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The transfer of knowledge from the MNEs to their Mozambican subsidiaries: A process based on the relationship between source and recipient

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The business opportunities in Southern Africa have originated a growing interest on the part of foreign investors in markets like Mozambique, which is a fact that justifies any effort to learn more about the phenomenon of the transfer of knowledge to the subsidiaries in Mozambique. This study examined four cases with activities in the industrial sector. The results revealed that an efficient transfer of knowledge depends on the source's ability to transfer this knowledge; the climate of collaboration between the source and the recipient; and the absorptive capacity of the recipient. Under these conditions, the intervention of the expatriates with a profound knowledge of the African reality is essential to create an atmosphere of trust that motivates individuals to acquire, assimilate and explore the new knowledge on the local market.

Key words: Transfer of knowledge, multinational enterprises, subsidiaries, Mozambique, culture.

INTRODUCTION

The companies (or organizations) are entities that create and use knowledge by way of the learning efforts of their employees in the construction of skills (which translate what a person is able to do) during their action and interaction with the environment in which they try to learn and develop competencies (which exist in the operability of specific functions of the productive process extending across the organization) faster than

their competitors do.

Learning makes it possible to increase the individuals' abilities through the discovery of new knowledge by carrying out tasks. Knowledge emerges from learning as a process of developing individual abilities, which confer the possibility of using a combination of skills and accumulated knowledge in the construction of a competitive advantage for the organization.

In a competitive environment, on a global scale, knowledge is one of the most important assets of the multinational enterprise (MNE), since it supplies the skills for efficient action; supported by a network of formal and informal relationships, it permits the organization's units (that is, subsidiaries) situated in different countries to have access to knowledge.

If this knowledge can be transmitted in formal and systematic language, that is, if it can be expressed in the form of words and numbers (for example, training

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Abbreviations: FDI, Foreign direct investment; IMF, international monetary fund; LDC, least developed countries; MNE, multinational enterprise; SADC, South African development community; SECI, socialization, externalization, combination and internalization.

manuals and technical reports), it is designated explicit knowledge; if it is a more personal knowledge that is difficult to formalize and share with other individuals, it is called tacit knowledge.

For Polyani (1966), knowledge is acquired tacitly through the realization of experiences. It is possible for an individual to acquire tacit knowledge directly from others without the use of language, but by observation, imitation and practices that take place, for example, during on-the-job training actions.

The major part of the company's specialized knowledge is of a tacit nature, its transfer being based on the experience and skills of its members by way of sharing experiences and the interaction of people in a way that creates trust between the parties (that is, source or transmitter, and recipient or receiver) involved in the transfer of knowledge (Ghoshal et al., 1994; Gupta and Govindarajan, 2000; Mowery et al., 1996), the complexity of which implies the use of expatriates as a 'vehicle' to facilitate the transfer of practices (that is, of particular ways of conducting the organizational functions that, in the course of time, start to influence people's actions in the organization) based on a combination of rules with special focus on the individuals (Bonache and Brewster, 2001; Riusala and Suutari, 2004; Song et al., 2003). This means that the process of the transfer of knowledge requires the adoption of formal rules describing the practices to be implemented and continues until these have been fully instituted in the subsidiary (that is, recipient) in a multidimensional context (that is, social, organizational and relational) where the compatibility of organizational cultures between source and recipient and the abilities of the recipient determine the success of the transfer.

The transfer is an attempt taking place inside the organization to copy (that is, reproduce exactly or partially) a type of specific knowledge of one unit of an organization for the benefit of another. The transfer of knowledge to the subsidiaries located in a least developed country (LDC) (for example, Mozambique) differs according to the various local necessities (for example, costs of the transaction and operational efficiency) and the local ability of adaptation, for example, of the rules for certifying the quality of the product as established by the parent MNE (that is, headquarters) located in a more developed country (for example, Portugal).

In order to learn more about this phenomenon of the transfer of knowledge that is present in the development of the Mozambican subsidiaries, this paper has established the following questions to be studied:

1. What is the influence of the source's ability to transfer knowledge on the knowledge that is assimilated by the recipient?
2. What is the importance of the climate of cooperation between the source and the recipient with respect to the understanding and amplitude of the transferred

knowledge?

3. What is the role of the recipient's absorptive capacity in the success of the transfer of knowledge?

The answer to these questions is centred on the elementary factors of the process of knowledge transfer, with a view to generate new knowledge that can be useful to the companies that pretend to operate on the Mozambican market.

The business environment in Mozambique

In 1987, Mozambique joined the Southern African development community (SADC, designation that was adopted in 1992 after the entry South Africa) as a founding member and since that date, has introduced great transformations into the Mozambican economy directed at a market economy under the supervision of the international monetary fund (IMF) and the World Bank. These transformations were strengthened in the 1990's through the liberalization of prices and commerce, privatizations and other structural reforms as a result of which the State has changed from an attitude as a direct economic agent to the role of facilitating the activities of the private sector and creating a climate which made investments more attractive for foreign capital, and induced the government of Mozambique to proceed to the legal revision of the incentives to be granted to investors (via the new code of fiscal benefits and the definition of industrial free zones), although, some obstacles to doing business, locally, may still be subsisting (for example, excessive rules and regulations, inefficient judicial system, rigidity of the labour market and insufficient transport infra-structures).

