HAL
open science

The outsourcing decision process in humanitarian supply chain management evaluated through the TCE and RBV principles

Loïc Cohen

To cite this version:

Loïc Cohen. The outsourcing decision process in humanitarian supply chain management evaluated through the TCE and RBV principles. RIRL 2016 11ème Rencontres Internationales de la Recherche en Logistique et Supply Chain Management, Ecole Polytechnique Fédérale de Lausanne (EPFL) Sep 2016, Lausanne, Switzerland. hal-01471643

HAL Id: hal-01471643

https://hal.science/hal-01471643v1

Submitted on 20 Feb 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

The outsourcing decision process in humanitarian supply chain management evaluated through the TCE and RBV principles.

Author: Loïc Cohen, PhD Student. Univeristy Aix-Marseille Cret-LOG (France)

Abstract: This paper assesses how Transactions Cost Economics (TCE) and Resources Based View (RBV) theoretical principles used in supply chain management (SCM) to explain the outsourcing decision process, can support this process in humanitarian supply chain management (HSCM). The applicability evaluation of these theories principles to HSCM is conducted firstly, by screening the literature relating to the outsourcing decision process supported by the TCE and the RBV in SCM. Secondly, by screening the literature on HSCM in order to define its specificities. Despite the differences between the "humanitarian" and "commercial" contexts, this paper should reflect the possibility of selecting and combining the two key theories principles applicable in SCM, to explain the outsourcing decision process in HSCM.

Keyword: Outsourcing decision, TCE, RBV, Humanitarian Logistics, Supply chain Management.

In the recent years, humanitarian organisations are under pressure from donors for delivering to the beneficiaries a more cost-effective assistance with a better transparency of the supply chain activities (Cozzolino, 2012). These donor's requirements raise awareness from humanitarian organisations that the improvement of the entire supply chain is necessary to enhance effectiveness and efficiency of the supply chain. In order to address donor' requirements and also to focus efforts on their core business such as the programs, some organisations are considering the option to externalise a part or the entire management of their supply chain to the private sector (Balcik et al, 2010).

In general, the outsourcing decision process has been mainly analysed by researchers through the TCE and RBV lens. In this context, this study is guided by the following research question:

- Given the important differences to be acknowledged between the "humanitarian" and the "commercial" contexts, are TCE and RBV perspectives used in SCM to support the outsourcing decision process, could be transposed to analyse the outsourcing decision in HSCM?

As stated by Jahre et al (2009), at this stage it is not clearly established which theoretical concepts the HSCM "borrows" its theories from. Therefore, in order to get a better understanding of the HSCM processes and for providing some theoretical perspective to the discipline, it would be interesting to test the applicability of key theories from the SCM to the HSCM.

The overall research methodology includes three different steps. The initial step is to screen the literature relating to the outsourcing decision process. The rationale for this approach is to identify how TCE and RBV principles support the decision to outsource SCM activities. The second step is to undertake an analysis of the humanitarian logistics literature in order to understand the specificity of the HSCM, and also to identify the trends in outsourcing supply chain management activities within the humanitarian sector. In a third stage, we will assess the applicability to the humanitarian supply chain of the two main theories principles governing the outsourcing decision process. In an emerging research field such as the HSCM, researches focusing on the use of theories principles are rare, therefore within the specificity of the HSCM this paper aims to provide a theoretical perspective to support the outsourcing decision process.

SCM OUTSOURCING

In the commercial sector, the outsourcing of SCM activities has been a common practice for decades. In general terms, the reasons invoked by the firms to outsource SCM activities are, to turn fixed costs into variable costs, to avoid heavy investments associated with logistics, to improve operating performance, to gain on flexibility and to focus more on their core business.

The researches on the outsourcing phenomenon take their bases on several different theories, some of them can be complementary and some other are contradictory, which can create some confusion in the analysis of the outsourcing decision process. As stated in the literature (Perunovic and Pedersen, 2007; Mc Ivor, 2009; Neves et al, 2014; Halldórsson et al 2015) the outsourcing decision process analysis takes ground essentially on the Transaction Cost Economics (TCE) and/or the Resource Based Views (RBV) theories.

