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Elie Virgile Chrysostome et Zhan Su

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Résumé de l'article

North-South joint ventures are initiated more and more nowadays. One justification for their creation is the acquisition of new know-how, with the aim of developing new competencies that favour a better competitiveness. Nevertheless, strategic learning in a North-South joint venture context still remains a poorly known area. The present research proposes examining the learning practices used by these joint ventures to see if they develop strategic competencies. The results of the research show that these practices are characteristic of vicarious learning and that new developed competencies are not profoundly strategic. The research therefore proposes a much more profound learning model that ultimately leads to the development of strategic competencies.

Towards Successful Learning Within North-South Joint Ventures Operating in Sub-Saharan Africa: An Exploratory Study

by

Elie Virgile Chrysostome

Université de Moncton, Canada

and

Zhan SU

Université Laval, QC, Canada

North-South joint ventures are initiated more and more nowadays. One justification for their creation is the acquisition of new know-how, with the aim of developing new competencies that favour a better competitiveness. Nevertheless, strategic learning in a North-South joint venture context still remains a poorly known area. The present research proposes examining the learning practices used by these joint ventures to see if they develop strategic competencies. The results of the research show that these practices are characteristic of vicarious learning and that new developed competencies are not profoundly strategic. The research therefore proposes a much more profound learning model that ultimately leads to the development of strategic competencies.

INTRODUCTION

An international joint venture is a legal entity created and managed jointly by two or more legally distinct organizations, among which at least one has its head office located outside the country where the joint venture operates. During the last 10 years, this special type of organization has grown in popularity and has become one of the major tools in internationalization of compa-

nies (Su, 1999). Learning constitutes one of the main motivations that justifies the creation of a joint venture (Kogut, 1988). Indeed, joint ventures facilitate the acquisition of new knowledge, and from this point of view constitute favourable frameworks for developing strategic competencies. However, joint ventures do not constitute an infallible solution for acquiring knowledge; if, in certain cases, learning know-how effectively and successfully takes place, in numerous other cases the hoped-for learning cannot take place, so joint ventures can be taken over by streams of all kinds of conflicts of power, cultures or interests (Lewis, 1990; Beamish, 1988). This observation about joint ventures accords with the observation made by some researchers — Lorange and Roos (1991) and Lewis (1990), among others — who think that joint ventures fail much more than they succeed. Learning in North-South joint ventures represents an even more difficult exercise, because of the institutional, cultural and geographic distances that separate the parent companies. Nevertheless, the works interested in this question are not numerous (Ingham, 1994; Dodgson, 1993).

The objective of this research is to contribute to a better understanding of this phenomenon. It proposes examining the learning practices used in North-South joint ventures by studying multiple case-studies, and in light of the observed results, building a learning model that favours actual development of strategic competencies within North-South joint ventures. This research comprises four parts: the first part presents a theoretical framework of strategic learning in international joint ventures; the second and third parts are an analysis and a discussion of the results observed; the last part recommends a learning model that favours development of strategic competencies within North-South joint ventures.

CONTEXT OF NORTH-SOUTH JOINT VENTURES IN SUB-SAHARAN AFRICA

A North-South joint venture is a joint venture in which at least one parent company is from a developing country and at least one parent company is from a developed country. The type of North-South joint venture that is more and more present in Sub-Saharan Africa is based on private capital. This results mostly from the failure of North-South partnerships of state companies undertaken in African countries (Chitou, 1991) shortly after their independence. The various pressures exercised in favour of privatization by the international institutions involved in the development of African countries (World Bank and IMF) have forced these countries to promote private companies. It is in this type of context that more and more North-South private joint ventures in Sub-Saharan Africa presently operate. Some of these North-South private joint ventures result from the privatization of state companies, or simply from the privatization of the state's interest in companies that were previously companies of mixed economy (Dzaka and Milandou, 1995; Mayoukou, 1995). The recent

