relationship offers a spontaneous and an open exchange of information and ideas. In this regard, Pisano (1988) indicates that the ability to learn through a JV structure does not depend simply on the absorptive capacity of the partners, it also depends on stakeholders’ willingness to cooperate and their higher sense of openness during the transfer process.

Proposition 1: Openness of local parent firm “managers influences knowledge transfer from local parent firm to the JV.

Learning Intent of Personnel

Hamel (1991) sees learning intent of a firm as a propensity to view collaboration as an opportunity to learn. According to Beamish and Berdrow (2003), the learning intent of local parent firms” managers will affect the resources that

parent firms transfer to the JV, its control on these activities, the performance assessment mode, the results, as well as the amount of learning that takes place between the joint entity and the parent firms.

Proposition 2: Learning intent of local parent firm “personnel influences knowledge transfer from local parent firm to the JV.

Experience in the Field of Cooperation

Studying some international JVs, Simonin (1999b) found that if the parent firm has experience in working with foreign partners, this experience will facilitate knowledge transfer in the event of a possible cooperation and in particular in marketing knowledge. Experience helps to control ambiguity and subsequently help to promote knowledge transfer between partners. Accordingly, Simonin (1999a) has shown that the more a firm is involved in cooperation projects, the higher the success of knowledge transfer (Simonin, 2004). When a firm begins to collaborate, it develops a cooperation experience and a reputation of a good partner (Powel *et al.*, 1996). This experience also allows the local parent firm to better manage the opportunistic behaviour of the foreign parent firm and reduces domination risks.

Proposition 3: Experience in the field of cooperation influences knowledge transfer from local parent firm to the JV.

Size of Local Parent Firm

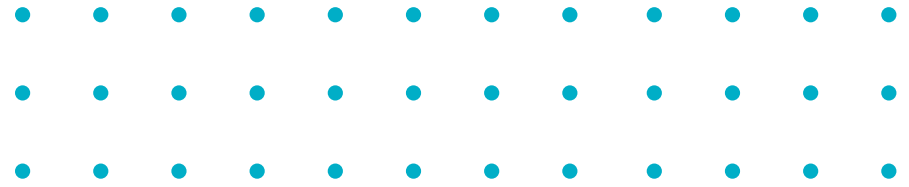
Hagedoorn and Schakenraad (1994) highlighted a significant link between the size of the local parent firm and the intensity of the cooperation with the JV.

In fact, the organizational learning benefits of the JV can be better enhanced by the size of the local parent firms. This influence can be explained by the fact that large local parent firms often have the financial resources and development potential that can support the knowledge transfer process through their long-term commitment to enhance employee skills and the operational activities of the JVs.

Proposition 4: Size of local parent firm influences knowledge transfer from local parent firm to the JV.

Characteristics of the JV

Surveying the literature, four characteristics seem to be relevant to our research topic: age, performance, absorptive capacity and learning motivation:



Age of the JV

Several authors have shown that the age of the JV positively influences the knowledge transfer process, JV performance and managers' perception of the success of the JV (Geringer and Hebert, 1991). Generally, the start-up phase is a difficult phase for the JV managers. The staff of the parent firms encounters difficulties, misunderstandings or conflicts during the start-up phase of their joint units. With the effect of time and mutual collaboration, knowledge transfer between partners can, under certain conditions, be achieved through this form of cooperation (Inkpen, 2000).

Proposition 5: Age of the JV influences knowledge transfer from local parent firm to the JV.

Performance of the JV

Performance of the JV plays an important role. Lyles and Salk (1996) suggest that we can view performance in two ways: economic performance and human resource management performance. However, the link between transfer and JV performance is not yet established in the literature: positive, negative, and non-significant results have been found in several previous studies (Lyles & Salk, 1996; Beamish & Berdrow, 2003). In our paper, we propose to test the positive effect of a good JV performance on knowledge transfer between the parent firms and the JV.

Proposition 6: Performance of the JV influences knowledge transfer from local parent firm to the JV.

Absorptive Capacity

Absorptive capacity has become a key concept in organizational learning. Cohen and Levinthal (1990) define it as 'the ability to assume the value of new external information, assimilate it and apply it to commercial ends.' This capacity is relevant to the receiver as it allows him to take advantage and use the knowledge provided by his partner. In a JV context, absorptive capacity is the skill that affects a firm's ability to learn. Inkpen (1997) shows that active participation of parent firms in management and training can, not only improve the absorptive capacity of partners, but also provide the means to transfer knowledge. As a result, by working more creatively and combining existing knowledge and transferred knowledge, the absorptive capacity of the JV and that of the parent firm greatly promotes the success of the knowledge transfer process (Lyles *et al.*, 2003).

Proposition 7: Absorptive capacity of the JV influences knowledge transfer from local parent firm to the JV.

Learning Motivation

Motivation can also play a decisive role in the transfer process. Hurst *et al.* (1989) consider that motivation, imagination, planning and experience are necessary variables that complement each other to ensure the successful transfer of knowledge. In reality, the motivation for learning needs to be translated into the field through actions that encourage and support learning and dissemination of knowledge between the parent firms and the JV.

Wang *et al.* (2004) showed that the higher the link between the reward of individuals and their learning outcomes, the higher the level of knowledge transfer between the parent firms and the JV.

Proposition 8: Learning motivation influences knowledge transfer from local parent firm to the JV.

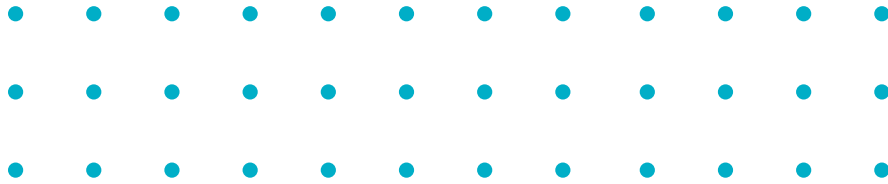
Characteristics of the Relationship Between Partners

A brief review of the literature indicates that four elements play a significant role in the relationship between parent firms and the JV: mutual trust, the ability to resolve mutual conflicts, the quality of contributions of parent firms and negotiation power of partners.

