

# Third Party Logistics Relationship (TPLR) Success Factor: Operational Perspective

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## Abstract

Outsourcing is dominant in many businesses to achieve competitive advantage and logistics outsourcing has been the focus for many businesses in industrial markets. Contracting out full or some of logistics activities to the expert that called as third party logistics provider (TPL) is conceded as core strategy to obtain competitive advantage for many manufacturers in many industries. However, we know little about logistics outsourcing relationship or also known as third party logistics relationship especially with regards to operational perspectives and how does it affects the success of any logistics relationship. Using Malaysia as a research setting and transaction cost theory (TCT) as the theoretical lenses, this paper explicates the relationship between automotive manufacturer (AM) and TPL. The focus of this study is both AM and TPL with dyadic as a unit of analysis in this research. This study demonstrates that several operational factors are critical needed to establish successful third party logistics relationship (TPLR) between AM and TPL. The five key operational factors examine in this study are known as the use of technology, the price of logistics service, information sharing between AM and TPL, investment on asset and system, as well as logistics service performance. The discussion of this study is grounded in seven case studies (multiple case analyses) in the automotive sector in Malaysia. To increase the reliability of case study research, this study follows established case study protocol guideline. The findings supply chain relationship and logistics domain of study. The originality and novelty of this research is on its unique context which is focus on the operational factor of TPLR in one specific industry namely automotive, in Malaysia, and the investigation is from a dyadic perspective. Key findings from this research may give positive impact to the practitioners via the development of novel on TPLR (third party logistics relationship) success factor. Additionally, the study may transferrable to other context that has similar environments.

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**1. Introduction**

Outsourcing is a prolific term that explains contracting out activity of some function of the organization to the external party. Intensified universal rivalry and aiming to provide beyond customer needs have led organization to focus on their core activity. Logistics outsourcing is a popular activity among the manufacturers as it is acknowledged as a key strategy to achieve competitive advantage and business sustainability (Ahmad et al 2019; Lai et al., 2012, Abdul Rahman 2012, Abdul Rahman et al. 2014; Huo et al, 2016; Vaidyanathan, 2005; Vijayakumar et al, 2019). It is a strong recognition that manufacturer has to focus on their main production, hence the logistics activities mostly outsource to the third party logistics provider (TPL). Logistics is vital for any industries as it moved the product or materials from one location to another. As highlighted by Jayaram and Tan (2011), logistics includes activities of transportation, warehousing, and coordinating resources and services throughout the supply chain network (from point of origin to point of consumption). Logistics is considered as part of supply chain activity that transfer the product via effective transportation and storage of goods and service. At present, logistics is recognized as the fastest growing industries worldwide. At present, the global logistics market has reached USD 4730 billion in 2018. As reported by Statistica (2018), the size of the global logistics markets in four regions (Europe, North America, Asia Pacific and others) has increased (see Table 1 below).

Table 1: Size of global logistics market in the world

Region	Size of global logistics market (Euro billion)
Asia Pacific	2425.91
Europe	911.19
North America	1400.62
Others	844.86

Source: The author

Research with regards to logistics is growing and past research shows the importance to establish long term relationship between logistics users and the TPL. As mentioned by Abdul Rahman et al (2014), successful dyadic relationship not only contribute to the sustainability of both parties, but also helps to establish reputation and brand image of the companies. Having reviewed the past literature, questions have been raised with regards to the factors that contribute to the long terms success of many partnerships.

As highlighted by Daugherty et al (2011) and recently by Rahman et al (2019), future research should warrant investigation on the successful factor that influence the relationship performance such as regards to relational factors, operational factors including the technology and the service quality. It is imperative for both parties to develop appropriate metrics to monitor relationship performance. In this study, the researcher