resurgence of these conditions for North-South joint ventures in Sub-Saharan Africa contrasts with conditions observed some decades earlier in other numerous developing countries. Indeed, in these countries the requirements of governmental legislation are the main determinant for creating North-South joint ventures (Beamish, 1985), and the partner from the North is in most cases a multinational. The important presence of multinationals in the creation of North-South joint ventures is represented in the terminology of multinationalization joint ventures used by Garrette and Dussauge (1995). In addition, this presence of multinationals is remarkably demonstrated through the structure of capital. Indeed, in North-South joint ventures operating in Sub-Saharan Africa the foreign parent company often holds the majority of the capital (Causse, 1994), and it controls the management of the joint venture. African partners whose technological competencies are limited generally do not involve themselves in the joint venture's activities (Causse, 1994), and often tend to limit their commitment to participation in the capital. This seems to confirm the observation previously made by Delalande (1989) that the economic operators in Sub-Saharan Africa seem more concerned with the fast profitability of their investments than with their involvement in an industrial activity. This concern is reinforced by the weakness of private savings, and because of this, African partners involved in North-South joint ventures are, more and more, well-off people. To all these elements, which are not necessarily favourable to mutually profitable strategic learning for partners in North-South joint ventures in Sub-Saharan Africa, add a complex sociocultural, political and legal context, which makes the operation environment hostile.

ELABORATING A LEARNING MODEL WITHIN THE FRAMEWORK OF INTERNATIONAL JOINT VENTURES

Learning in joint ventures is a relatively recent issue and there is very poor literature among the profusion of research works that exist related to learning, so the mechanisms proposed here result from the integration of a very scattered literature. These mechanisms are the acquisition of knowledge and the joint creation of knowledge.

Acquisition of Knowledge and Development of Strategic Competencies

The acquisition of new knowledge within a joint venture is essentially effected by individuals from parent companies (Lyles and Salk, 1996) who undertake a process of sharing their experiences (Prahalad and Bettis, 1986; Lyles and Schwenk, 1992; Huber, 1991; Lyles, 1994). There are various methods to acquire knowledge. Huber (1991) has identified five methods that can take place in joint ventures: acquisition by experience, acquisition by imitation, acquisition from the outside, acquisition by research, and acquisition by inheritance. More specifically, Lyles and Salk (1996) have identified two types of knowledge acquisition in joint ventures: vertical and horizontal acquisition of

knowledge. Two dimensions are particularly important for knowledge acquisition in joint ventures. These are the transfer and the internalization of parent companies' know-how. Researchers often use the transfer of know-how as an indicator of learning phenomena. Some of them are Fiol and Lyles (1985), Lyles (1988), Dodgson (1993a; 1993b), Lyles and Salk (1996), Makino and Delios (1996), Biggs, Shah and Srivastava (1995), and Lei, Hitt and Bettis (1996), among others, studied the acquisition of knowledge between individuals or organizations by focusing on the transfer of know-how. This transfer of know-how plays a key role in the development of strategic competencies.

Indeed, the transfer of know-how allows a learning partner to accumulate knowledge, which allows him or her to develop new and more successful skills. It is desirable that the transferred knowledge not only be explicit, but also, and especially, tacit, because this type of knowledge is difficult for competitors to imitate and can therefore bring unique competitive advantages to the learning partner. Tacit knowledge can be transferred by metaphors and without language (Lei, Hitt and Bettis, 1996). The conversion of tacit knowledge into new competencies can create a causal ambiguity (Reed and DeFillippi, 1990), which makes it rather difficult to be imitated.

Internalization refers to the appropriation by joint ventures of the knowledge transferred by the parent companies, and is revealed through renewal of organizational memory (Lei, Hitt and Bettis, 1996). This renewal of organizational memory constitutes an important advantage for the joint venture because it allows the exploitation of new potentialities based on a synergy between the know-how learned from the parent companies and the prior know-how of the joint venture employees, and it stimulates the development of new skills to improve competitiveness. So, the intention to internalize a partner's know-how will be strong and clearly expressed if the company perceives this know-how to be of crucial importance to its growth and competitiveness (Hamel, 1991).