Mutual Trust

Trust between partners has been identified as an important element in a collaborative activity (Gulati, 1995). Difficulties in strategic alliances often stem from a lack of trust between partners (Powel *et al.*, 1996). Zand (1972) states that without trust, information exchanged between parent firms either directly or through the JV may not be highly accurate, complete, or timely because partners are sometimes reluctant to take the risk of sharing important information. Lyles *et al.* (2003) corroborate that trust contributes to the creation of an atmosphere of openness and knowledge exchange making it important for the partners to manage the level of trust in the relationship to prevent opportunistic behaviour.

Proposition 9: Mutual trust influences knowledge transfer from local parent firm to the JV.



Ability to Resolve Mutual Conflicts

A relationship of understanding between business managers is a factor that can play an important role in resolving disputes between decision makers in a JV where conflicts between parent firms may prevent the sharing of information and the exchange of knowledge between them and the JV and be a hindrance to the knowledge transfer.

Given that conflict is almost inevitable in a partnership, the question of how such a conflict is resolved becomes important and the need to manage the level of conflict including through informal setting becomes crucial.

Proposition 10: Ability to resolve mutual conflicts influences knowledge transfer from local parent firm to the JV.

Quality of Contributions from Parent Firms

When the JV is endowed with quality inputs from parent firms (sophisticated technologies, distinctive know-how modern equipment and work tools and high value-added knowledge), it can promote learning within its network. These socialized and internalized contributions to the parent firms and the JV can create potential for further development of knowledge with high added value. Several studies (Lyles & Salk, 1996; Tsang *et al.*, 2004) highlighted the importance of the quality of parent firms' contributions in the knowledge transfer process, making it important to manage the level of quality inputs from parent firms.

Proposition 11: Quality of contribution from parent firms influences knowledge transfer from local parent firm to the JV.

Negotiation Power of Partners

When a JV is created, the relative bargaining power of partners is determined primarily by the contribution of each partner to the JV (Harrigan & Newman, 1990). Hamel (1991) found that the higher a partner's learning progresses through a strategic alliance, the higher the latter's negotiating power develops over time. In reality, partners' contributions are rarely symmetrical. With a variation in power balance, the need for cooperation between partners may diminish or disappear altogether. The balance of bargaining power between partners can be seen as a factor that can positively or negatively affect learning and knowledge transfer. The need to manage the power balance in the relationship so that the

level of cooperation is maintained to the level needed by a successful knowledge transfer is important.

Proposition 12: Negotiation power of partners influences knowledge transfer from local parent firm to the JV.

Characteristics Related to the Strategic, Cultural, and Organizational Dimensions:

In the literature, three elements seem to play an important role: strategic compatibility, cultural compatibility, and organizational compatibility:

Strategic Compatibility

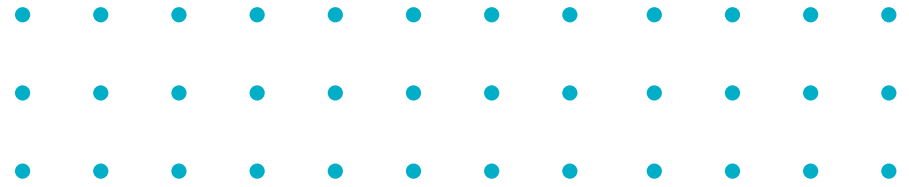
The dual dependence of the JV on parent firms sometimes leads to difficulties in setting the objectives of the JV since the JV must take into account the interests of the different parties and try to ensure certain compatibility between the expectations of the involved parties. Inkpen (1995) found that JVs that are weakly linked to parent firm strategies do not allow for a high level of knowledge transfer, while JVs that are strategically important to parent firms offer significant opportunities for cross- and increased learning potential. Thus, in order to promote the sharing of knowledge between the JV and the parent firms, the latter must ensure a minimum of strategic compatibility.

Proposition 13: Strategic compatibility influences knowledge transfer from local parent firm to the JV.

Cultural Compatibility

According to Killing (1983), most of the problems encountered by JVs are of cultural origin. The national and organizational cultures of the partners affect the different aspects of collaboration, including the process of knowledge transfer. This opinion is also shared by Lyles and Salk (1996), who report that not only conflicts, but also cultural misunderstandings rooted in cultural differences can reduce the sharing of knowledge to the minimum. Then, it is obvious that partners must take these differences into account to prevent difficulties that can hinder the knowledge transfer process.

Proposition 14: Cultural compatibility influences the knowledge transfer from local parent firm to the JV.



Organizational Context Compatibility

Szulanski (1996) points out that the more organizational contexts are different, the greater is the risk of problems, and the greater is the need to adjust the transferred knowledge.

Inkpen and Dinur (1998) proposed a model that shows that organizational context compatibility is a necessary condition for a successful knowledge transfer. In this regard, Simonin (1999a) also showed that the higher organizational distance, the higher the ambiguity of knowledge transferred, which will not favour the transfer. Indeed, incompatibility between organizational contexts can lead to serious conflicts between the different partners of the JV, which, in turn, can negatively influence knowledge transfer.

Proposition 15: Organizational context compatibility influences knowledge transfer from local parent firm to the JV.

Characteristics of the Communication Supports of the Transfer Mechanism

Previous research pointed out to two main communication supports the transfer mechanism: the use of ICTs and face-to-face interaction. These are also becoming more and more key elements in interactive learning and often complement each other for the successful conduct of a business relationship.

Information and Communication Technologies (ICTs)

The use of ICTs favours the codification of a large quantity of tacit knowledge, ensures the transfer of explicit knowledge and offers the possibility of bypassing, at least partially, the need for face-to-face interaction by developing virtual links and/or creating virtual interactions. ICTs could help achieve several objectives as pointed out in the literature (Foray 2000): they are means of reducing codification costs, allowing for the codification of complex knowledge in a more or less tacit way, and can be a tool for a new virtual communication.