strongly agrees that in business market, any partnership or alliances among channel member is vital. In a context of business to business or also called as industrial market, the inter-organizational alliances is depicted with formal action as stated in service level agreement (SLA) or contract agreement (Mudambi et al., 1997), rather than informal behavior which is driven more by culture. With that, this study decided to focus on operational perspectives and exclude the relational and cultural factor in the investigation. The heart of this research is on logistics relationship between automotive and their TPL in Malaysia. Automotive industry is chosen in this study because the industry is a major industry for many countries. In general, it has contributed to economic growth and globally, the global auto industry expected to achieve 77 million automobiles sales at the end of 2019 (Statistica, 2019). While Malaysia is chosen in this study as it is recognized as the third largest automotive industry in Southeast Asia (SEA). Also, automotive industry discussion with regards to logistics partnership is still lacking in the past research discussion. Previous studies on logistics relationship focus on manufacturer from other industries such as construction, food manufacturing, consumers' products and others. There are dearth of literature that looks into logistics partnership in the automotive sector. Therefore, the selection of automotive and Malaysia country as a focus in this study is justified. This paper starts with the theoretical underpin of the logistics relationship and buyer supplier relationship in supply chain domain. The structure of the paper is coordinated as follows.

In literature review section, discussion starts with conceptual elaboration with focusing on the concept of operational factors examined in this study, as well as transaction cost theory overview. On this basis, we build on the proposition and analytical model for successful relationship between AM and TPL. AM in this study is refer to the car manufacturer. The discussion continues with elaboration on the research context and qualitative case study method opted in this research. The findings are then presented and this paper also highlights both theoretical and managerial implication, as well as offering future research suggestion for logistics scholars. To summarize the core of this research, Figure 1 illustrated the main aim and research questions of this study.

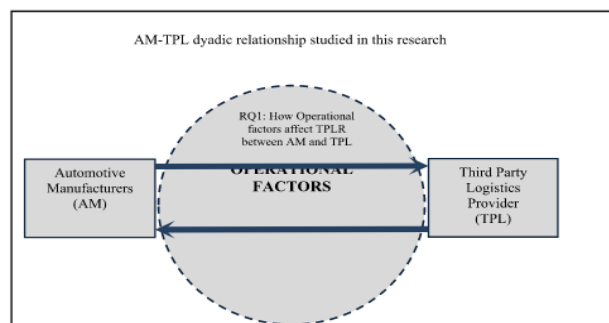


Figure 1: The core of the research

Source: The author

## 2. Literature Review

### Third Party Logistics Provider (TPL) and Third Party Logistics Provider Relationship (TPLR)

Research on TPL starts as early as 1970s. After almost 5 decade of the logistics study, the provision of TPL discussed in the literature can be conclude to seven categories. As highlighted in Abdul Rahman (2012), the six provision of TPL included logistics alliances, contract logistics, logistics outsourcing, logistics partnership, contract distribution and involving external parties. As highlighted by old and recent study, the function of logistics is always on the transfer of the product from one location to another (Ekeskar and Rudberg, 2016; Rahman et al 2019; Autry et al, 2001). It includes transportation and warehousing activities. Marasco (2008) defines TPL as an agent or external party that perform part or full logistics activities on behalf of their customer. According to Bowersox et al (2010), the performance of logistics function including transport, storage or warehouse are significant to manufacturing, as well as procurement.

Many definition of logistics relationship discussed in past studies. It is also refer to logistics outsourcing relationship, logistics partnership and third party logistics relationship. TPLR is considered as logistics partnership as outsourcing arrangement is also considered as partnership. According to earlier study by Lambert et al (1999, p.166), they mention that “*in fact, outsourcing arrangements are often assumed to be partnerships*”, thereby this statement acknowledging that outsourcing is connected to the long term relationship or long term alliances between TPL and the logistics users.

### Operational Factors and TPLR

For this research, we select five main operational factors to be explored in the context of successful logistics relationship in automotive industry. There are logistics service performance, technology used, information sharing, investment and price. Below table 2 elaborate further on the selection of these variables and the list of proposition, as well as conceptual framework are also develop as a focal of this study.

Table 2: Key themes on operation factors that leads to successful Third Party Logistics Relationship (TPLR)