- Transaction Cost Economics (TCE)

According to many researches the TCE has traditionally been the theory which provides the best decision-making tool in order to assist organisations to cut costs in deciding which of their operations should be outsourced (Ivanaj and Franzil, 2006; Mc Ivor, 2009; Spina et al, 2016). Initially, Coase (1937) noted that firm's decision to make an economic exchange, incur some costs. Later, Williamson (1975) defined the transaction costs as "*the costs that attend completing transactions by one institutional mode rather than another*". These costs can be divided in two types: ex-ante costs (prospecting, evaluation of the partner and the formulation of the contract) and ex-post costs (service provider performance monitoring and contract management). According to the theory, in considering the behaviour of the economic partners (limited rationality and agent's opportunism), three different sorts of transactions governance are supposed to influence the level of transactions costs. The different types of governance are, the market, the hierarchy and a hybrid form between the market and the hierarchy. As developed by Williamson (1975), three principal variables can affect the level of transaction costs which are assets specificity, uncertainty, and frequency of the exchanges:

- **The frequency of exchange** refers to the number of times the transaction takes place between the buyer and seller. According to the literature, outsourcing is justified only in case of a high degree of exchange frequency. Consequently, the trend is to outsource frequent recurring activities and to keep in-house non recurrent ones.

- **Uncertainty of the transactions** refers to the probabilities related to the exchanges type and occurrence. It implies a complex contract definition because all probabilities related to the type of exchange might be difficult to be specified for all situations. Consequently, it would be complex for the buyer and the seller to monitor and control the situation. In logistics, uncertainty causes difficulty for the principal to define and to forecast a highly fluctuating demand. Generally, there is a tendency to outsource activities in a context of low uncertainty.

- **The assets specificity** refers to the specific attributes of the transaction due to site, physical or human assets specialisations. For non-specific assets, service providers can achieve economies of scale by providing standardised products or services to several customers. Therefore, the market governance is the most efficient option for non-specifics assets.

To summarize, in order to reduce transaction cost impact, a company would have the tendency to outsource activities having a high frequency of exchange, having a low uncertainty of occurrence and requiring a low assets specificity.

- The Resource-Based View (RBV)

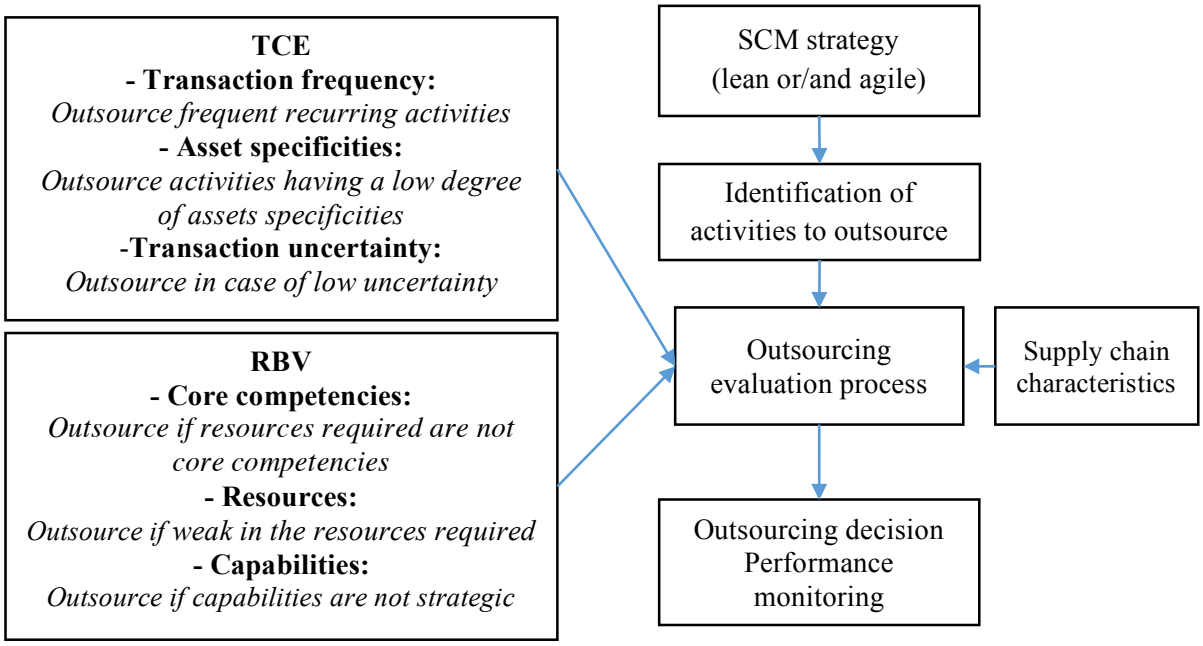
Beside the minimization of the transaction costs ruled by the TCE, outsourcing decisions are evaluated as well through the RBV. This is in order to define the relevancy to keep in-house core competencies and to outsource non-strategic activities (Mc Ivor, 2009). Prahalad and Hamel (1990) have first established the link between core competencies and outsourcing. Quinn and Hilmer (1994) have systematized the process to identify which activities can be outsourced through the RBV. They recommend that firms should keep in-house and focus on core competencies in which they have definite advantages and to outsource of activities in which the firm has no critical strategic need or special skills. Outsourcing an activity can be seen as the mean to reduce a performance differential between the internal capabilities of the company and the quality of services available externally (Grant, 1991). The goal is to have access to resources and specific skills that would be difficult to accumulate internally. In this perspective,

