Offshoring: an analysis based on production costs and transaction costs

الأفشور: تحليل مبني على تكاليف الإنتاج و تكاليف الصفقات

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Abstract

Offshoring is often seen as a reverberation of the search for cost reduction. This reduction is born with the provider's ability to lower his production costs. In this paper, our aim goes beyond this rather limited conceptualization of Offshoring by introducing for the first time in the literature a new illustration more complementary to this strategy. A second assumption based on the notion of transaction costs is superimposed. The purpose of this paper is to remove the weakness of the production cost approach and the importance of TCT. To do this, a conceptual method based on an introspection of the economic literature of Offshoring was adopted. The results suggest a broad failure of the apprehension of Offshoring just by production costs. A client firm uses Offshoring not only to take advantage of low production costs offered by the provider, but also because the transaction costs are reasonable.

Keywords: Offshoring; Production costs; Transaction costs; TCT; Provider.

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Jel Classification Codes : F21 ; O33.

الملخص

ينظر للأفشور على أنه انعكاس للبحث عن تخفيض التكاليف. هذا التخفيض يتولد نتيجة قدرة المورد على تخفيض تكاليفه الإنتاجية. في مقالنا هذا، يتعدى هدفنا هذا التصور المحدود للأفشور و ذلك عن طريق التطرق لأول مرة في الأدبيات إلى تجسيد جديد أكثر تكاملية لهذه الإستراتيجية. يتم تركيب افتراض ثان يعتمد على مفهوم تكاليف الصفقات. تهدف هذه الورقة إلى استخراج ضعف المقاربة عن طريق تكاليف الإنتاج و أهمية نظرية تكاليف الصفقات. ولذلك، تم تبني منهج تصوري يعتمد على استبطان الأدبيات الاقتصادية للافشور. تبين النتائج ضعف كبير لإدراك الأفشور فقط عن طريق تكاليف الإنتاج. تلجأ المؤسسة الزبون إلى الأفشور ليس فقط من أجل الاستفادة من تكاليف الإنتاج المنخفضة المعروضة من قبل المورد و لكن أيضا لأن تكاليف الصفقات هي معقولة.

الكلمات المفتاحية: الأفشور، تكاليف الإنتاج، تكاليف الصفقات، نظرية تكاليف الصفقات، المورد.

تصنيف Jel: O33;F21.

Introduction

Focusing on an Offshore strategy allows us to focus on a particular angle of Outsourcing. This last approach, which is part of an organizational trilogy forming the Sourcing choice, is represented when a so-called client firm seeks to get rid of the management of a function by entrusting it to another external party. Offshoring refers to a contractual relationship characterized by the existence of a wide geographical gap between two legally independent economic poles. Apparently, this strategy creates an unavoidable, and revocable, additional difficulty when the firm chooses another form of Outsourcing.

The geographical distance between the two contracting parties produces *ex-ante* and *ex-post* problems where appropriate. In other words, there is a strong probability that this organizational solution will fail. On the other hand, Offshoring is taking a growing share of the world market (Carmel and Tjia, 2005; Goel, 2017). The advantages of leaving the responsibility for a

function previously managed within the firm to a service provider located in a country far away from the client therefore cover all kinds of risks that may be generated. Both in the literature and in the practices of firms, Offshoring appears to be a rational strategy that makes it possible to reduce overall costs for client firms (Khan et al., 2009; Roza et al., 2011).

Offshoring has long been linked to the prospect of reducing production costs. While, using such an approach generates other kinds of costs as well as production costs. The transaction costs that result from choosing Offshoring are completely neglected in the Offshoring literature, although the impact of these costs is undeniable. Like production costs, transaction costs seem to be in favor of Offshoring.

To this end, this study aims at answering the following question:

Can we go beyond the undoubtedly restrictive explanatory framework of Offshoring based on production costs towards a complementary approach supported by TCT?