Key themes/ Variables	Description	Sources	Proposition
Logistics service performance	Refer to logistics provider's ability and capacity to deliver the product in the given time frame consistently. Among the criteria evaluated, there are cycle times for warehouse and total order cycle time, fill rates and many more.	Forslund (2009); Blackhurst et al 2015; Bowersox et al,(2002);Dadzie et al (2005).	Logistics service performance strongly connected to successful TPLR between AM and TPL.
Technology used	Technology is critical for connectivity among the supply chain member. It refers to any system that integrates logistics activities and refer to the use of information's system or program for communication purpose, decision making, tracking and at the warehouse. Technology not only improved monitoring system in logistics activities (monitor movement of the product, storage system, monitor inventory) but also help in security, tracking, and decision making process.	Ellram and Murfield (2019); Master 1994; Rahman et al 2019; Grant et al (2006)	Technology may strongly affect TPLR between the AM and TPL in the automotive sector.
Information Sharing	Information sharing refer to the information or data exchange between two parties. Information sharing is recognized as a key strategy to improve relationship with channel members, as well as improve organizational capabilities. It has been highlighted that the way of information being transferred and the frequency of information sharing leads to successful partnership in any dyadic or triadic relationship.	Lee and Whang (2000); Bititci et al., (2004); Kleen and Rai (2009)	Information sharing between AM and TPL may lead to successful TPLR in automotive industry.
Investment	Investment is refer to activity of using money for something, whether to buy more asset, to develop something or to invest in a system. In general, partnership or dyad relationship always required resources sharing and asset sharing. It is recognized as one of the key factor for successful	Gong et al (2018); Maltz and Maltz (2008);	Investment may have positive influence to the TPLR success of between the AM and TPL in automotive sector

	channel relationship.		
Price of Logistics Services	Price and service level coverage is one of the significant factor in logistics business.	Du et al. 2018; Ghiani et al 2014	Price of logistics service has an impact on the success of the TPLR between the AM and TPL in the Malaysian automotive sector.

Source: The author

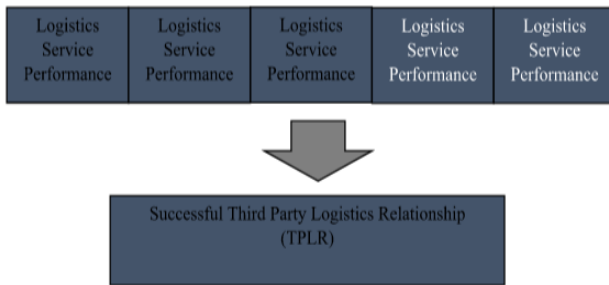


Figure 2: Conceptual model and operational key themes for further exploration

Source: The author

**Transaction Cost Theory and TPLR**

To address such issue on the success of TPLR, this are grounded upon transaction cost theory (TCT). It is extensively embraced to explain logistics outsourcing (Yuan et al., 2020). According to Williamson (2008), this theory is grounded on how the relationship between channel members is beneficial to both parties and explains how the transaction cost occurs in relationship or partnership. There are three main attributes in TCT namely asset specificity, uncertainty and frequency (Abdul Rahman 2012, Yuan et al 2020). Asset specificity refers to the asset used in inter relationship transaction between two organizations. It has specific function that can be shifted to alternative uses by other users (Williamson, 1989), for instance car carrier, container etc. Asset always acknowledged as the core attributes in TCT and it also refers to the level of service customization associated with the transaction (Geysken et al. 2006; Abdul Rahman, 2012). On the other hand, uncertainty in TCT refers to the “computational inability to ascertain the structure of the environment” (Williamson, 1989). While frequency refer to the frequency of logistics transaction. It is about the repetitiveness of logistics transaction between TPL and their customer (Miranda and Kim, 2006).

**Qualitative Case Study Method**

This research opted for qualitative case study method. Multiple case using three phase case study protocol are developed with a reference from Eisenhardt (1989). In this research, seven dyadic cases from automotive industry are examined. (Case A to Case G). Seven cases are justified in this study as the aim of qualitative study is not to generalize, but to have a deep understanding on the

phenomena (Merriam 1992; Rahman et al 2018). Case study research aim to understand complex phenomena (Yin, 2009). In this research, the unit of analysis is a AM and TPL dyadic relationship. One case refer to one dyadic relationship between AM and TPL. The data were collected using inductive approach with 14 organizations (seven from AM and seven from TPL). Data gathered in this study are from semi structured interview, observation and documents review. In obtaining data from semi structured interview, one page of interview guide is prepared to help the researcher to explore further on the key themes discuss in the study (Miles and Huberman, 1994; Saunders et al., 2019; Bryman and Bell (2014).