outsourcing allows the firm to use expert skills from the market and to focus internally on its core competencies.

Resources are strengths or weaknesses of a firm, or tangible and intangible assets tied to a firm. They are valuable, rare, inimitable and non-substitutable, they provide to the firm a competitive advantage. According to the analysis of the outsourcing decision process through RBV:

- A firm outsources an activity when it is weak in the resources required for this activity.
- A firm outsources an activity when the resources required are not core competencies.
- A firm outsources an activity if capabilities in this activity are not strategic.

The schema below summarizes the outsourcing decision process supported by TCE and RBV:



Schema 1: outsourcing decision process

To conclude on the TCE and RBV attributes, the TCE offers a short-term approach based on costs reduction and the RBV proposes a long-term perspective including a strategic vision in the outsourcing decision. Therefore, TCE and RBV are complementary and can be coupled to guide the "make or buy" decision process (Mc Ivor, 2009; Gerlb et al 2015; Halldórsson et al, 2015).

THE HUMANITARIAN SUPPLY CHAIN: TEMPORALITY & UNPREDICTBILITY

When it comes to the definition of "humanitarian logistics", the most commonly used definition is the defintion from Thomas and Mizushima (2005): "*Humanitarian logistics is the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from point of origin to point of consumption for the purpose of meeting the end beneficiary's requirements".*

HSCM is involved in three specifics phases, which are the preparedness, the immediate response and the reconstruction phase. Depending of the phase, different supply chain principles might be applied. Many authors have defined the HSCM as an agile supply chain (Charles et al, 2010; Cozzolino et al, 2012; L'hermitte et al, 2015) and have highlighted the distinction between agile response and lean reconstruction. HSCM is the most expensive part of any relief operations and it can make the difference between a successful or failed operation (Van Wassenhove 2006).

It is also important to note that the humanitarian sector regroups a wide panel of different types of organisations which range from NGOS, UN agencies, International Organisations, etc. Although, even if they operate in the same context, the place of the HSCM within the organisation and the level of logistical capabilities vary from one organisation to the other **(**Thomas and Kopczak, 2005). Some of the largest organisations consider HSCM as a central function in emergency response, at the opposite some other organisations often neglect the importance of the logistics' role (Kovacs and Spens, 2009). Various factors, such as their size, mandate, funding sources and spezialization, define their organizational structure and their operational boundaries, which impact their HSCM strategy.

Many authors (Beamon 2004; Van Wassenhove 2006; Kovacs and Spens 2007; Day et al, 2012) have highlighted the differences between business sector SCM and HSCM. They note that there are important differences to be acknowledged between the "humanitarian" and "commercial" contexts. The main specifies of the HSCM are:

. The unpredictability of the demand makes forecasting difficult in terms of timing, location, type, volume of supplies.