Mozambique has in the course of the decade of the 1990s turned into one of the rare cases of success in Sub-Saharan Africa, rewarded with extensive international assistance of donators and the subsequent implementation of foreign direct investment (FDI), which in 2005 came from 27 countries, among them are, South Africa, Great-Britain and Portugal. This entry into the Mozambican market occurred through the operative modes of the acquisition of already existing installations as well as joint ventures with Mozambican companies and the posterior establishment of agreements for technical assistance with the parent MNEs in order to increase the competencies of the local employees and, as a result, the stock of knowledge available to the Mozambican subsidiaries by means of a process knowledge transfer from the MNE (that is, source) to the subsidiary.

Literature review

In order to develop the conceptual framework for this study, a review of the literature on knowledge transfer was carried out.

The process of knowledge transfer

Nonaka and Konno (1998) asserted that the physical (or direct) experiences are the key for the conversion and transfer of tacit knowledge that are initiated with the socialization (which is a process of sharing experiences where it is fundamental to overcome personal borders, in order to create and apprehend tacit knowledge like, for example, technical skills) and enlarged by means of other forms of converting knowledge — socialization, externalization, combination and internalization (SECI) — where the interaction between tacit and explicit knowledge (at the epistemological level) in the 'knowledge spiral' (which is a structure that integrates opposing aspects by means of a dynamic process of organizational dialogue and practice) becomes continuously broader as it progresses at the ontological level (that is, individual, group, organization and inter-organizational level) (Nonaka and Takeuchi, 1995). This way, the creation of organizational knowledge is a process that begins at the personal level and is moved by means of 'interacting communities' — who traverse the boundaries of sector, department and organization — where the physical interaction of the participants in the sharing of space and time is of the utmost importance, as is the creation of a common language through direct experiences in which knowledge is shared, created and used.

Knowledge transferred beyond the boundaries of the organization interacts with knowledge held by different organizations resulting in the creation of new knowledge (Badaracco, 1991; Inkpen, 1996) in a 'place' (which may be the result of either a joint venture between the MNE and an Mozambican company or of a contractual relationship between the parent company and the subsidiary) where the intervening parties share their contexts and create new meanings by way of personal interactions in which the middle managers play a key role by synthesizing the tacit knowledge of the managers in the front line (those that are in direct contact with the market) and the top managers, turning it explicit and incorporating it into programs, technologies or new products (Nonaka, 1994) developed in the subsidiary company. This is a flow of information and abilities, which occurs regularly in the direction from the MNE to the subsidiary and is influenced by three dimensions of analysis within the framework of the local introduction of new products or services (Figure 1).

Transfer capacity of the source

The transfer of knowledge results from the capabilities of the MNEs basis of specific knowledge, which can give its subsidiaries located in an LDC access to organizational modernization or renovation, leading to an increase of its competitiveness in the local context where it is fundamental to avoid bad cultural understanding (for example, at the level of local values and traditions) and

conflicts that bring about negative repercussions with respect to the recipient's performance (Dierickx and Cool, 1989; Lane and Beamish, 1990; Saad et al., 2002).

The characteristics of particular pieces of knowledge themselves may influence the way in which they are shared within the organization and beyond its frontiers, that is, in the case of the transfer of explicit knowledge, whereas knowledge of a tacit nature, being widely rooted in the experience of individuals, frequently requires a demonstration process with the sharing of experiences between the source and the recipient.

The participation in socialization mechanisms is essential when the nature of the transferred knowledge calls for the personal communication and the establishment of a relationship of trust between the transmitter (that is, expatriates) and the receiver (that is, local workers) of knowledge (Howells, 1996; Levin and Cross, 2004; Newell and Swan, 2000). Simultaneously, the type of knowledge has to be harmonized with the transfer process that is being used, constituting a critical factor in the choice of the transfer mechanism.

In an initial phase, the expatriates act as individuals who facilitate the transfer of specialized knowledge and the business philosophy from the MNE headquarters, the success that depends on the skills of the individuals that are involved in this process.

Climate of cooperation between the source and the recipient

The transfer of knowledge to the subsidiary company may imply the development of a production process by means of the installation of machinery and equipment that include either new technology like the one that is being used in the home base or technology that is already outdated, with a view to developing the subsidiary's competencies because of its importance, for example, in relation to its geographic production and local strategic presence (Argote et al., 1990; Kedia and Bhagat, 1988).

The MNE's task can be facilitated by the acquisition of existing installations and the creation of joint ventures with local companies, since these are an instrument of organizational learning, it helps to gain access to complementary capabilities and to the knowledge of the market.