All things considered, the acquisition of new knowledge through the transfer and internalization of know-how favours the development of strategic competencies. The concept of strategic competence refers to a complex combination of skills that are specific to an organization and that allow an organization to satisfy some market niches better than its competitors. The most important characteristic of strategic competence is its difficult imitation by competitors (Barney, 1991; Amit and Schoemaker, 1993), and it is this difficulty that favours sustainable advantages for the organization. The above analysis, which links learning and strategic competence, leads to Proposition No. 1 below:

Proposition No. 1: *Within international joint ventures, the acquisition of new knowledge from parent companies can favour, on one hand, the development of capacities for autonomous production and competitive production, and on the other hand, the development of capacities for continuous improvement and innovation.*

Joint Creation of Knowledge and Development of Strategic Competencies

Joint creation of new knowledge constitutes the second fundamental mode of learning in joint ventures. This is very important for these joint ventures because developed knowledge is a fundamental asset that influences their performance, and is also of use in maintaining their competitive advantage (Inkpen, 1996). Regrettably, despite all the research done regarding the creation of organizational knowledge, this phenomenon still remains poorly understood. Social interactions between organizational members undoubtedly play a fundamental role in the creation of new knowledge (Nonaka, 1994; Inkpen, 1996). More specifically, in joint ventures where interactions between individuals coming from parent companies constitute an important learning mechanism (Miller, 1996), they allow an exchange of experiences, which generates development of new knowledge. In other words, these individuals represent a community of interactions (Nonaka, 1994), where exchanges can occur and contribute to a joint creation of knowledge.

These interactions can take two fundamental forms: the joint transformation of know-how, and joint experimentations. The transformation of know-how is one learning practice that allows the development of strategic competencies, because it gives place to new specific skills (Lei, Hitt and Bettis, 1996). Indeed, the organization's concern to meet its market's needs adequately leads it to undertake an adaptive process to make its know-how correspond with customers' requirements. Through this process, the organization can improve its manufacturing capacities and methods, and in some cases, undertake a process of incremental innovation. The process is translated into the development of new specific skills, which favours an improvement of the organization's competitive position. Joint experimentation constitutes a very innovative learning mode (Fiol and Lyles, 1985; Prahalad and Hamel, 1990; Badaracco, 1991; Huber, 1991) and from this point of view, favours the development of strategic competencies. More specifically within the context of joint ventures, this experimentation is joint because it is based upon collaboration between people affected in the joint venture by parent companies. The experimentation mostly proceeds by trial-and-error, until, step-by-step, new competencies are developed. These new competencies, whose strategic character depends on the difficulty with which they can be imitated by competitors, can be translated into a continuous improvement, or into radical innovations. All things considered, the joint creation of new knowledge, specifically by transformation of know-how and joint experimentations favours the development of strategic competencies, which leads to Proposition No. 2 below:

Proposition No. 2: *The joint creation of new knowledge within North-South joint ventures by parent companies can favour, on one hand, the development of capacities for autonomous production and competitive production, and on the other hand, the development of capacities for continuous improvement and innovation.*

Conditions for Successful Learning in International Joint Ventures

The conditions for successful learning constitute one of the main concerns of researchers who study learning phenomena. More specifically in the case of joint ventures, some of these conditions seem particularly important. Indeed, Cohen and Levinthal (1990), among others, focus on the capacity to learn. Other frequently identified conditions are the quality of the collaboration, the transfer mechanisms used and the management of sociocultural specificities (Mohr and Speakman, 1994; Su, 1997; Grosse, 1996; Inkpen, 1996; Sullivan and Peterson, 1982; Su, 1997), the commitment of the partners (Lyles and Salk, 1996), and the level of confidence and transparency (Inkpen, 1996; Doz, 1996). In the absence of these cardinal conditions, cooperation cannot allow a joint learning and sharing of experiments between partners, a situation that inevitably leads to failure, which is the reason for Proposition No. 3:

Proposition No. 3: *Within North-South joint ventures, the intention to learn, the capacity to learn, a good quality of collaboration, a deployment of transfer mechanisms of knowledge, and effective management of sociocultural specificities can facilitate the learning of know-how from the parent companies of industrial nations.*