Two secondary questions therefore arise:

Are the production costs sufficient to explain the choice of Offshoring?

Does the total economic framework of Offshoring require an input from TCT in addition to the production cost approach?

To answer these analytical questions, two main assumptions are made as follows:

The production cost approach alone does not justify the use of Offshoring

The TCT represents a complementary angle to the previous reasoning on the choice of Offshoring.

- Previous Studies

In the literature, Offshoring is only appreciated through its relationship with the search to reduce production costs by targeting the country that is characterized by a low average wage. Production costs are often cited as part of the Offshore strategy, while transaction costs are a decisive determinant of the Outsourcing of its various forms. Numerous studies have been carried out by researchers to confirm the place occupied by production costs in the Outsourcing strategy. Walker and Weber (1984), Ultrich and Ellison (2005), Lamminmaki (2011), Daneshgar et al (2013) and Espino-Rodríguez and Lai (2014) find that the production cost advantage held by the provider through its ability to achieve economies of scale leads the firm to outsource the function.

For its part, the prospect of TCT to Outsourcing remained undisputed. Levy (1985), Lacity and Willcocks (1995), Anderson (2008), Kamyabi and Devi (2011), and Schneider et al. (2013) have confirmed that the client firm will choose Outsourcing if transaction costs are low. However, Ngwenyama and Bryson (1999) and Barthélemy (2000) suggest a composition of production costs and transactions costs in the organizational choice of the client firm. In addition, Walker and Weber (1987) and Hennart (1988) find that transactions costs can blur the claimant's cost advantage in production costs and reverse the TCT prediction.

-Objective of research and methodology

As previous studies on Offshoring have shown, this research is characterized by a refocusing on a specific form of outsourcing, namely Offshoring. Contrary to previous studies, the aim of this work is to highlight the analytical deficiency of the production cost approach and to emphasize its failure to be independently a framework capable of justifying the choice of Offshoring as deployed in the economic and managerial literature. Our attempt therefore remains the pioneer in providing a more in-depth clarification around Offshoring based on a more detailed understanding of the rationale for Offshoring. This is the transactions cost approach, which remains one of the most famous theories referred to by researchers.

Since this research is aimed at removing the failure of the production cost input, the conceptual approach is the most appropriate one to use. This approach will allow us to present the different reasonings related to Offshoring before designing the integrative framework of it. In order to do so, we will first present the often recognized general form of Offshoring before moving on to establish the explanatory framework of this approach from the perspective of the production and transaction costs approach. We will then conclude with a detailed conception of the real *raison d'être* of Offshoring through an argumentation based on a complementarity between the two perspectives.

1. The organizational approach of Offshoring

Understanding Offshoring as an organizational strategy allows us to turn to what is called by the firm and its moving boundaries. The latter formulation has been a widely debated topic of analysis in the economic and managerial literature for several decades. It is a structural choice in which the firm selects from among an organizational triplet the most canonical approach to managing a given activity (Brewer et al, 2014).

After having for a long time considered the market and hierarchy as the only poles of economic activity, Coase's article (1937): "*The Nature Of The Firm*"; was able to open the door to more pragmatic analyses of the actual practices of firms. According to Coase, the firm and the market are two interdependent pivots that meet the economic needs of different parts of society (Coase, 1937). There is thus an absolute and lasting coexistence surrounding these two parts and a fairly strong substitutability between the two. The firm offers what the market cannot, and transaction costs are those that limit the organizational expansion of the market to the detriment of the firm.

With the work of Williamson (1979, 1991) and Imai and Itami (1984), the subdivision of economic activity between firm and market widened by introducing a third form of coordination of resources called a form of inter-firm cooperation. The choice that tilts profit towards a single mode takes the neologism of Sourcing and refers analogously to using either: the market, hierarchy or inter-firm cooperation. In this sense, the firm can manage an

activity through market transactions; by entrusting the activity to internal departments, or by contracting with a legally independent external party.