The success of the transfer of knowledge depends on the capacity to transmit and receive information, and on the good will of the parties to communicate in order to increase the understanding and learning of the transmitted knowledge, given the existence of compatible operational priorities (for example, necessities and preferences of the consumer, customer service, quality of the product and cost efficiency).

For Cohen and Levinthal (1990), the familiarity with the knowledge supplied by the transmitter, facilitates its acquisition and sharing due to a better understanding

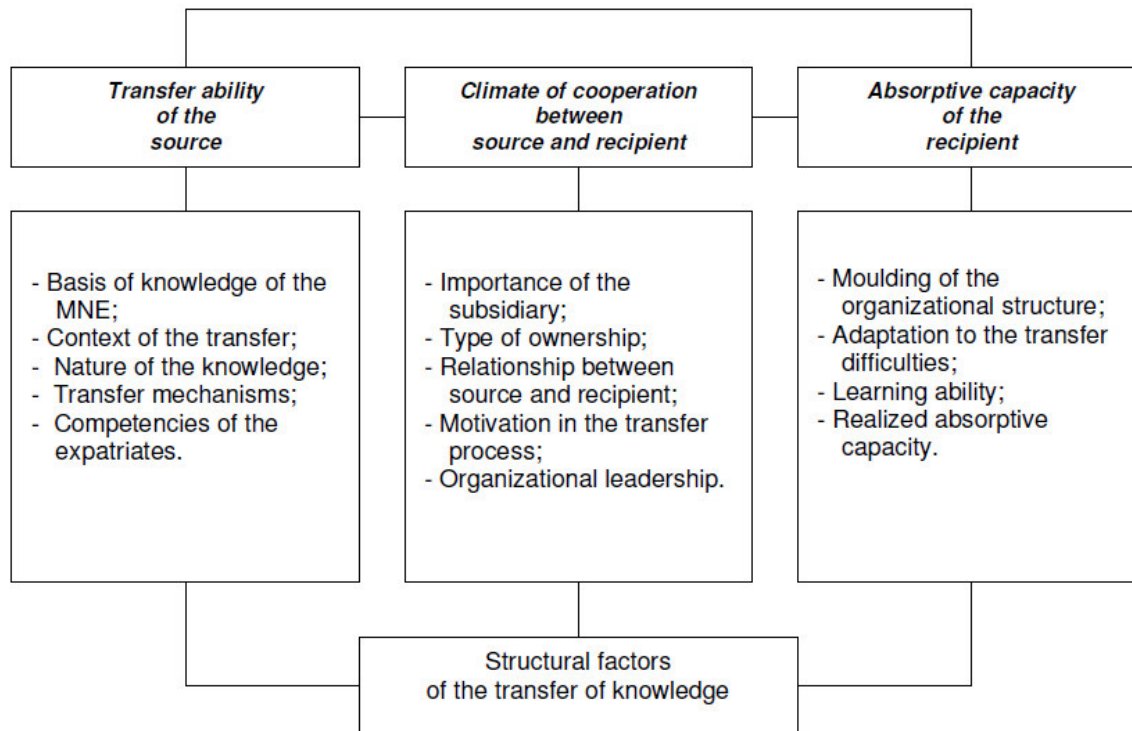


Figure 1. Dimensions of the transfer of knowledge from the MNE to the subsidiary.

originated by the receiver's earlier experience. The lack of motivation on the part of the receiver creates obstacles to the process of knowledge transfer because of the simulated implementation or the rejection of the transferred practices and, on the part of the transmitter, results in resistance to sharing the knowledge because there is no adequate compensation or because the transmitter is not willing to dedicate time and resources (e.g. financial and technical) to support the transfer (Katz and Allen, 1982; Menon and Pfeffer, 2003; Szulanski, 2000).

The leaders (that is, the chief executive officer and the top managers of the subsidiary) can promote a climate of trust that imbues individuals with an attitude of looking for and sharing knowledge both, in training actions and in team work (Senge, 1990; Smith et al., 1995).

Absorptive capacity of the recipient

The subsidiary companies implement improvements in their organizational structure (which is the form in which the organization is organized in the development of its activities) in order to facilitate the learning operations of the new knowledge that is to be integrated into their business activities, what results in changes of functioning (both, the adoption of a pro-active attitude relative to continuous learning on the part of the employees, and the breaking down or attenuation of functional hierarchies), with a view to increasing the horizontal communication

flow and, as a consequence, the quantity and variety of information available with respect to the productive process of the subsidiary.

The most valuable adoption of new knowledge resides in the tacit realm (that is, in the development of the personal abilities of the employees associated with their experiences) and is sometimes dependent on an adjustment process that allows a better comprehension and operative integration on the part of the recipient (Lam, 2000; Leonard-Barton and Sensiper, 1998; Subramaniam and Venkatraman, 2001).