. The operational context makes very complex the effective flow of goods and information.

. The imperatives associated with the time constraint for the delivery of supplies.

. The strategic goal is to minimize the loss of life and alleviate suffering, it is not based on profit

. The recurrent lack of resources in terms of supply, expertise, technology, capacity, funding.

. The supply chain life span is short term and temporary.

Humanitarian supply chains are driven in project mode and they can be considered as temporary organizations from permanent structures. In order to assemble specific skills in a given time, the use of the service providers is common in this context of project management. Also, it is important to note that relief organisations are in competition to access funding, and donors are demanding greater accountability and better performance. Since logistics accounts for about 60% of a relief operation (Van Wassenhove, 2006), improving HSCM performance would surely give a ''competitive advantage'' to relief organisations to access funding. One way envisaged by certain organisations to improve the performance of their HSCM activities, is to delegate the conception, the management and the coordination of such activities to logistics service providers. Given the high level of investment required to own logistics assets, the unpredictability of the demand, the complexity of the operational context and as well the short time life span of the supply chain, most of the organisations spot contract extensively logistics services. Organisations work already with 3PL (third party logistics) logistics services providers (LSP) but the use of 4PL (fourth party logistics) is not really observed in the HSCM (Balcik et al, 2010). However, it is important to note that there is a changing trend because the role of logistics service provider grows into important players and 4PL can act as an integrator and a coordinator in the HSCM (Vega and Roussat, 2015).

In addition, as discussed by Jensen (2012), the logistics cluster leaded by the World Food

Programme can carries tasks related to 4PL role such as services provider, integrator and coordinator. Having such form of 4PL services provision from an ''Insider'', can provide to many organisations the logistics expertise and capacity that they are missing. That would create less contractual complexity, because such services are specifically funded by donors and are dedicated to the humanitarian organisations for a specific emergency response.

RESULT/ FINDING

Based on the two main theories principles used to support the outsourcing decision process and based on the main characteristics of the HSCM, we have developed the two tables below to assess how the two theories principles support the outsourcing decision process in the HSCM.

- TCE

Principles	Outcomes applicable to SCM	HSCM characteristics	Outcomes applicable to HSCM
- Frequency of exchange	Outsource regular and frequent activities.	HSCM activities are not necessary frequent but can be diverse	Outsourcing is not recommended as HSCM activities aren't necessary frequent and recurrent. Contract definition and monitoring will be very complex. This will incur high level of transaction costs.
- Assets specificity	Outsource activities with a low degree of assets specificities	HSCM Assets are not specifics	Outsourcing is recommended as logistics assets are not specific but require a high level of investment. LSP can invest in such assets and make economy of scale by having several customers.
-Uncertainty	Outsource in case of low uncertainty.	HSCM is characterized by a high level of uncertainty of demand (scale, location….)	Outsourcing is not recommended. Uncertainty is a key characteristic of the HSCM. Contract definition and monitoring will be very complex, and will incur high level of transaction costs.

We have seen that commercial companies often choose to outsource activities in the aim of reducing transaction costs. Humanitarian organizations are not profit-maximizing entities, but they aim to make their activities cost effective, which makes the application of TCE to this sector slightly different. Outsourcing decision process evaluated through TCE tells us that following the analysis of two TCE principles, which are the frequency and the uncertainty of the exchange,

the outsourcing is not recommended. Given the characteristics of the HSCM and the high level of uncertainty, the analysis through the uncertainty principle will always give a negative outcome in the decision process. One of the reason is that the coordination cost would be high in a constantly changing operational context. Considering all the specificities that characterize the HSCM, we can deduct that the outsourcing process of a part or the entire supply chain management can be complex to define, implement and monitor. However, a hybrid form of governance between the hierarchies and the market can be adapted to the HSCM characteristics and can be defined between both parties.