The organizational triplet: market/hierarchy/cooperation is therefore a strategic choice through which a firm manages its various needs that have arisen. This choice is made through an *ex-ante* and *ex-post* analysis of the function concerned, the firm in question and its external environment. On the other hand, the adoption of one of these three solutions is based mainly on multipolar considerations aimed at further streamlining the chosen decision (Ménard, 2004). One of the strategies that fall within the framework of cooperation between firms, also known as the hybrid form, is Outsourcing. This last form of resource coordination amounts to resorting to an external solution; one in which another external party takes charge of the management and execution of an activity of second strategic importance (Espino-Rodríguez and Lai, 2014).

Depending on the geographical proximity between the parent firm and the service provider, three different Outsourcing strategies can be distinguished: Onshoring, Nearshoring and Offshoring (Carmel and Tjia, 2005). The first form of this occurs when both contractual parties carry out their main activities in the same country. However, Nearshoring is necessary when these two parties settle in two different but geographically close countries. Offshoring will be discussed if the country of the client firm is far from the country of the provider. Choosing Offshoring for predetermined reasons therefore means resorting to a specialized external service provider who operates in another country far away from the Outsourcing firm, as Prikladnicki and Audy (2010, p. 780) point out: "*The move to an external third party in another country*". Therefore, what characterizes the Offshoring of the two other Outsourcing approaches is the geographical interval between the client firm and the chosen service provider (Kohler and Kukharskyy, 2019).

In the following table, the main points of differentiation between the different governance structures serving the needs of different parts of society are shown:

Table 01: The differences between the governance structures

	Hierarchy	Market	Outsourcing		
			Onshoring	Nearshoring	Offshoring
Movement	Internal	External	External	External	External
Contractual term	Long	Short	Medium	Medium	Medium
Contractual nature	Subordination contract	Classical contract	Neoclassical contract	Neoclassical contract	Neoclassical contract
Decisional nature	Unilateral	Unilateral	Bilateral	Bilateral	Bilateral
The distance between the parties	Non-existent	Variable	Short	Medium	Long
Virtual communication	Optional	Function of the distance	Favorite	Essential	Essential

Source: according to the author

As a form of Outsourcing, Offshoring refers to an outward movement in which an exogenous expansion of the moving frontier of the client firm is represented. The two contracting parties through the conclusion of a neoclassical medium-term contract ensure a decision-making interdependence whereby neither party is subject to the other. The geographical distance between the service provider and his client is much greater, which makes it essential to computerize the contractual relationship.

2. Offshoring: production costs approach

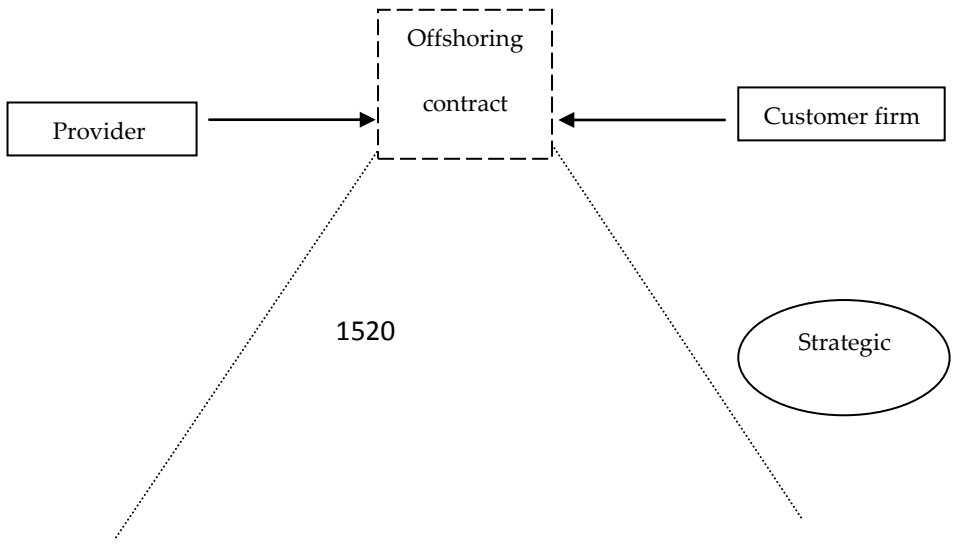
When a firm chooses to outsource a function to a foreign provider, it first seeks to reduce its internal management costs (Paz-Aparicio et al., 2018). This proposal is fully confirmed by researchers who view the use of an Offshore strategy from an exclusively economic perspective (Palvia, 2004; Dibbern et al., 2008; Mudambi and Venzin, 2010). This is made possible when the firm chooses a provider that offers services at low cost. In order to do so, the latter must have a production cost advantage. Devoting low wages to