Learning in the subsidiaries is better when the transferred knowledge is related to the existing structure of knowledge (that is, the levels of training and professional qualifications of the local workers), while the ability to apply this knowledge depends on the very receptivity or will to learn as translated by the absorptive capacity based on the organizational routines and processes that can stimulate change and increase the ability to acquire, assimilate and explore new knowledge on the market.

The transfer of knowledge is efficient when the transmitted knowledge is retained, enabling the recipient to produce and commercialize new products and services or to adopt new and more efficient forms of functioning, which may lead to an improvement of its performance (for example, via increased productivity of the production process) (Lane et al., 2001; Stock et al., 2001; Van den Bosch et al., 2003).

The analysis of this matter permits the answering of the research questions based on the field work as outlined in the following section.

METHODOLOGY

In this study, the principal source of data used were the interviews held with a controlled selection of Portuguese companies with investments in Mozambique especially, in business areas that are presently of interest, in a way that they constitute the accessible population, that is, the Portuguese MNEs that transfer knowledge to their Mozambican subsidiaries with activities in the industrial sector. Subsequently, the study defined an intentional sample by taking into consideration those companies, which affected successful investments on the local market, as the reason for their having been selected with respect to the easiest access to the managers of the operations of knowledge transfer both, in the parent company and in the subsidiary.

The study had access to key informers through the study of four companies, one of them being a 'holding company' (that is, founded via the operative ways of direct investment of total property and joint ventures with local operators), two in the regimen of total property and one joint venture with a local investor with a dominant participation in the capital stock.

Company 1 carries out its main activity in the sector of telecommunications, being active also in the industrial sector, in the exploration of marble and the transformation of agricultural products, as well as in tourism, while the three other companies operate in the industrial sector, respectively, at the level of the production of energy, plastics, in electromechanics and electronics. The dimensions of the companies under research vary between 40 and 1900 workers, with business volumes between 5 and 55 million euros in the year 2006 (Table 1).

The data were gathered by means of semi-structured interviews (that is, with a formal alignment and without limits to the answers) held with top managers during one hour and according to an interview protocol that was applied to all interviewed individuals.

Given the qualitative nature of the questions of the research, this study adopted the method of case studies because of the possibility it gave us in studying a combination of problems of the phenomenon (Yin, 1994).

The treatment of the data included the (1) complete transcription and analysis of each interview before passing on to the next ones, (2) attribution of significance to the data through adoption of the data analysis (inductive and deductive) by successive cycles of questions and answers in a constant comparison of cases and (3) analysis of contents in the classification of data in order to achieve a systematization of the answers to the questions asked in the study.

The following shows, the results of this analysis present in the four cases that were studied.

RESULTS AND DISCUSSION

Following what has been described, the four cases of transfer of knowledge from MNEs to their subsidiaries operating in Mozambique, will be analyzed where the study try to answer the questions of the research based on the results of the interviews that were made.

In the development process of the subsidiaries, all enterprises that were studied turned to the expatriates to transfer the MNE's best practices, with great emphasis being placed on the competencies associated with

'knowing how to do'. The reason why 'the written means of communication are not sufficient' (case 4), is because it is necessary 'to create empathy between people, and place at their disposal relevant experiences of learning' (case 1).

The great challenge in the process of the transfer of knowledge is to admit that this occurs in a sustainable way, which means that it originates with gradual improvements in the activities developed by the subsidiary, with the help of the programmed assistance by the expatriates in order to avoid regressing to the situation from where it started. The leading officers, by means of their intervention on different organizational levels and with respect to various functional questions, avoid that the inertia, resulting from cultural factors (for example, the attribution of a high value to family associated with an elevated rate of absenteeism and retraction in searching knowledge) and which is present in the organizational culture itself, may condition the processes of learning and modernization in the subsidiary company.

The results of the interviews showed that the process of knowledge transfer reflects the influence of a combination of factors in the efficient development of the subsidiary, which is subdivided into the following components (1) transfer ability of the source, (2) climate of cooperation between the source and the recipient and (3) absorptive capacity of the recipient, the analysis of which we present within the framework of the answer to the previously enounced questions.

Influence of the source's ability to transfer knowledge on the knowledge as assimilated by the recipient.

The ability of the source allows knowledge to be transmitted in such a way that it can be assimilated by the recipient, as for example, by means of the individual participation of the managers and technicians from the parent company in socialization measures in the subsidiary.

According to the results that were obtained, the long experience and accumulated knowledge bestow the headquarters with a basis of knowledge of differential ability (that is, the tacit knowledge imbued in the business know-how of the company is unique) which is partially reproduced in the subsidiary due to differences of sophistication of the local market. Thus, the specialized knowledge transferred to the subsidiary had a lower degree of development than the standards existing in the parent company, but was without competition on the Mozambican market.

When knowledge is transferred from a developed country (like Portugal) to a LDC (like Mozambique), the cultural compatibility between source and recipient depends on the existence of historical bonds between the two countries, remarkable because of the knowledge of

Table 1. Companies participating in the interviews.