METHODOLOGY

The methodological approach used to examine the realities of learning in North-South joint ventures in Sub-Saharan Africa is multiple case studies. It is adequate because of its exploratory character. The case studies are related to four North-South joint ventures that were identified in Ivory Coast, and examine four activities with high technological intensity: electronics, pharmaceutical biotechnology, semiconductors, and electrical energy. The life of these North-South joint ventures is at least three years and six months, considered by some previous researchers as a long enough duration for learning realization. The choice of four cases of North-South joint ventures is well within the bracket recommended by Yin (1994) and Eisenhardt (1989) with regards to the number of cases that must be retained to satisfy the requirements of reproducibility. In addition, several important works concerning learning in joint ventures have used a sample of similar size. That is the case of research works such as those of Lyles (1988), Ingham (1994) and Inkpen and Dinur (1998) or Doz (1996), Cyr and Schneider (1996) and Cyr (1997). The data was collected through individual, semi-directed interviews with the main learners who took part in learning with technicians from a foreign parent company. These main learners were the persons in charge of production, maintenance, and quality management, or their closest associates. In each studied joint venture, three main learners participated in five interviews of ninety minutes to two hours each. A good part of these interviews were recorded on tape and transcribed later. The data was analyzed using the patterns matching technique proposed by

Yin (1994), and the results that arose from it are presented in the following paragraphs.

RESULTS AND DISCUSSION

Learning Practices

The learning practices that took place within the studied joint ventures were primarily the transfer and the internalization of know-how. The transfer of know-how took place within joint ventures by sharing of experiences between the technicians of African and foreign parent companies, and also through accumulation of know-how by African technicians. The forms of sharing experiences, which are convergent, were periodic meetings for discussion, observation, practical technical accompanying, and the exchange of practical experiences in the foreign parent company. Taking notes and memorization were the two convergent forms of accumulating know-how. Internalization took place by imitation and the scattering of foreign parent company know-how by the African technicians. For the dissemination of know-how, the only convergent type was the internal scattering of know-how through training of local co-workers. None of the learning practices for joint creation of knowledge were observed for all the studied joint ventures. Adaptations of know-how without innovative aim took place in three joint ventures, but they were only joint in a single case. No case of unlearning was found. Numerous trial-and-error experiments took place, but they were not joint and were mostly directed towards mastery of the production's operations, maintenance and quality control, rather than towards innovations.

Developed Competencies

All the joint ventures studied developed autonomy of production through their capacity to ensure auto-maintained manufacturing and maintenance. Indeed, no case of product manufacturing or repairs that required the technical aid of the foreign parent company was observed. As for capacity in competitive production, only two of the joint ventures studied made products that were relatively difficult for competitors to imitate, because of legal measures of protection used. Generally speaking, the joint ventures studied considered the investments required to participate in their activities to be a barrier to the entry of new potential competitors. With regard to dynamic capacities, all the joint ventures studied recorded a continuous production improvement. They brought several positive changes to their products, such as the improvement of the physical and/or aesthetic attributes of products, and the decline of imperfections. They also acquired a dexterity that allowed them to realize time savings from 25% to 50% in operations, maintenance and quality control, although these savings were more important in operations than in maintenance. No case of development of new products or new processes was observed in the studied joint ventures.

Observed Learning Conditions

The intention to learn was obvious in all the studied joint ventures and was expressed through the acquisition of supplementary non-paid hours of learning on the initiative of the African technicians. In general, learning was not sustained by a strategic concern. Nevertheless the African technicians who were involved had a good capacity to learn based on their great curiosity and their enthusiasm for learning. Most of these African technicians were young people in their first employment. If high academic standards were an important facilitating factor for some of them, education levels were rather variable, ranging from a high school diploma in technical sciences to a doctorate in one of the cases, and from the first year of secondary school to a diploma in another case. A good quality of collaboration prevailed during learning in all the studied joint ventures. It was translated into a transparency and social solidarity between the African technicians and their foreign homologues. However, there was no real complementarity in the exchanges of technical know-how, because these exchanges were often one-directional, from the foreign parent company to the joint venture. These uni-directional transfers of know-how were realized through the detached visits of technicians from foreign parent companies as well as from training courses. The number of visiting technicians varied in each case, from one to six technicians, while the duration of their stay varied from six months to three years. The frequency of experts' visits was one or two visits per year for a duration of two to three weeks. Intercultural management was not of particular concern during learning. Indeed, in three of four cases, no formal psychological preparation of the technicians took place before they started the learning process, although individually every African technician underwent informal psychological preparation before their training within the parent company. In four studied cases, African and foreign technicians showed cultural tolerance for each other. However, this tolerance was polarized around cultural features such as the perception of time or the organizational culture. Tables No. 1 and No. 2 recapitulate these results.