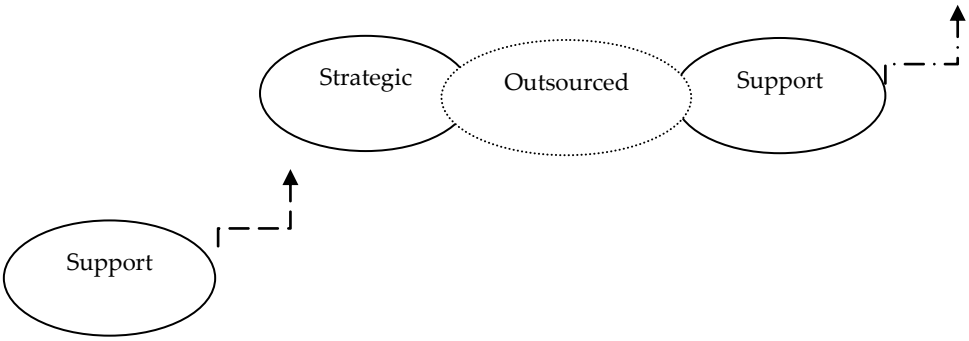
employees, achieving significant economies of scale and being able to pool resources between different customers are the main factors that lead to extreme rationalization of production costs at the provider (Khan et al., 2011; Jensen, 2012).

Costs related to human capital management obviously remain the main source of production costs, particularly in the computer and technology industry (Zitouni et al, 1995). Therefore, having the possibility to minimize these costs allows the provider to have a remarkable economic dominance. It is mainly the countries with low wages that dominate the Offshoring market (Goel, 2017). In this context, India, the Philippines and Vietnam are a good example of countries that have been able to generate considerable financial shares through the provision of Offshore services. In these countries, which are referred to as *Low Cost Countries*, an employee achieves an extremely low monthly salary compared to a colleague in the same position in another country (Schneider et al., 2013).

On the other hand, the provider is always able to reduce production costs compared to a client firm (Pongellia et al., 2019). This unquestionable privilege arises mainly from the nature of the activity that specifies the level of production. A client firm reflects on the Offshore strategy only for activities considered as non-strategic. While the Offshoring provider performs his strategic function which remains secondary for his clients. This idea is interpreted in the following figure:

Figure.1: Nature of the activity in the framework of Offshoring





Source: according to the author

Offshoring's decision only concerns functions of second strategic importance, i. e. functions that are limited to supporting the main function of a firm (Barthélémy, 2007). As a result, a client firm's core business is excluded from Offshore strategy and any other form of Outsourcing (Alexander and Young, 1996). On the other hand, economies of scale are realized only at the level of the core function; a function that presents the core business of a firm, exercised iteratively to satisfy needs expressed by third parties (Alexander and Young, 1996). Indeed, for a client firm, the production costs of an internally managed sub-function are always higher than those generated by the provider. Since the latter function is strategic for the provider, economies of scale are achievable there and will never be achievable at the client firm (Quélin, 1997).