Companies	Type of ownership	Activities	Number of employees	Volume of local business 2007 (10 ⁶ euros)
1	Joint venture, total ownership	Telecommunications, industry, tourism	1900	55
2	Total ownership	Energy production	88	29
3	Total ownership	Production of plastics	40	7
4	Joint venture	Electromechanical and electronic production	120	5

Source: Interviews with top managers.

the local reality and the understanding of the way of acting of the people of Mozambique, for example, with respect to problems — the 'vision, gravity and ranking of the problems on the part of a middle manager in Mozambique are different from those attributed in the parent company' (case 1). Already the transition that is presently occurring in the Mozambican society, of the individuals from the primary sector to the secondary and tertiary sectors, side by side with the non-existence of a local industrial tradition, resulted in the non-fulfilment of working rules that are deemed normal in the parent company (for example, assiduousness, working hours and the carrying out of tasks). The 'Mozambicans undervalue their duties as regards work, but like to learn' (case 3). These cultural differences make the transfer of knowledge difficult because of the resistance towards change that exists in the organizational culture of the recipient. However, the major difficulty that the companies had to face was the non-existence of qualified human resources, which in cases 3 and 4 resulted in technical barriers due to the lack of familiarity with the new knowledge, since, for example, in case 3 the industry of transforming plastics by extrusion did not exist in the Mozambican economy. Indeed, the context of implementing the transfer is particularly relevant in the transfer of knowledge to a LDC because of the difficult conciliation of the organizational cultures of source and recipient.

The transferred knowledge had to do essentially with knowing how to operate — and to maintain — the machines of the productive process as well as with the working method at the level of the systems of the product's quality. These technological abilities were transmitted during the installation of the machines by the supplying technicians and by sharing the specialized knowledge held by the expatriate key personnel (that is, experts from the parent company) who teach by doing. This means that learning in the subsidiary was based on actions of demonstration and the sharing of experience including the exchange of opinions between the participants next to the equipments at the work place, in detriment to a more formal training method (for example, class-room sessions and the handing out of manuals), where the error is being tolerated in order to create a

good relationship between people, and the development of the receiver is fostered by the assimilation of knowledge in these interactions with the transmitter. In other words, the sharing of a context is important in the sharing of knowledge and creation of a common language between its elements, since it facilitates the assimilation of the new piece of knowledge on the part of the receiver (cases 1, 3 and 4).

The practice of case 1 focused on the transfer of the headquarters' best practices to the subsidiary in areas of operation where they have competitive advantages, it was therefore, not directed at the entire organization, whereas, in case 2 the transfer of knowledge was centred on the very activities developed in the parent company. In fact, the transfer of knowledge is influenced both, by the nature of the piece of knowledge and the technological necessities at the operative level, and requires the use of adequate transfer mechanisms in order to obtain the abilities that are locally intended. The use of more extensive means of communication (that is, those supported by personal interaction during the execution of the tasks) permits a more effective transfer of knowledge than by means of written communication (for example, making procedures of activities available on the 'intranet') (cases 1, 3 and 4).

According to the opinions expressed by the managers during the interviews, it was necessary to create conditions for the receiver to be able to understand that the knowledge is not being imposed by the transmitter (case 1), so that he feels to be a participating element (case 3) and makes it possible for the transfer of knowledge to become consolidated (case 4) (that is, the transferred knowledge can be included into the productive process with the production of new products). The carrying out of training actions by the expatriates made it possible to implant the best practices, and delegate their functions to local people, with a view to guaranteeing the sustainability of business. The expatriates assumed a central function in the transfer by successfully involving the Mozambicans in the transferred practices with 'the improvement of business in technical, safety and efficiency terms' (case 2). As observed, the ability to transfer knowledge from the MNE depends principally on the personal competencies of the

expatriates and their ability to motivate the local personnel in the implantation of new organizational practices. To this effect, it is essential to promote a relationship of trust between the transmitter and the receiver in an environment of institutional cooperation.

The importance of the climate of cooperation between the source and the recipient with respect to the understanding and amplitude of the transferred knowledge

The source's disposition to share knowledge depends, on the one hand, on its installed ability in terms of human resources, which are highly qualified and possess accumulated experience and, on the other hand, on the willingness of the individuals involved in this process to transmit and receive knowledge.

The results have shown that the process of the subsidiary's productive development was aimed at installing a basis for joint functioning in the global structure of the MNE (that is, in their organizational units) without reproducing the home business model, due to the logistic and commercial diversity (case 3) and the reduced operational dimension of the business and resulting lack of profitability of the investment and technology due to the fact that the Mozambican market does not require certain products and services that exist in the parent company (cases 1, 2 and 4). There was a dynamics of adaptation to the circumstances of the business and the abilities of the Mozambican workers. For instance, 'the number of operative functions of the software programs was reduced to the indispensable' (case 1). Apart from this, the transfer efforts (for example, the time and costs involved) employed in the Mozambican subsidiaries were the result of the importance attributed to them by the MNEs, in conformity with the potentialities of the local market and the geographic zone integrated in SADC.