Similarly, these types of technologies promote coordination through mutual adjustment by facilitating the exchange and transfer of explicit knowledge between the parent firm and the JV's personnel. Indeed, the more these tools provide synchronous and uncodified relationships between the personnel of the different parties, the more these tools become face-to-face relationships.

Proposition 16: ICTs influence the knowledge transfer from local parent firm to the JV.

Face-to-Face Interaction

Nonaka (1994) stresses that individual knowledge remains personal unless it is amplified and articulated through social interaction. Knowledge is transferred into a social community as part of a social construction process (Powel *et al.* 1996). Staff movements between the parent firm and the JV promote interaction and help to understand multi-faceted activities that make knowledge more fluid and easier to apply (Nonaka, 1994).

The interdependent relationships between the parent firms and the JV provide face-to-face interaction and closer working relationships that can facilitate the sharing of individual and collective knowledge.

Proposition 17: Face-to-face interaction influences knowledge transfer from local parent firm to the JV.

On the basis of the previous analysis, the successful transfer of knowledge from the local parent firm to the JV as the dependant variable seems to be significantly influenced by seventeen (17) independent variables highlighted in the literature. All these independent variables were identified as being linked to knowledge transfer in the framework of JVs.

The empirical Framework

Methodology

The methodological approach used in this study is the multiple case study approach which explores multiple bounded systems (cases) over time, through using multiple sources of information (Creswell 2013, p. 97) and helps analyse the data within each situation and also across different situations, (Yin 2003, Berdrow and Lane 2003).

This study focuses on four JVs, operating in Tunisia and selected respectively in four different economic sectors: agro-food industry, electronics, ICTs and mechanical and metallurgical industries (Table 1). Briefly, the agro-food sector, totalling more than 1060 firms, generates more than 19% of the value added of the industrial sector and represents about 10% of the country's exports. The electronic sector is made of 372 firms. The number of firms in partnership has grown from 222 units in 2009 to 240 in 2013. The ICT sector contributes about 7% to GDP and has nearly 1800 firms. The mechanical and metallurgical industries represent 11% of all manufacturing industries (API 2014). The choice of these four sectors is in line with the range of industries recommended by Yin (1994).

TABLE 1
Structure of the sample

	Case N° 1: JV1	Case N° 2: JV2	Case N° 3: JV3	Case N° 4: JV4
Sector of activity	Electronics	Food industry	Machines for the food industry	Telecommunication
Capital (DT)	1 500 000	21 120 000	4 450 000	2 000 000
Nationality of foreign parent firm	French Group	French Group	Italian Group	American Group
Local parent firm	Tunisian S.M.E	Tunisian Group	Tunisian Group	Tunisian S.M.E
Year of establishment	2004	1997	1995	1991
Share Capital	40% local 60% Foreign	51% local 49% Foreign	70% local 30% Foreign	49% local 51% Foreign
Number of Interviews (Total: 47 employees)	13	10	13	11
Number of site visits (Total: 66)	20	15	14	17

Source: fieldwork - DT: Tunisian Dinar (1 US dollar = 2.47 DT)

Data were collected through forty-seven individual interviews representing a diversified sample of the population of employees, from both parent firms and JVs. They range from the primary manager to executive staff in order to gain a more accurate and precise view of the phenomenon of knowledge transfer. For more details, see Appendix 2.

The same questionnaire was used in the interviews. It was not felt necessary at this stage of the study to discriminate between the categories. Our conceptual framework and objective do not make it relevant. Further work in the future will take up this issue. The answers to the questions were not therefore examined separately.

These data were analysed by a somewhat different method called “*lexical intensity*” and which consists of estimating the proportion of the responses that refers to a given theme using the SPHINX software. This method, which belongs to the world of linguists, has been used in other fields such as economics and management, amongst other disciplines.

For example, Moscarola, (1995) used it in the field of management while Gavard-Perret and Moscarola (1995) used it in innovation studies. In more details, each theme is associated with a word, a series of words or expressions, which represent traces (or significant indices) to indicate the presence of this theme in the interview. In order to be able to analyse the qualitative data, we have created a thematic grid, based on our theoretical conceptual framework

on the one hand and the contextual phenomena resulting from interviews on the other. Content analysis is automated by building lists of words corresponding to the different categories of the thematic grid. Each theme is associated with a word, a series of words or expressions that refer to the presence of this theme in the interview. The frequency with which these elements are in the text serves as an indicator to measure the presence and intensity of these themes (categories or variables). The use of the dictionary of themes makes it possible to measure the meaning thus identified. In total, we have analysed the corpus that contained 46593 words.

Thus, the lexical intensity of a theme is equal to the ratio between the number of words and phrases belonging to the lexical field of this theme and the total number of words and phrases used in the interview. It is written in a simple formula as follows:

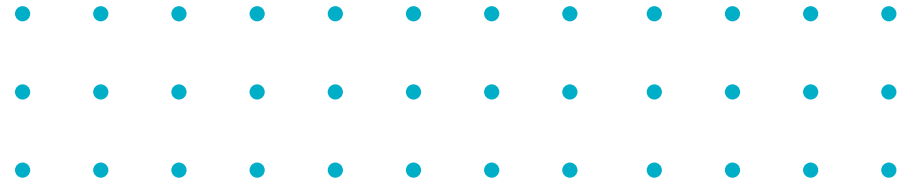
$$Lit = Nbt / Tnb \times 100$$

where:

Lit: represents the lexical intensity coefficient and measures the weight of the theme in the answer

Nbt: represents the number of words related to the theme and the verbal output in terms of utterances: the higher it is, the more relevant and important to the respondent the theme is.

Tnb: represents the total number of words



The average lexical intensity for all interviews will also be given by theme. Through this method, one can go beyond the presence or absence of the theme. By focusing on speech acts, lexical analysis offers an alternative to text analysis through their content. Lexical intensity can shed light on the different aspects of language that can provide clues to the speaker's thoughts, feelings, or representations. In addition, the Pearson correlation coefficients "r" has been calculated to show the strength and direction of the impact of the relationship between knowledge transfer intensity as the dependant variable and the different independent variables listed earlier. This method of linking qualitative variables to more quantitative ones is not new: it has been used already by Gavard Perret and Moscarola (1995) and Mora and Moscarola (2010).