- RBV

Principles	Outcomes applicable to SCM	HSCM characteristics	Outcome applicable to HSCM
- Core competencies	Outsource activity if resources required are not core competencies	Most organisations consider HSCM as a non-core competency	Depending of the profile of the organisation, outsourcing is recommended if HSCM isn't considered as a core competency
- Resources	Outsource activity if weak in the resources required	Most organisations are weak in resources for an effective HSCM	Outsourcing is recommended. As most organisations are dependent of donor funding, investment in HSCM resources acquisition is difficult
- Capabilities	Outsource activity if capabilities are not strategic	Most organisations consider HSCM as non-strategic	Depending of the profile of the organisation, outsourcing is recommended if HSCM is not strategic for the organisation

From a general point a view, we can deduct from the above table that according the analysis through the RBV principles and considering the HSCM characteristics, the outsourcing is recommended in all the cases. Accordingly, a resource-based view is particularly appropriate for examining HSCM outsourcing because organisation can use outsourcing as a strategy for gaining access to resources and capabilities. However, as we have seen previously, if relief organisations work in the same context, they can be very diverse depending of their mandate, funding, specialties and profile. Therefore, the resources profile, the capabilities and the strategy of an organisation can heavily influence the outcome of the outsourcing evaluation process through

the RBV. A deep analysis of the organisation profile can help to define to which extent the HSCM activities can be outsourced.

In addition, most of organisations are dependents on the funds provided to them by the institutional donors and the constraints of such funding give them a low level of manoeuvre in capabilities development. Consequently, as outsourcing entails buying a service instead of investing in the capabilities development to perform it in-house, the donors funding mechanism influences the decision process by limiting the options in internal capabilities development.

CONCLUSION

There is a growing body of literature arguing that TCE and the RBV are complementary to each other, which is based on the recognition that each theoretical perspective alone cannot fully explain the outsourcing decision. TCE offers a short-term approach based on costs reduction and the RBV propose a long-term perspective including a strategic vision in the outsourcing decision by gaining access to capabilities. However, as noted by Tabakar et al (2015), on a theoretical perspective, the characteristics on speed, agility, and flexibility are difficult to encapsulate in theories that are used in SCM research. Some supply chain decisions, such as outsourcing, are based on comparative analysis of possible alternatives, but these remain statics in the sense that they don't really include the agility and the contingency aspects which are the essential component of the HSCM.

In addition, in this paper we face some limitation because we have been very generalist on the profile of the relief organisations and it appears that mandate, funding, strategy, speciality of each organisation, are key elements in the outsourcing HSCM decision process. We believe that this paper can initiate interesting further researches on HCSM, in which we can define the typologies and the profiles of humanitarian organisations in order to determine if they are prone (or not) to outsource the management of their supply chain.

REFERENCES:

- Balcik, B. Beamon, B. Krejci, C. Muramatsu, M. and Ramirez, M. (2010), *Coordination in humanitarian relief chains: Practices, challenges and opportunities*. International Journal of Production Economics 126(1): 22–34.

- Barthélémy, J. (2004), *Comment réussir une opération d'externalisation*. Revue française de gestion, juillet-août, n° 151, p. 9-30.

- Beamon, B. (2004*), Humanitarian relief chains, issues and challenges*. Proceedings of the 34th International Conference on Computers & Industrial Engineering, pp. 77-82.

- Charles, A. Lauras, M. and Van Wassenhove, L. (2010), *A model to define and assess the agility of supply chains: building on humanitarian experience*. International Journal of Physical Distribution & Logistics Management, Vol. 40 No 8-9, pp. 722-741.

- Chicksand, D. Watson, G. Walker, H. Radnor, Z. Johnston, R. (2012), *Theoretical perspectives in purchasing and supply chain management: an analysis of the literature*. Supply Chain Management: An International Journal, 17(4), 454–472.

- Coase, R. (1937), *The Nature of the Firm*. Economica, New Series, Vol. 4, No. 16. pp. 386-405

- Cozzolino A. Rossi, S. Conforti, A. (2012), *Agile and lean principles in the humanitarian supply chain*, Journal of Humanitarian Logistics and Supply Chain Management, Vol. 2 Iss 1 pp. 16 – 33.

- Day, J. Melnyk, S. Larson, P. Davis, E. Whybark, D. (2012), *Humanitarian and disaster relief supply chains: a matter of life and death*, Journal of Supply Chain Management, Vol. 48 No. 2, pp. 21-36.

- Grant, R. (1991), *The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation*. California Management Review, spring, pp.114-135.