The way to enter the market of Mozambique and, consequently, the ownership structure of the subsidiary did not interfere with the sophistication of the knowledge transferred, since it is in all cases controlled by the parent MNE, which imposes the rules of the transfer operations to be carried out — Comparing the companies under research, the cases 1 and 4 benefited as far as their access to the market is concerned, based on the fact that they created joint ventures with Mozambican operators.

However, the members of the source were not constantly available to transfer knowledge to third parties, since this means an increase in work. That is why it was necessary to conquer the availability of the individuals on both sides (that is, source and recipient) in order for certain supplementary tasks to be accepted as normal during the transfer, in which it is important to establish a good interpersonal relationship (cases 1 and 3) with a view to resolve some initial distance through the creation

of personal affinities that lead to the improvement of precision, comprehension and opportunity of the transmitted knowledge — not avoiding, however, the occurrence of a certain tension between the parties (cases 1 and 4).

In cases 3 and 4, the Mozambican workers were not familiar with the new knowledge, since they did not have any experience nor knowledge regarding the productive process that was implemented in the subsidiary, the result being that a great part of the transferred knowledge was not well understood nor was its local utility recognized, hence, the difficulty to convince people of the necessity to carry out the transfer of knowledge. To this effect, the local employees were invited to visit technologically further advanced productive installations, where they were integrated in work teams and, on the one hand, observed the process of global functioning that was to be achieved and, on the other hand, got to know the advantages resulting for the subsidiary — and the respective workers — from the successful transfer of knowledge (cases 1 and 4). Moreover, the efforts to make the transfer were increased in order to achieve a good communication, with the understanding of the transmitted practices, and to anticipate possible failures that might occur in the local productive process because of the Mozambican managers' difficulties in planning, since 'in order to warrant the uninterrupted continuation of work in the subsidiary, the parent company has to effect a permanent control of the stock of raw materials' (case 3). As observed, the association of the personal objectives with those of the company made the transfer of knowledge much easier, because it enhanced the receptivity, understanding and sharing of knowledge on a local basis.

The intervention of the expatriates is fundamental at the beginning of the transfer process because of the culture that is being developed and the formatting of the working relations in the subsidiary, through the constant intervention of the leaders both, in the affirmation of the MNE's values and principles of functioning, and in the effective connection with the parent company, through carrying out a key role between the contact of both parties, as happened in cases 1 and 4. Top management helped to avoid the occurrence of barriers against learning by means of its constant presence in the work place and the introduction of the concept of 'intelligent error' as a pre-condition for improving the operational efficiency (case 1), since 'the Mozambicans easily lose interest when they fail in their search for solutions to their problems' (case 4). As a consequence, instituting a proactive attitude in the solution of problems and the improvement of the organization's efficiency was difficult, since 'the work spirit that prevails in Mozambicans is guided by the rule to do things just sufficiently well, which is an attitude that gradually leads to the deterioration of the execution of work routines, unless the leaders are permanently accompanying them' (case 1). Under these

conditions, the leaders play a crucial role in the creation of an organizational culture that stimulates the collaboration and participation of all employees in the pursuit of common objectives and the alteration of the valid cultural paradigm. In this point, the search for the optimization of functional processes starts with increasing the local individuals' absorptive capacities in a way that improves the performance of the subsidiary.

Role of the recipient's absorptive capacity in the success of the transfer of knowledge

The knowledge acquired by the recipient is the result of a relationship of cooperation with the source, where the individuals' intention and ability to learn are elementary as manifested by their ability to absorb the new knowledge.

When being interviewed, the managers mentioned the existence of alterations in the subsidiary's organizational structure in order to simultaneously promote the learning operations and the adaptation to the rules of functioning of the parent company. These operational changes led to the centralization of a number of functions and the formalization in the attribution of tasks and responsibilities (cases 1 and 3). Basically, they reduced the number of hierarchic command posts and emphasized the middle managers' importance by way of the creation of interdepartmental teams, whose functions were to accelerate the application of the best practices. The mediating role of the middle managers facilitated the flow of intra-organizational communication and the incorporation of tacit knowledge held by the top managers and the managers in the front line (those who are in direct contact with clients and suppliers) into the productive process. Consequently, the alterations that took place in the organizational structure of the subsidiary facilitated the training operations and improved decision making by bringing the deciding entity closer to the context that is the object of its application.