Results

Our results are structured around two main components: the first one is knowledge transferred from the local parent firm to the JV and the second one is the factors influencing knowledge transfer from the local parent company to the JV.

Knowledge Transferred from the Local Parent firm to the JV

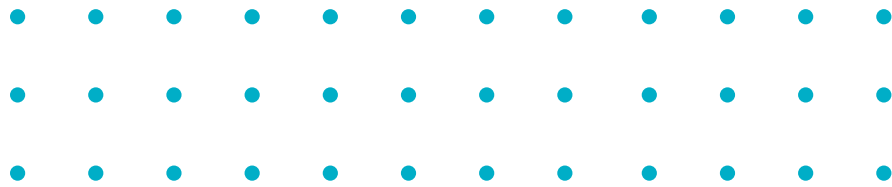
Most interviewees pointed out that the local parent firm is actively involved in market research through knowledge related to the marketing field. The contributions are even technical in nature, as indicated by most respondents (83%) (see Table 2). In fact, the contribution of the Tunisian parent firm goes beyond the technical field: it is essential to ensure the day-to-day management of the JV.

Collaboration between the staff of the local parent firm and that of the JV has made it possible to achieve a certain level of synergy, which ensures the performance and durability of the JV. In general, local parent firms have managed to transfer their experience and knowledge to the JVs. Mastery of the Tunisian context and the ability to manipulate the specificities of the business world in Tunisia are amongst this knowledge. According to a sales manager: "*Our local group has expertise in the production and marketing of products that adapt to the demand of Tunisian consumers*". The direct contribution of the local parent firm to the day-to-day management of the JV should be noticed. Generally, the executives of the JV, coming from the local parent firms, possess knowledge and experience about the field of activity of the JV and tend to ensure the operation of the JV. As a result, the heads of the foreign parent firm prefer to limit their interventions to handling the large files of the JV. Knowledge transfer from the

local parent firm to the JV is carried out either directly or indirectly through collaboration with the foreign parent firm. The contribution of Tunisian skills to the design of the products is therefore essential to create products that are adapted to Tunisian consumers and even to those in neighbouring countries. The local parent firm ensures the trust and stability of the staff recruited during the creation phase of the JV. It is the guarantor of the staff. The executives of the local parent firm have an important role during the constitution of the JV and have usually benefited from substantial investment in training made by the Tunisian parent firm. Our results show that, in several situations, foreign parent firms rely on the contributions of local parent firms to develop partnerships in other countries in the region.

The contributions of the local parent firm are observed in several ways, including the performance of the JV. Indeed, the more the JV shows good performance and economic efficiency, the more the contribution of local parent firms increases in terms of quality, especially in the case of large firms. A factor which is more decisive in the success of knowledge transfer in the eyes of the interviewees is the size of the local parent firm. In this regard, the bigger its size, the more balanced negotiation power between the two partners is, making it possible to lay down the conditions conducive to the stability and success of the JV. These characteristics appear to be acting in favour of knowledge transfer to JVs, especially when the two partners are in strategic compatibility. The other factors are complemented by the harmonious and coordinated setting of strategic orientations between the different parties. In addition, there is a relationship based on mutual trust, which creates greater transparency among the actors involved in the transfer process and which also reduces the risk of opportunistic behaviour and strengthens the dissemination of knowledge with high added value. Table 2 reports the number of parent firm interviews in which the listed topics are cited. Table 3 presents the lexical intensities characterizing the average importance of the topics covered in the local parent firm interviews. The more the people involved have friendly and transparent relationships based on mutual trust, the more information exchange is made easier. The vast majority (83%) confirmed that local parent firms have contributed to the successful transfer of knowledge to JV (Table 2).

The contribution of local parent firms is observed in several ways as well, including the performance of the JV (2.48%). Indeed, when the JV achieves



economic performance, the contribution of local parent firms becomes of higher and higher quality (1.15%) (Proposition n° 11), especially when firms are large. Another factor, which is more influential in the success of the phenomenon of transfer for the interviewees, is the size of the local parent firm (2.40%): the greater the size of the JV, the more balanced the negotiation power (1.85%) between the two partners to setting up favourable conditions for the functioning of the JVs (Proposition n° 4), the higher their stability and the level of transfer of the know-how necessary for their functioning (Proposition n° 12). This, no doubts, improves the ability of JV managers to solve problems and create a work environment conducive to improved performance.

These characteristics appear to be factors acting in favour of knowledge transfer to JVs, in particular when there is strategic compatibility (2.03%). In other words, the harmonious and coordinated fixing of strategic objectives between the different parties complements and strengthens the other factors (Proposition n° 13). This could lead to a certain balance of bargaining power between the different parties involved, thereby strengthening the transfer phenomenon more advantageously. In addition, there is mutual trust (1.53%), which allows for greater transparency between the actors involved in the transfer process and which also reduces the risk of opportunistic behaviour (Proposition n° 9). The more friendly and transparent the relationship between the representatives of the partners, the more the relationship is based on mutual trust and the easier the exchange of information and knowledge. This can greatly contribute to accelerating the circulation of documents, and the exchange of information and will make the transfer easier, especially when local managers are more open-minded (1.00%) (Proposition n° 1).

At this level, it must be noted that knowledge, which is at the heart of the transfer, is not only technical or strategic but also globally complex and difficult to transfer under the usual conditions.

This could be seen as a special case and therefore could be explained by the specificities of the unique context of firms surveyed (size, activity, market etc.). In fact, the mastery of the business environment in Tunisia (0.96%) seems to be a factor explaining knowledge transfer between the Tunisian parent firms and the JVs, in the sense that there is, in some way, a cultural complementarity (1,02%) and a mutual understanding of the requirements of the targeted markets among those in charge (Proposition n° 14).