Table No. 1: Matrix of analysis of concordance between empirical relations learning/competencies and theoretical propositions

Competencies Learning	Capacity for autonomous production	Capacity for competitive production	Capacity for continuous improvement	Capacity for innovation	Analysis of concordance between empirical relations and theoretical propositions	Results
Transfer of know-how	4/4	2/4	4/4	0/4	1a	PARTIALLY CONCORDANT
Internalization of know-how	4/4	2/4	4/4	0/4	1b	PARTIALLY CONCORDANT
ACQUISITION OF NEW KNOWLEDGE	4/4	2/4	4/4	0/4	1	PARTIALLY CONCORDANT
Transformation of know-how	3/4	2/4	3/4	0/4	2a	NON CONCORDANT
Joint Experimentations	0/4	0/4	0/40	0/4	2b	NON CONCORDANT
CREATION OF KNOW-HOW	3/4	2/4	3/4	0/4	2	NON CONCORDANT

* Level of concordance

Table No. 2: Matrix of concordance analysis between empirical relations learning /success conditions and theoretical propositions

Conditions	Intention to learn		Capacity to learn		Quality of collaboration		Mechanisms of transfer		Sociocultural management		Analysis of concordance between empirical relations and theoretical propositions
	Commitment	Strategic values	Receptivity	Qualification	Confidence	Communication	Experts assignment	Training	Cultural differences	Peaceful management conflicts	
Learning											
Transfer of know-how	4/4	0/4	4/4	1/4	4/4	3/4	4/4	4/4	3/4	00/4	PARTIALLY CONCORDANT
Internalization of know-how	4/4	0/4	4/4	1/4	4/4	3/4	4/4	4/4	3/4	00/4	PARTIALLY CONCORDANT
Transformation of know-ow	3/4	0/4	3/4	1/4	3/4	3/4	3/4	3/4	3/4	00/4	NON CONCORDANT
Joint Experimentation	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	00/4	NON CONCORDANT

In summary, the most important observation that can be made in light of these results is that the main learning mode that took place in the joint ventures studied was the acquisition of new knowledge, through the transfer and accumulation of foreign parent company know-how by the joint venture. This resulted in a process during which important exchanges of experiments, memorization, imitation and scattering of know-how took place. At the end of this process, the joint ventures developed new competencies in terms of autonomy in the manufacture and maintenance of technical installations, on one hand, and in terms of capacities in continuous improvement of their production, on the other. These results correspond globally with those of Biggs, Shah and Srivastava (1995), Drouvot and Verna (1994), Perrin (1984), and Lyles and Salk (1996), according to whom the transfer of know-how within the context of North-South partnerships allows the partner from the South to develop useful basic capacities to ensure the activities of manufacture, maintenance and quality control. The necessity of memorization in the process of transfer is particularly underlined by Ribault, Strap and Ledibois (1991). Another point to note is that none of the studied joint ventures realized a joint creation of new knowledge. Indeed, learning in these joint ventures was not sustained by causes of strategic intent; there was no research and development, and learning was unidirectional according to the North-South axis. Furthermore, the weak power of negotiation of the partner from the South, a result of its weak participation in the capital and its limited technological knowledge, prevented it from specifying particular requirements during learning. To all these elements of strategic concern were added some elements of systemic concern, such as technological dependence and the low intensity of the industrial tradition. What can be done to avoid the limitations to vicarious learning of these exchanges of know-how within North-South joint ventures, and make them lead to the development of strategic competencies ? This concern is addressed in the next paragraph.

TOWARDS EFFECTIVE DEVELOPMENT OF STRATEGIC COMPETENCIES IN NORTH-SOUTH JOINT VENTURES

From Acquisition of Knowledge to Autonomy of Production

The acquisition of knowledge from a foreign parent company constitutes the first phase of learning within North-South joint ventures, and can be realized by experience sharing and knowledge accumulation. The sharing of experiments is not limited to the transfer of explicit knowledge, but also, and especially, concerns tacit knowledge. All this knowledge has to be internalized via the organizational memory of the joint venture, to be redeployed afterward with the aim of an autonomous realization of the production's operations. Such an activity requires the deployment of both procedural memory, which allows a filing and a fast localization of tacit knowledge, and declarative memory,

which allows a filing and a fast localization of explicit knowledge (Girod, 1995).