- Gerbl, M. McIvor, R. Loane, S. Humphreys, P. (2015), *A multi-theory approach to understanding the business process outsourcing decision*, Journal of World Business 50 505-518.

- Halldórsson, A. Hsuan, J. Herbert Kotzab, H. (2015*), Complementary theories to supply chain management revisited – from borrowing theories to theorizing*. Supply Chain Management: An International Journal, Vol. 20 Iss 6 pp. 574 – 586.

- L'Hermitte, C. Bowles, M. Tatham, P, Brooks, B. (2015), *An integrated approach to agility in humanitarian logistics*, Journal of Humanitarian Logistics & Supply Chain Management, Vol. 5 Iss 2 pp. 209 – 233.

- Ivanaj, V. Masson-Franzil, Y. (2006), *Outsourcing Logistics Activities: A Transaction Cost Economics Perspective*. 15th Conference Internationale de Management Stratégique, Annecy/Geneve, 13-16.06.2006, ss.1- 25.

- Jahre, M. Jensen, L. Listou, T. (2009), *Theory development in humanitarian logistics: a framework and three cases*, Management Research News, Vol. 32 No. 11, pp. 1008-1023.

- Jensen, L-M. (2012), *Humanitarian cluster leads: lessons from 4PLs*, Journal of Humanitarian Logistics and Supply Chain Management, Vol. 2 Iss 2 pp. 148 – 160.

- Kovacs, G. Spens, K. (2007), *Humanitarian logistics in disaster relief operations* International Journal of Physical Distribution & Logistics Management, Vol. 37 No. 2, pp. 99-114.

- Kovács, G. Spens, K. (2009), *Identifying challenges in humanitarian logistics*. International Journal of Physical Distribution & Logistics Management, 39(6), 506–528.

- McIvor, R, (2008), *What is the right outsourcing strategy for your process?* European Management Journal 26, 24– 34.

- McIvor, R., (2009), *How the transaction cost and resource-based theories of the firm inform outsourcing evaluation,* Journal of Operations Management 27, 45–63.

- Neves, L. W. A. et al, (2014), *Outsourcing from the perspectives of TCE and RBV: A multiple case study*. Production, v. 24, n. 3, p. 687-699.

- Perunovic, Z., Pedersen, J.L., (2007), *Outsourcing process and Theories,* S. Gupta, & J. Coelho (Eds.), Proceedings of the 18th annual conference of the Production and Operations Management Society 2007.

- Prahalad, C and Hamel, G (1990), *The Core Competence of the Corporation*, Harvard Business Review, 68(3), 79- 93.

- Quinn, J.B & Hilmer, F.G. (1994), *Strategic outsourcing*, Sloan Management Review, Vol. 35, No. 4, pp. 43-55.

- Spina, G. Caniato, F. Luzzini D, Ronchi S. (2015), *Assessing the use of External Grand Theories in Purchasing and Supply Management*, Research Journal of Purchasing & Supply Management 22 (2016) 18–30.

-Tabaklar, T. Halldórsson, A. Kovács, G. Spens, K. (2015), *Borrowing theories in humanitarian supply chain management*, Journal of Humanitarian Logistics & Supply Chain Management, Vol. 5 Iss 3 pp. 281–299.

- Thomas, A., Kopczak, L. (2005), From Logistics to Supply Chain Management: *The Path Forward in the Humanitarian Sector*, Fritz Institute, San Francisco, CA.

- Thomas, A. Mizushima, M. (2005), *Logistics training: necessity or luxury? ,* Forced Migration Review, No. 22, pp. 60-61.

- Van Wassenhove, L.N. (2006), *Humanitarian aid logistics: supply chain management in high gear*, Journal of the Operational Research Society, Vol. 57 No. 5, pp. 475-489.

- Vega, D. Roussat. C, (2015), *Humanitarian logistics: the role of logistics service providers*, International Journal of Physical Distribution & Logistics Management, Vol. 45 Iss 4 pp. 352–375.

- Williamson, O.E. (1975), Markets and Hierarchies: Analysis and Antitrust Implications, Free Press, a division of Macmillan, Inc., New York.