TABLE 2

The weight of topics related to the contribution of local parent companies

	Frequency	Percentages
Tr-Conn (Knowledge Transfer)	39	83%
Pfce-Jv (Performance of the joint venture)	34	72%
Taill-Ent-Loc (Size of local parent firm)	32	68%
Pouv-Neg-Part (Equilibrium of negotiating power between partners)	30	64%
Comp-Strag (Strategic Compatibility)	30	64%
Conf-Mut (mutual trust)	28	60%
Ouv-Dirg-Loc (Openness of local managers)	25	53%
Qual-Contri (Quality of partner contributions)	24	51%
Contx-Tun (Mastery of the Tunisian context)	20	43%
Rela-Inf-asso (Informal relationship between partners)	19	40%
Comp-Cult (Cultural Compatibility)	18	38%
Exp-Ent-loc (Experience of the local parent firm)	17	36%
Comp-Org (Organizational Compatibility)	16	34%
Intera-F2F (face-to-face interaction)	13	28%
Perct-Fila (Perception of the joint venture as a subsidiary of the foreign parent firm)	13	28%
Cost (Cost of Knowledge Transfer)	12	26%
Val-Strag-Conn (Strategic value of knowledge to be transferred)	12	26%
Volon-TR-Etg (Willingness of foreign parent firm to transfer knowledge)	11	23%
Intent-Appr-Loc (Learning intention of local parent firm executives)	10	21%
Format (Training)	8	17%
Tacitss-Conn (Tacit aspect of the knowledge to be transferred)	7	15%
Age-Jv (Age of the joint venture)	6	13%
Cap-abs-jv (Ability of the joint venture to absorb knowledge)	6	13%
Comm-Tic (Communication and ICT)	6	13%
Time	4	9%
Contr-etrg (Control of the joint venture by the foreign parent firm)	4	9%
March-Afr (African Market)	2	4%
Ambg-Conn (Ambiguity of knowledge to be transferred)	2	4%
Complx-Conn (Complexity of knowledge to be transferred)	2	4%

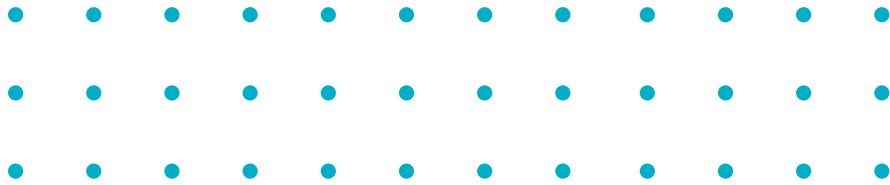
Source: Calculated by the authors

TABLE 3

The weight of themes according to lexical intensities in the case of local parent firm (percentages)

	Average	Standard deviation	Min	Max
# Tr-Conn_TI (Knowledge Transfer)	3.40	3.64	0.00	20.00
# Pfce-Jv_TI (Joint-Venture Performance)	2.48	2.29	0.00	10.26
# Taill-Ent-Loc_TI (Size of local partner)	2.40	3.58	0.00	21.05
# Comp-Strag_TI (Strategic Compatibility)	2.03	2.14	0.00	7.69
# Pouv-Neg-Part_TI (Bargaining power between partners)	1.85	4.53	0.00	30.00
# Conf-Mut_TI (Mutual Confidence)	1.53	2.07	0.00	10.53
# Qual-Contri_TI (Quality of partner contributions)	1.15	1.69	0.00	7.89
# Comp-Cult_TI (Cultural Compatibility)	1.02	2.73	0.00	15.38
# Op-Dirg-Loc_TI (Openness of local managers)	1.00	1.37	0.00	5.33
# Contx-Tun_TI (Mastery of the Tunisian business context)	0.96	1.82	0.00	9.24
# Rela-Inf-asso_TI (Informal relationship between partners)	0.74	1.44	0.00	7.69
# Exp-Ent-loc_TI (Local Business Experience)	0.71	1.54	0.00	7.55
# Comm-Tic_TI (Communication and ICT)	0.64	1.36	0.00	5.26
# Comp-Org_TI (Organizational Compatibility)	0.64	1.17	0.00	6.78
# Perct-Fila_TI (Perception of the joint venture as a subsidiary of the foreign parent firm)	0.46	1.17	0.00	6.78
# Intera-F2F_TI (Face-to-face interaction)	0.43	1.03	0.00	5.26
# Val-Strag-Conn_T	0.36	0.84	0.00	4.55
# Volon-TR-Etg_TI	0.26	0.68	0.00	3.13
# March-Afr_TI (African Market)	0.25	1.48	0.00	10.00
# Cost_TI (Knowledge Transfer Cost)	0.24	0.57	0.00	2.67
# Intent-Appr-Loc_TI (Leadership intent of local parent firm)	0.20	0.49	0.00	1.92
# Comm-Tic_TI	0.18	0.57	0.00	2.67
# Format_TI (Training)	0.16	0.54	0.00	0.63
# Tacitss-Conn_TI	0.15	0.54	0.00	3.19
# Cap-abs-jv_TI (Ability of the joint venture to absorb knowledge)	0.13	0.44	0.00	2.14
# Age-Jv_TI (Age of the joint venture)	0.09	0.26	0.00	1.27
# Capa-Tr-Etrg_I (Ability of foreign parent to transfer knowledge)	0.09	0.35	0.00	1.91
# Time_I (Time)	0.08	0.27	0.00	1.19
# Contr-etrg_TI	0.07	0.25	0.00	1.14
# Ambg-Conn_TI (Ambiguity of knowledge to be transferred)	0.05	0.26	0.00	0.69
# Complx-Conn_TI	0.01	0.03	0.00	0.18
TOTAL	0.77	1.92	0.00	30.00

Source: Calculated by the authors



Strength of the Relationship Between Knowledge Transfer and the Independent Variables

The strength of the interactions between knowledge transfer and independent variables can be better apprehended when plotted in a graph (figure 1). It gives an account of the factors having the strongest correlation with knowledge transfer as the dependent variable.