In this research, the researcher ensures the trustworthy of the data is achieved via four criteria. The first criteria are credibility. Credibility of the findings in this research is achieved via peer debriefing process during data analysis, as well as data and method triangulation. Data triangulation is achieved with multiple case study adoption in this study. While method triangulation is achieved from interview, observation and document review as a data collection method. The second criteria of trust worthiness are referring to transferability. The deep explanation on the findings provide a great basis for future research to replicate this research in different context, for instance to study in neighboring country perspectives. The third criteria namely dependability is achieved via the stability of the data. All interviewees are voice recorded and the fourth criteria namely conformability is achieved via reflexivity. The researcher not introduce any themes to the interviewees and all findings are naturally comes from the interviewees. For data analysis, the research opted for thematically analysis or known as qualitative content analysis.

**3. Key Findings**

From the findings, all interviewees correspond the importance of all key themes to influence the success of TPLR. Below Table 3 shows the key findings from the research with detail propositions and interesting quotation from the findings.

Table 3: Key findings from the research

Key themes/ Variables	Interesting Quote	Description	Revised propositions
Logistics Service Performance	<i>“If you see from the evaluation sheet, we were given the penalty as a result when we were not able to comply with what had been stated in the contract”</i>	Consist of few sub themes namely delivery times, support (car carrier), car quality, route and urgent delivery	<p>i) Delivery time has positive influence to the success of the TPLR between AM and TPL in automotive sector</p> <p>ii) Support or the number of car carriers provided by TPL is positively lead to the success of the TPLR</p> <p>iii) The product quality (cars) delivered by the TPL positively influence the success of TPLR between the AM and TPL in the automotive sector.</p> <p>iv) Route positively affects the TPLR success between the AM and in automotive sector</p> <p>v) Urgent delivery strongly give impact to the success of TPLR between AM and TPL in the automotive sector.</p>
Technology used	<i>“In any business association, communication is the core... any breakdown or hiccup in communication will affects the operation and business engagement. Technology used could reduce the miscommunication and connect every people in one business relations”</i>	System used in organization helps to improve communication among employee as well as channel member in the supply chain activity. It also lead to improve decision making process. System use and technology help both AM and TPL to improve their performance and communication in a relationship.	The use of technology positively lead to the ease of the communication which then lead to achieve successful TPLR between AM and TPL in the automotive sector
Information sharing	<i>“So far, we do share some information... but if our partner do not ask, some of information we just keep to ourselves”</i>	All interviewees from both AM and TPL agree on the importance of information sharing in inter organizational relationship. Among the information that they share includes car production number, forecast of sales, load planning and future planning..	Sharing information on sales forecast, car production number, load planning is significant to achieve a successful TPLR.
Investment	<i>“We have made a great deal of investments. We invest in terms of facilities, hardware, and software.... for instance, the GPS and tracking system. However, sometimes we do experience unaffordable as the technology is very expensive and rapidly change”.</i>	Consist of a number of investment such as investment on car carrier, GPS system, IT system for communication improvement	Investment in tracking system such as GPS, car carriers and any other type of investments lead to successful TPLR

Price of the Logistics Service	<i>“Certain requirements from the AM will increase the cost to the TPL. Therefore, the price should be negotiated again even if it stated in the contract to avoid the partner having a bad effect in order to fulfill what AM's need”</i>	Price of logistics services is depend on the logistics level customization and its influence the TPLR between the AM and TPL	The price of the transportation or storage lead to the success or failure of TPLR
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Source: The author

#### 4. Conclusion

To conclude this study enhances current understanding on buyer seller relationship in the industrial market from logistics and automotive point of view. Drawing on the transaction cost theory as a basis for theoretical underpin, it was found that asset and performance of TPL are vital to strengthen and maintain the relationship between AM and TPL in TPLR. In fact, the novelty of this study is accomplished through the establishment of AM -TPL successful dyadic relationship conceptual model as well as a list of revised proposition in this study.

This study could be used as a reference for future research to further develop this study in a larger context and multi industry investigation. Cross sector data collection could generalize the findings in the larger context. The recommendation for future research also to further look into other factor such as relational perspectives and how it affects the success of TPLR in automotive industry and other industries. Comparison between national and multinational logistics provider could also be a focus for future studies as it may lead to TPL collaboration analysis more sharp and interesting.

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