As for the pooling of resources, this factor is accessible for a party working for several clients by performing the same or similar activities. This factor is therefore more likely to be found in the case of a service provider who responds to needs entrusted by different client firms than in the case of an Outsourcing firm (Reix, 2004). The pooling of resources can concern human, physical, site assets, etc. For a firm that is limited to serving its internal needs, the production process becomes unique and scarce and

therefore its idiosyncratic resources will be dedicated to performing a particular task.

It is therefore strong to say that the service provider has and reciprocally to the client firms more chances to reduce production costs which allow it to have an incomparable economic advantage in the framework of Offshoring practices.

3. Offshoring: transactions costs approach

The use of one of the three main modes of resource coordination has remained, since its introduction in the academic world, a fundamental target for which the transaction costs approach plays its role (Frank and Henderson, 1992; Kamyabi and Devi, 2011). According to TCT, the characteristics of the transaction (asset specificity, uncertainty, frequency) and the behavioral characteristics of the actors (limited rationality, opportunism) are those that determine the level of transaction costs and therefore the governance structure that ensures cost reduction (Williamson, 2007).

Established by Williamson (1979, 2007), the TCT stipulates that a transaction involving specific assets is expensive and must remain in-house regardless of the level of uncertainty or frequency. Conversely, the market is suitable for generic transactions i. e. transactions that do not require investment in idiosyncratic assets. Whereas interfirm cooperation can be adopted for medium-specific transactions. Right here, uncertainty and frequency come into play in organizational choice. High uncertainty requires contractual parties to constantly renegotiate to include new contingencies. As a consequence, a high frequency means a strong recurrence of a contract award. In this situation, high transaction costs are avoided by the use of hierarchy. Otherwise, the hybrid form is the one to be chosen (Williamson, 1991).

In addition, the behavioral characteristics of the actors involved in the transaction are a major source of transaction costs. The *homo-economicus* with limited rationality may be faced with a risk of opportunism on the part of the party with more information about the transaction in question (Akerlof, 1970; Demsetz, 1983). This illegal behavior requires the implementation of

control and monitoring procedures to identify such risk, and thus excess transaction costs will occur. Just like production costs, transaction costs decrease when the firm chooses Offshoring. Today, it is widely acknowledged that more and more firms are adopting Offshoring to complete a given transaction. This justifies, in terms of transaction costs, that this strategy does indeed reduce the total costs of the client firm by reducing transaction costs. The nature of the investment and the communication between the client firm and its provider leads to lower transaction costs.

From the point of view of the specificity of the assets, it is clear that Offshoring is based on a moderately specific contract. Generally, Offshore strategies are particularly aimed at intangible projects and services such as technology and research and development (Carmel and Tjia, 2005). The degree of deployability of assets in this industry remains high. The service provider thus becomes able to redeploy his assets in other similar transactions. Indeed, transaction costs, which are a function of the specificity of the assets, become low.

Moreover, it is particularly external uncertainty that has been tightened as a result of the use of ICTs. This type of uncertainty, which refers to any unpredictable external factors that may impact on the bilateral relationship, is weakened by ICTs. Information about the service provider, the outsourced activity and the external environment of the customer firm became easily accessible, quickly and inexpensively. Indeed, external uncertainty is supposed to be low, which leads to lower transaction costs.

Moreover, the impact of ICTs on transaction costs is well illustrated by the computerization of the contractual relationship, as the latter remains the main source of costs. The costs of finding a provider, selecting, contracting and monitoring him become low due to the use of ICTs. This proposal was highlighted and confirmed by Malone and others (1987) and Barthélemy (2007). Furthermore, Reix (2004) sees that the use of information technology leads in particular to a reduction in communication time and costs.