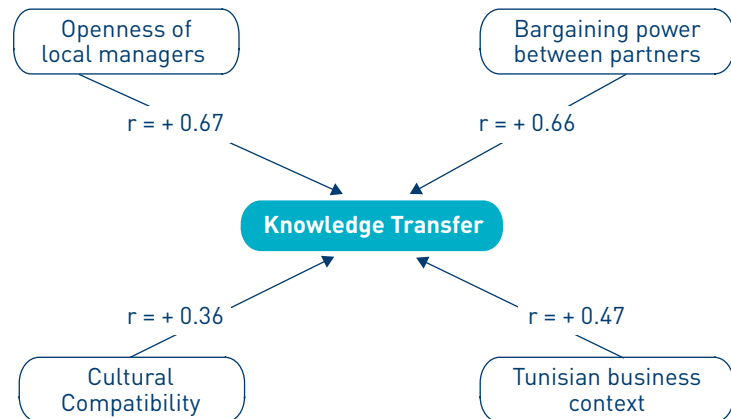
The Pearson correlation coefficient “r” shows the strength of the relationship between the independent variables with a high lexical intensity and the dependant variable. In effect, the correlation coefficients indicate both the strength of association and the direction of influence as shown by the arrow. Indeed, a positive coefficient indicates that the higher the intensity of the factor, the more it will facilitate knowledge transfer. Here, all the relationships are positive and there is no negative sign showing an adverse effect. Accordingly, figure 1 shows the correlation of factors that have the greatest influence on knowledge transfer. We decided to retain only the most significant coefficients which are higher than 0.20. The low correlation coefficients ($r < 0.20$) are not considered as they are statistically non-significant.

When looking at these results, several observations can be made. The first one relates to the presence of significant links between the degree of openness of the managers of the local parent firms ($r = + 0.67$), negotiation power balance between the managers of the firms ($r = + 0.66$), cultural compatibility ($r = + 0.36$), and control of the specific characteristics of the business context in Tunisia ($r = + 0.47$) on the one hand and knowledge transfer on the other. These positive and significant correlations between these four variables and knowledge transfer may explain the success of the knowledge transfer process between the local parent firms and the JV. The interesting thing is that the specificities of the business context in Tunisia (fast growing small companies, openness to foreign markets, closeness to Europe,..) seem to be an explanatory factor of the relationship between the Tunisian parent firms and the JVs. This results in some way from a cultural complementarity and a common understanding of the requirements of the markets. This could lead not only to managers opening up their minds to their common requirements and constraints, but also to a certain balance in the bargaining power between them in terms of market knowledge and mastery of production processes and work.

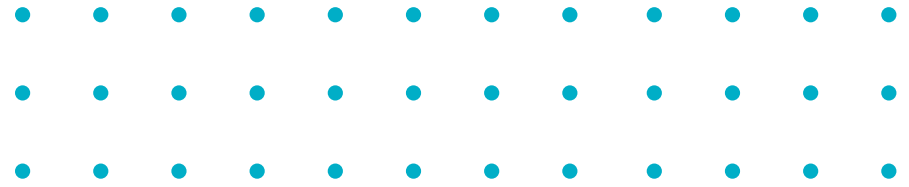
The results show that the local parent firm is actively involved in the successful transfer of knowledge to the JV. It has succeeded in transferring its knowledge and experience to the JV. These are real contributions in terms of understanding the context of the local and regional affairs, prospecting and marketing and knowledge of the specificity of the Tunisian market. They also offer expertise and rich experience necessary for the functioning of the JV.

There is also the direct contribution of local parent firms in the day-to-day management of the JVs. In fact, such an assistance to the JV is seen as an important contribution by the local parent firms. The size of the local parent firm, the open-mindedness of its managers, and a good grasp of the local business environment are key factors in the transfer process (See the list of propositions in appendix 1).

FIGURE 1
Determinants of successful knowledge transfer from the local parent firm to the joint venture



Source: Calculated by the authors



Correlations Between the Independent Variables

The correlation matrix between the factors and knowledge transfer points to several relationships of influence between some independent variables as shown in figure 2 (low correlation with $r < 0.4$ are not considered).

Two main types of relationships of influence could be seen: linear or simple relationships and multidirectional or complex relationships.

Linear and simple relationships: there are several linear relationships between our factors, some of them being relatively strong. The strong positive correlation coefficients show the presence of reciprocal effects between at least two selected factors. For example, it can be argued that, depending on the level of control exercised by the foreign parent firm, a co-operation requirement arises, which is conducive to mutual trust between the different actors. This makes it possible to develop the capacity of the JV to absorb the transferred know-how until it is appropriated and adapted to its functioning. Note also that the more efficient the JV, the faster the transfer of knowledge. On the other hand, the perception of the JV as a subsidiary of the foreign parent firm explains the JV managers' adoption of the same organizational design and management system as those of the parent firm. Finally, training is even more beneficial in terms of knowledge transfer as it relies on interpersonal interactions between employees of the different firms.

Complex interactions: nonlinear relationships between our factors are also noted. They are between three or more variables. For example, it is clear that, in the Tunisian context, knowledge transfer requires, among other things, the open-mindedness of the managers of local firms towards new trends and managerial practices and the new technologies developed by foreign firms. However, this requires a balance of power in terms of decision-making to build negotiation capacities with their foreign counterparts.