The lack of endogenous abilities on the part of the subsidiaries led to the adjustment of the degree of rigor, demanded from the business as well as from the individuals involved in the operational process where the adaptability of the transferred knowledge to the local reality made its understanding more accessible for the Mozambican employees. Given the particular nature of the operative conditions and the market, such a process of adaptation and modification of practices permitted the improvement of its acceptance and utilization according to the local necessities (cases 2 and 4). Following this logic, the reproduction of the parent company's business model in the subsidiary must take the characteristics of the Mozambican market into consideration as well as the type of product or service that the local consumers demand or are willing to pay for. For example, 'it makes no sense having self-service operations at the gas

stations in Mozambique, because the clients prefer the full service' (case 2); on the other hand in case 4, contrary to the tendency existing in the parent company, it was decided to adopt a structure of vertical functioning, that is, the subsidiary had to install quality tests, since 'the local suppliers do not guarantee the quality of the final product's protection against corrosion'. As observed, overcoming the difficulties in the transfer of knowledge depends on whether the business model is adequate to the local situation and the adaptation of the best practices to the subsidiary's environment.

The non-existence of accumulated experience and the lack of competencies on the part of the receiver produce lack of interest or inadaptation with respect to the level of competencies that are being transmitted by the transmitter. Besides, the absence of common interests between the transmitter and the receiver as well as the imposition of certain knowledge that was not requested by the receiver leads to misunderstandings regarding its applicability to the local needs and provokes resistance to its application (cases 1 and 2). On the other hand, the knowledge transferred must be appropriate for the level of training and professional qualifications of the individuals in the receiving organization. As a result, the absorptive capacity of the receiver can be increased by means of training actions during which people acquire technical skills and develop practical abilities that improve their understanding of the transmitted knowledge as well as their contribution to the productive process. Therefore, the receiver's ability to learn is based on the existence of a stock of related knowledge.

A more heterogeneous learning, that is, learning taking place in various productive units of the MNE that are more highly developed in technological terms, enabled the Mozambican workers to gain experience and technological abilities, which at the end represent the related knowledge that the subsidiary needs to be able to apply, with reduced deflections of efficiency, the new knowledge to the local operative process (cases 1 and 4). Consequently, the training efforts originated the greatest automation of procedures achieved by the individuals' realized absorptive capacity (which focuses on the utilization of knowledge that reflects the incorporation of assimilated knowledge into the company's operations) that contributes to the improvement of productivity by means of the institution of new routines that reduce the duration of tasks (cases 1 and 4) and increase the organization's ability to respond to the market's demands (case 3). Thus, the realized absorptive capacity favours an improvement of the subsidiary's performance through productivity gains obtained in its productive process, with added competitiveness due to the commercialization of new products.

In the following, the study presents the main conclusions resulting from the transversal analysis of the six dimensions that exist in the transfer of knowledge from the MNEs to their subsidiaries in Mozambique.

Conclusions

The objective of this study was to obtain knowledge that can be supplied to the companies that pretend to install themselves in Mozambique, since this country's potentialities, due to the abundance of its natural resources as well as its strategic localization in Southern Africa, have brought about the growing interest of foreign investors in the local market.

Conclusively, the specific knowledge of the source is used by the recipient as an asset for more advanced production concentrated on the necessities and preferences of the consumer, customer service, quality of the product and efficiency of operational costs. However, the particular characteristics of the Mozambican context (for example, scarcity of qualified human resources, insufficient transport infra-structures, non-existence of technical assistance, weak purchasing power, excessively bureaucratic public administration and absence of industrial tradition) do not advise in favour of, or complicate the reproduction of the source's business model. Apart from the fact that the tacit nature of knowledge increases the complexity of its transmission and diffusion in the organization, so far, it is incorporated in the individuals' experience. On this basis, the expatriates promote a climate of trust that facilitates the interactive communication between the transmitter and the receiver, including the possibility to ask questions, flexibility and the adaptation of the new practices to the local environment.

The participation of the parent MNE in the subsidiary, holding the majority of the capital stock, leads to the moderation of some local cultural characteristics (for example, the resistance to change and the importance of the family superimpose themselves on the duties as regards work), as well as the control of the training actions, where it is important that the individuals are open and available towards developing a work ethics shared between transmitter and receiver, which leads to a better cooperation by eliminating defensive attitudes in the sharing of key information for the business. In this sense, a politics of incentives, on the one hand, eliminates a certain apprehension on the part of the recipient with respect to the compensation of efforts and costs involved in the acquisition and utilization of new knowledge and, on the other hand, encourage the source to invest time and resources in the transfer of knowledge. In other words, the leaders play a critical role by promoting the sharing of knowledge by means of creating an environment that is favourable to the institution of a proactive attitude with respect to seeking knowledge and cooperation throughout the entire organization.

The absorptive capacity of the recipient is greater when starting from operative areas where it has previous experience (that is, related knowledge), since what is learned is largely related to the previously created knowledge, enlarged and crystallized in the organization. More specifically, the application and exploration of the

acquired knowledge bestows the subsidiary with the possibility of both, optimizing functional processes by means of improving its productivity, and increasing its competitiveness in the Mozambican market.