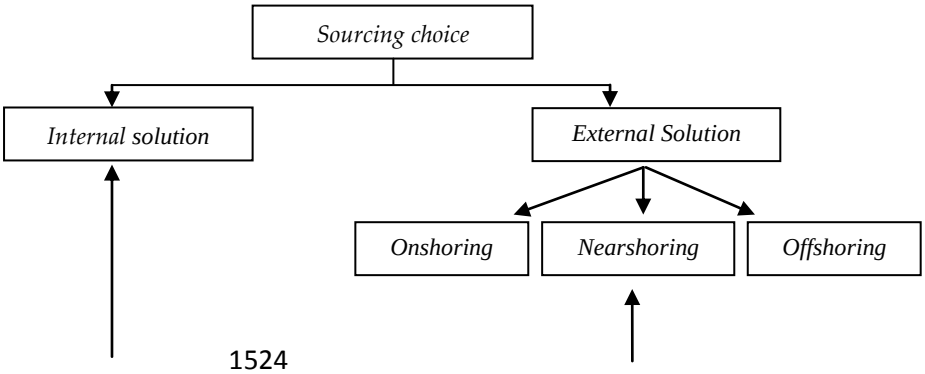
Thus, virtual communication between two parties contracting for Outsourcing undeniably reduces both information asymmetry and the

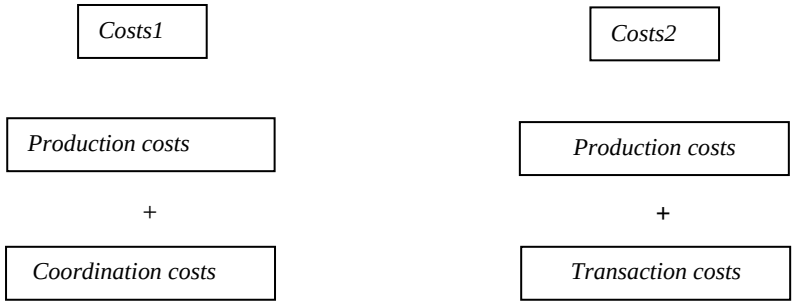
possibility of opportunistic behavior (Nemmiche et al., 2014). Certainly, these two factors remain the main sources of transaction costs. The transaction costs generated by the choice of Offshoring are now low compared to a previous period. Hence, the transaction costs that may arise when using Offshoring are minimized today. This perception, which is widely appreciated by client firms, encourages many of them to follow this approach.

4. Towards a complementary framework for Offshoring

Offshoring offers an advantage in production and transaction costs. So linking the use of this fair strategy with a single cost component remains unreasonable. Transaction costs theory has thus emerged as an integrative theoretical framework in dealing with such research problems. The TCT includes in its proposals production costs as well as transaction costs as a cost determinant specifying the most economical solution. Thus, this theory forms a conception that is closer to the reality of *the raison d'être* of Offshoring. According to the TCT, the market is limited to satisfying simple, standard and predefined needs. Subsequently, for contradictory needs, the organizational triplet shrinks to a dualism that includes: Insourcing and Outsourcing. It is therefore necessary to balance all the costs generated by the adoption of the internal solution with those generated by Outsourcing. The choice of Sourcing is interpreted according to the following rule.

Figure. 2: The choice of Sourcing according to the assumptions of the TCT





Source: according to the author

For the firm seeking to reduce costs, the TCT states that:

If Costs1< Costs2: the firm chooses the internal solution (Insourcing);

If Costs2< Costs1: the firm chooses the external solution (Outsourcing).

The notion of coordination costs generated by the internal functioning of the hierarchy is rather vague. Under various names such as organizational costs or bureaucratic costs, Williamson (1988) considers that the latter occur through the use of hierarchy as a means of coordination. These costs are therefore a function of the size of the firm, since the larger the firm, the higher the coordination costs and the more costly the bureaucracy (Williamson, 1991). Consequently, the TCT excludes these costs from its analysis since its predetermination remains insignificant as to the direction of the firm's organizational choice.