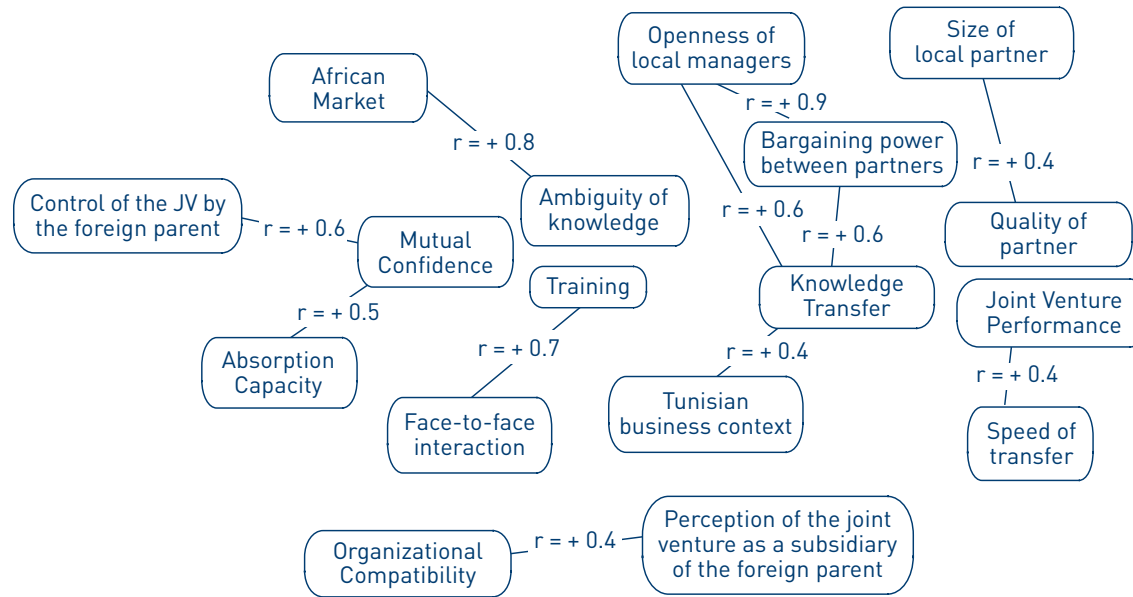
Discussion

In the era of openness and globalization, fierce innovation-driven competition dictates that firms in the South build adequate competencies to be able to enter the game, particularly in the manufacturing sector. The JV seems to be one of the privileged means to benefit from knowledge transfer as a way to build competencies and capacities to compete and access the latest technologies.

Unlike previous studies, where knowledge transfer is seen as a one-way process, in this study we have adopted a two-way process relying on the interactive learning dynamics developed by evolutionary economics. As articulated above, this transfer occurs in a complex set-up where the main partners to the JV include foreign partners but also local parent firms as an intermediary to transfer knowledge to the JV. The general question that guided our exploratory thinking was to know; first, the role of the local parent firm in transferring knowledge to JVs; second, the factors that determine knowledge transfer from the local parent firm to the JV. We based our approach on theoretical assumptions from which we drew the research hypotheses to be empirically tested. We also used an empirical study of four JVs using lexical intensities. We highlighted four main factors that significantly explain the success of knowledge transfer and then validated our hypothesis about the presence of a possible knowledge transfer from the local parent firm to the JV. Our results also point to relationships between knowledge transfer and a set of independent variables: in our view the interactions between these variables show the *systemic nature of the relationships* between the key variables of the knowledge transfer process.

This latter finding is another original contribution to the literature on knowledge transfer, extending the results of Tsang *et al.* (2004) and Song (2014). Our study is also a way to highlight the magnitude and pattern of learning that takes place between JV partners in this specific set-up of North-South and South-South business relationship, adding thus a new dimension to learning that is already put forward in the literature (Tsang *et al.*, 2004; Easterby-Smith, Lyles & Tsang, 2008; Song, 2014). Then, the traditional factors that explain the relationship between JVs and foreign parent firms, essentially of economic nature, can be extended to include knowledge and learning exchange. The phenomenon of knowledge transfer within a JV refers to a more complex relationship between parent firms (both foreign and local) and the JV. As such, this relationship can be decisive to the success of the knowledge transfer process. The results show that the local parent firm is actively involved in the successful transfer of knowledge and experience to the JV. These findings are real contributions in terms of understanding the context of local and regional affairs of marketing and acquiring knowledge and the specificity of the Tunisian context. Local parent firms also offer expertise and rich experience necessary to the functioning of the JV. There is also the direct contribution of local parent firms in the day-to-day management of JVs. This assistance to the JV is seen as an important contribution

FIGURE 2
System of relations between explanatory (independent) factors (variables) and their strength

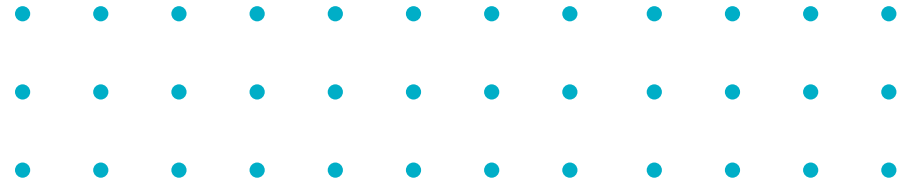


Source: calculated by the authors

by local parent firms. It is indeed part of the learning process in line with the DUI used in the context of North South JVs, adding another dimension to it. It contributes to strengthening the explanatory power of this diagram but also adds the dimension of “*learning by transferring*” knowledge, which is a new concept we propose as a significant outcome of our study.

We were able to test a specific set of key variables not often used in the literature: they are the performance of the JV, the size of the local parent firm, strategic compatibility, balance of bargaining power between parent firms, mutual trust, quality of contributions and cultural compatibility. In addition, a good command of the local business environment seems to be another key factor. Both the parent firm and the JV need therefore to take them into account in order to successfully transfer knowledge from the local parent firm to the JV, thus enriching research done previously by Tsang *et al.*, (2004) and Song, (2014). They need to promote the use of learning methods and multilateral training programs and involve employees in the process of improving and finding new solutions to problems met. In this respect, they could create a support committee within the JV for coaching, discussing and managing these problems (Anand *et al.*, 2007).

While pursuing our research objectives, we are aware of the several limitations of our study. First, from a methodological point of view, the choice of a non-probabilistic method to build the sample may generate some bias and we have tried to use in depth interviews to overcome some of this bias. The lexical intensity method, rarely used in management may need further exploration to be widely admitted. In addition, the data collection at JV level may not be sufficient to validate our research hypotheses in the absence of a thorough investigation between the foreign parent firm and the local parent firm. The present study proposes an original and a rich vision by specifying the nature and the dynamics of a “tryadic” relationship, probably bringing more questions than answers. Some points could be studied in depth while others have only been sketched or suggested. For instance, the results of the study could be extended to the employees of the firms involved an avenue to be explored. While the role of the public authorities of the host country in influencing national firms to engage in a transfer process seems obvious, the role of the authorities of country of origin of the parent firm can be raised. In other words, how far do they support knowledge transfer considering the weight of the political decision-making sphere? Not to mention all the issues related to the informal relationships as a vehicle for knowledge transfer.