From Imitation to Autonomous Production and Continuous Improvement

Imitation constitutes the second phase of learning in the present model. It contains two different variants of the same continuum (Bolton, 1993), namely, primary imitation and creative imitation. Primary imitation (simple imitation) is dedicated towards mastery of production operations and maintenance by the joint venture. However, it requires a scattering of knowledge within the joint venture, which, with the experience acquired over the course of time, can allow technicians to develop a dexterity that can be translated into economies of time in the execution of operations and improvements in the quality of products. Primary imitation can prepare the joint venture for creative imitation. Within North-South joint ventures operating in Africa, creative imitation can be translated into a joint modification of knowledge acquired from the Western parent company by African and Western technicians, with the aim of proposing products or processes that offer better satisfaction than rival products. Creative imitation can be based on the joint venture's internal knowledge or on a combination of internal and external knowledge, in which case it is essentially translated into benchmarking. Whether it is based on internal knowledge or is translated into benchmarking, creative imitation can favour an improved competitiveness through better product quality and increased productivity. Creative imitation introduces the North-South joint venture operating in Africa to a phase of creative learning, that of joint experiments.

From Joint Experiments to the Innovation of Processes and Products

Joint experiments constitute the ultimate stage of learning through which a joint venture can develop strategic competencies by the creation of new, original knowledge. The present model proposes two types of joint experiments: experiments qualified as peripheral, and those qualified as central. Peripheral experiments are experiments that generate new exploratory knowledge. This knowledge represents possible innovative solutions that African and Western technicians have reached in their joint efforts to resolve technical problems for the joint venture or to develop new processes or more competitive products. The various activities of peripheral experiments proposed in the present model are joint reconfiguration of existing knowledge, joint technological scanning, joint brainstorming, and joint research and development. As for central experiments, they enable testing of the operative validity of the exploratory knowledge that results from peripheral experiments. The forms of central experiments proposed in this research are the crystallization of exploratory knowledge in product or process and a test of the aforementioned product or process. The test determines if the product or process stemming from the crystallization of

exploratory knowledge satisfies the requirements of the competitive needs (in terms of costs, quality or reliability) that were at the origin of its creation. There are two main testing strategies: the serial testing strategy, which consists of a sequential procedure of trial-and-error on a single product stemming from the crystallization of exploratory knowledge; and the parallel testing strategy, which consists of various concomitant tests of products stemming from the crystallization (Thomke, Hippel and Franke, 1998). It is possible to combine both strategies to exploit their mutual advantages (Ward, Liker, Cristiano and Sobek, 1995; Montgomery, 1991). In all, the creation of new knowledge, which can form the origin of strategic competencies within North-South joint ventures, results from the dialogue between peripheral joint experiments and central joint experiments. This dialogue is fed, on one hand, by the dialogue between various peripheral experiments, and on the other hand, by the dialogue between various central experiments. The model of strategic learning process is presented in Figure 1 in the Appendix.

CONCLUSION

The development of strategic competencies within North-South joint ventures via a learning approach between partners is a process that is not well understood by researchers. Nevertheless, more and more North-South joint ventures are built, with the aim of developing new competencies in order to improve competitiveness. This research, which is an exploratory study, examines the learning practices used by North-South joint ventures of an industrial character by studying multiple case studies. The results of this research show that these learning practices are essentially vicarious and that the new developed competencies are not profoundly strategic. However, in light of these results, the research then proposes a much more in-depth learning model whose ultimate stage is the joint creation of new knowledge, which is bound to lead to strategic competencies. The development of this model constitutes the main scientific contribution of this research. Indeed, from our understanding, there exist very few previous researchers who were interested by the problem of strategic learning in North-South joint ventures. From this point of view, this model opens up a whole new field of investigation, which it is hoped will interest other researchers. This model should, however, be tested on a wide sample of international joint ventures to prove its empirical validity.

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Figure 1: Model of strategic learning within North-South Joint Venture