Production and transaction costs are therefore seen as the main factors influencing the Sourcing decision. The TCT indicates that the provider always has the cost advantage over the client firm (Quélin, 1997). Transaction costs then become the basic element of analysis between internal and external solutions. Whichever external solution is chosen, production costs become low compared to in-house solution. When comparing Offshoring with Onshoring and Nearshoring in terms of production costs, the latter

depends on the area to which the client firm belongs. The most important thing for the latter is to target the provider that offers low-cost services regardless of the distance. Therefore, the further away the client firm is from the party in question; the more the production costs lean towards Offshoring (Kohler and Kukharskyy, 2019).

On the other hand, it is clear that Offshoring is focused on certain industrial sectors. These are sectors that are characterized by low asset allocation in single transactions. Indeed, by adopting Offshoring, transaction costs become low in this respect. For the other two forms of Outsourcing, the comparison depends on the nature of the industrial sector in which the transaction takes place.

Thus, establishing a computerized relationship between the two poles is essential to execute an Offshore transaction. This leads to low transactions costs since uncertainty; information asymmetry and the possibility of opportunistic behavior emerging are low. Contrary to what was common in a previous period, transaction costs have become a function of the degree of computerization of the relationship between the client firm and its provider and not of the geographical distance between them. In this sense, no differentiation linked to the gap is therefore highlighted between Offshoring and the other two forms of Outsourcing.

As a result, there is a widely perceived great interference with the economic reasoning behind Offshoring. It turns out that by comparing the choice of Insourcing and Offshoring, the profit leans towards Offshoring in terms of production and transaction costs. However, the decision to use one form of Outsourcing to the detriment of the other two remains dependent on certain considerations that determine the level of production and transaction costs.

A single source of costs is therefore not enough to interpret the choice of Offshoring. Assuming that the transaction costs appear to be estimated to be high, the production cost advantage created by the use of Offshoring will never be reflected in the reduction of total costs, which is the main goal that the client firm is seeking.

Consequently, the production cost approach alone is unable to justify the choice of Offshoring among the various modes of resource coordination. This result therefore confirms the first assumption that production costs fail to justify the use of Offshoring in isolation. For its part, the economic analysis of Offshoring has underlined the importance of CCT as a theoretical framework for the decision to use offshoring. The second hypothesis is therefore confirmed and the TCT represents a complementary angle to the previous reasoning regarding the choice of Offshoring.

It must therefore be said that production costs remain an undeniably restrictive explanatory framework for Offshoring and that TCT must imperatively fill the analytical gap in the economic perception of Offshoring. Accordingly, there is a clear need for economic harmonization between the production cost approach and the principles of TCT in order to fully address the issue of Offshoring.

Conclusion

In this work, an economic complementarity that has not previously existed in the literature on Offshoring was presented. The idea widely deployed as to *the raison d'être* of Offshoring resides in the dissimilarity linked to the production costs borne by service providers belonging to certain countries. However, Offshoring as a form of Outsourcing is considered under the TCT as a process through which the firm can reduce the overall costs of a function by reducing production and transaction costs.

Of course, Offshoring stands out from other organizational solutions by its ability to reduce both production and transaction costs. Although production costs are often seen as the main factor triggering Offshoring, it is necessary to say that the impact of transaction costs on this strategic choice is indisputable.

To grant such an approach with production costs only remains defective. In this sense, it is safe to say that the TCT analysis is more globalizing than a simple consideration based on the difference in production costs. For this reason, the TCT appears as an extremely typical theoretical framework for dealing with the Offshoring decision.

Conceiving Offshoring from a TCT point of view will therefore be closer to reality because the latter approach is more global than a simple conception based on the notion of production costs. The TCT deserves to be considered as a pioneering theory regarding the firm's problems and the movement of its boundaries. The production cost approach accompanied by an analysis based on the assumptions of the transaction costs theory is therefore sufficient to form a fully illustrative framework for the rationale of Offshoring.

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