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REFERENCES

- Argote L, Beckman S, Epple D (1990). The persistence and transfer of learning in industrial settings. *Manage. Sci.*, 36: 140-154.
- Badaracco J (1991). *The knowledge link: how firms compete through strategic alliances*. Boston: Harvard Business School Press.
- Bonache J, Brewster C (2001). Knowledge transfer and the management of expatriation. *Thunderbird. Inter. Bus. Rev.*, 43: 145-168.
- Cohen W, Levinthal D (1990). Absorptive capacity: a new perspective of learning and innovation. *Admin. Sci. Q.*, 35: 128-152.
- Dierickx I, Cool K (1989). Asset stock accumulation and sustainability of competitive advantage. *Manage. Sci.*, 35: 1504-1511.
- Ghoshal S, Korine H, Szulanski G (1994). Internal communication in multinational corporations. *Manage. Sci.*, 40: 96-110.
- Gupta A, Govindarajan V (2000). Knowledge flows within multinational corporations. *Strat. Manage. J.*, 21: 473-496.
- Howells J (1996). Tacit knowledge, innovation and technology transfer. *Technol. Anal. Strat. Manage.*, 8: 91-105.
- Inkpen A (1996). Creating knowledge through collaboration. *California. Manage. Rev.*, 39: 123-140.
- Katz R, Allen T (1982). Investigating the not invented here (NIH) syndrome: a look at the performance, tenure and communication patterns of 50 R&D project groups. *R&D Manage.*, 12: 7-19.
- Kedia B, Bhagat R (1988). Cultural constraints on transfer of technology across nations: implications for research in international and comparative management. *Acad. Manage. Rev.*, 13: 559-571.
- Lam A (2000). Tacit knowledge, organizational learning, societal institutions: an integrated framework. *Org. Stud.*, 21: 487-513.
- Lane H, Beamish P (1990). Cross-cultural cooperative behavior in joint ventures in LDCs. *Manage. Inter. Rev.*, 30: 87-102.
- Lane P, Lubatkin M (1998). Relative absorptive capacity and interorganizational learning. *Strat. Manage. J.*, 19: 461-477.
- Lane P, Salk J, Lyles M (2001). Absorptive capacity, learning and performance in international joint ventures. *Strat. Manage. J.*, 22: 1139-1161.
- Leonard-Barton D, Sensiper S (1998). The role of tacit knowledge in group innovation. *California. Manage. Rev.*, 40: 112-132.
- Levin D, Cross R (2004). The strength of weak ties you can trust: the mediating role of trust in effective knowledge transfer. *Manage. Sci.*, 50: 1477-1490.
- Menon T, Pfeffer J (2003). Valuing internal versus external knowledge. *Manage. Sci.*, 49: 497-513.
- Mowery D, Oxley J, Silverman B (1996). Strategic alliances and interfirm knowledge transfer. *Strat. Manage. J.*, 17: 77-91.
- Newell S, Swan J (2000). Trust and inter-organizational networking. *Hum. Relat.*, 10: 1287-1328.
- Nonaka I (1994). A dynamic theory of organizational knowledge. *Org. Sci.*, 5: 14-37.
- Nonaka I, Takeuchi H (1995). *The knowledge-creating company: how japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.
- Nonaka I, Konno N (1998). The concept of ba: building a foundation for knowledge creation. *California. Manage. Rev.*, 40: 40-54.

- Polanyi M (1966). *The tacit dimension*. London: Routledge and Kegan Paul.
- Riusala K, Suutari V (2004). International knowledge transfers through expatriates. *Thunderbird. Inter. Bus. Rev.*, 46: 743-770.
- Saad M, Cicmil S, Greenwood M (2002). Technology transfer projects in developing countries: furthering the project management perspectives. *Inter. J. Project. Manage.*, 20: 617-625.
- Senge P (1990). The leader's new work: building learning organizations. *Sloan. Manage. Rev.*, 32: 7-23.
- Smith K, Carroll S, Ashford J (1995). Intra and inter-organizational cooperation: toward a research agenda. *Acad. Manage. J.*, 38: 7-23.
- Song J, Almeida P, Wu G (2003). Learning by hiring: when is mobility more likely to facilitate interfirm knowledge transfer?. *Manage. Sci.*, 49: 351-365.
- Stock G, Greis N, Frischer W (2001). Absorptive capacity and new product development. *J. High. Technol. Manage. Res.*, 12: 77-91.
- Subramaniam M, Venkatraman N (2001). Determinants of transnational new product development capability: testing the influence of transferring and deploying tacit overseas knowledge. *Strate. Manage. J.*, 22: 359-378.
- Szulanski G (2000). The process of knowledge transfer: a diachronic analysis of stickiness. *Org. Behav. Human Decision Process.*, 82: 9-27.
- Van den Bosch F, Van Wijk R, Volberda H (2003). Absorptive capacity: antecedents, models, and outcomes. In Easterby-Smith M, Lyles M (Eds). *Handbook of organizational learning and knowledge management*. Oxford: Blackwell, pp. 278-301.
- Yin R (1994). *Case study research: design and methods*. London: Sage.