Conclusion

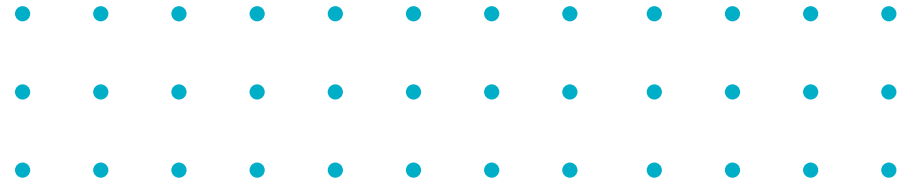
In conclusion, it is necessary to draw some final thoughts and highlights. While research on JV dynamics has often adopted a standard method to analyse dominant market role and competitive pressure, we have deliberately set out to inscribe our study within the evolutionary thinking of learning and competence building. The interactive process we have examined through knowledge transfer shows the scope of applying the concepts and tools in a JV set-up in a North-South and South-South partnership perspective. These real contributions include understanding the context of local and regional affairs, prospecting and marketing, knowledge of the specificity of the Tunisian market and local consumers. Parent firms also offer rich expertise and experience necessary to the functioning of joint ventures. We should note, here, the direct contribution of local parent firms in the day-to-day management of joint ventures. In fact, such an assistance to the joint venture is seen as an important contribution by the local parent firms. The size of the local parent firm, the open-mindedness of its managers and the good local business context are critical factors. Generally, these latter are found to be more influential in the successful transfer of knowledge from the local parent firm to the joint venture.

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APPENDIX 1

Text of propositions related to the successful of knowledge transfer from the local parent firm to the joint venture

Text of propositions		Results
Proposition n° 1	Openness of local parent firm 'managers influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 2	Learning intent of local parent firm 'personnel influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 3	Experience in the field of cooperation influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 4	Size of local parent firm influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 5	Age of the JV influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 6	Performance of the JV influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 7	Absorptive capacity of the JV influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 8	Learning motivation influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 9	Mutual trust influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 10	Ability to resolve mutual conflicts influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 11	Quality of contribution from parent firms influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 12	Negotiation power of partners influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 13	Strategic compatibility influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 14	Cultural compatibility influenced the knowledge transfer from local parent firm to the JV.	Corroborated
Proposition n° 15	Organizational context compatibility influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 16	ICTs influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated
Proposition n° 17	Face-to-face interaction influenced the knowledge transfer from local parent firm to the JV.	Partially corroborated

Source: the authors



APPENDIX 2

Information on respondents

	Case N ° 1: JV1	CaseN° 2: JV2	Case N° 3: JV3	CaseN° 4: JV4
Type of function, Home Institution and Seniority (Years)	<ul style="list-style-type: none"> - CEO, (JV), 9 - Technical director, (FPF), 8 - Training directeur, (FPF), 7 - Production team manager, (LPF), 9 - Assembly team manager, (FPF), 6 - Sales executive - Former, (LPF), 9 - Employee, (LPF), 8 - Commercial agent, (JV), 7 - IT technician, (LPF), 5 - IT technician,(FPF), 9 - Supply staff, (JV), 7 - Assembly employee, (FPF), 9 - Worker, (JV), 4 	<ul style="list-style-type: none"> - CEO, (JV), 16 - Administrative and financial director,(FPF), 12 - Marketing manager, (FPF), 15 - HR Directeur,(LPF),16 - Health and safety manager,(JV), 15 - Agro-food Enginner, (FPF), 15 - Agro-food Technician, (LPF), 16 - Agro-food, Technician, (JV), 14 - Worker, (JV), 12 - Worker, (LPF), 9 	<ul style="list-style-type: none"> - CEO, (JV), 18 - Technical director,(LPF), 18 - Supply Manager (JV), 16 - New project manager, (JV), 13 - Management control, (FPF), 14 - Quality manager, (FPF), 18 - Marketing manager (JV), 10 - Production Manager (LPF), 12 - Sale manager, (LPF), 16 - Service engineer, (JV), 18 - Electronic technician, (LPF), 13 - Computer technician, (FPF), 12 - Worker, (JV), 7 	<ul style="list-style-type: none"> - CEO, (JV), 22 - HR director, (LPF), 8 - Marketing director, (FPF), 11 - Chief financier officer, (JV), 7 - New project manager,(FPF), 13 - Senior engineer, (FPF), 6 - Telecommunication engineer, (LPF), 20 - IT engineer,(JV), 8 - Software engineer, (LPF), 11 - Computer technician, (JV), 4 - Computer technician, (JV), 7
Nationality	8 Tunisian, 4 French, 1 Italian	6 Tunisian, 4 French	6 Tunisian, 2 French, 5 Italian	5 Tunisian, 1 Morroccain, 2 American
Sex	8 Male, 5 Female	7 Male, 3 Female	9 Male, 4 Female	7 Male, 4 Female

JV: Joint-venture FPF: Foreign parent firm LPF: Local parent firm

Source: the authors



APPENDIX 3

Interview guide used in the field

Details of the company

Name of company:		
Phone:	fax:	e-mail:
Manager:		
Sector of activity:		
Products:		
Year of creation:	capital:	
Number of employees:		
Main partners:		
First partner:	% of capital:	
Second partner:	% of capital:	
2. During the cooperation period, was there a transfer of knowledge from the Tunisian parent company to the joint venture? If yes, what types of knowledge was transferred?		
3. How do you evaluate this transfer? What indicators are you using to assess this transfer?		
4. What factors contributed to this transfer?		
5. Did you experience any particular difficulties regarding the transfer of knowledge?		
6. Can you make an assessment of the current state of your joint venture?		