

Reengineering the Concept of Outsourcing: Air Freight Perspective in Malaysia

¹Nor Aida Abdul Rahman, ¹Mohammad Fakhruhnizam Mohammad, ²Rohail Hassan,

³Suzari Abdul Rahim, ⁴Md. Fauzi Ahmad and ⁵Suhaila Abdul Kadir

¹Universiti Kuala Lumpur, Dengkil, Selangor, Malaysia

²Universiti Teknologi PETRONAS, 32610 Seri Iskandar, Perak Darul Ridzuan, Malaysia

³Universiti Sains Malaysia, Penang, Malaysia

⁴Universiti TunHussein Onn, Johor, Malaysia

⁵Universiti Malaysia Kelantan, Kelantan, Malaysia

Abstract: This study discusses the outsourcing concept in logistics. Specifically, this study explains the determinant of air freight logistics outsourcing practice in Malaysia among the manufacturer. The aim of this study is to identify what are the key determinants for logistics outsourcing in air freight perspectives. Forty questionnaires were distributed for pilot study and only received ten in return. The industries involved in this pilot study are electrical and electronic industry, personal care and health product, IT and computer industry and household industry product. The initial findings show that the key determinant of outsourcing in air freight is to improve air freight logistics services and to get more flexible air freight service. This is followed by improving services to their customer and to obtain service from a logistics expert. This study discover and enhance current understanding of logistics in air transport in terms of value proposition from the outsourcing activity.

Key words: Outsourcing, logistics outsourcing, air freight, air freight provider, 3PL, Malaysia

INTRODUCTION

Logistics outsourcing: Logistics is the heart of supply chain since it plays crucial roles in corporate success and to gain distinctive value propositions. Without logistics, supply chain activity will not be possible. Ongoing global challenges forced many firms to outsource their business activity including logistics. As such many firms have outsourced their logistics activity either partial or fully outsource as it is recognized as a key driver to business entity to achieve supply chain agility and effectiveness (Min, 2013; Shi *et al.*, 2017). Agility has been noted as an organizational enabler of quick and efficient reaction that enables the firm to achieve a competitive advantage (Rahman, 2012; Gligor and Holcomb, 2012). A firm's supply chain agility will have affecton its overall global competitiveness. The movement of goods from one point to another point is vital for every channel member for both inbound and outbound, direct and in reverse logistics. The main channel member here refers to the supplier, manufacturer, wholesaler, retailer, dealer and customer. For instance, the manufacturer always warrants their product to reach the customer at the right time, right place

and with no defects (Leuschner and Lambert, 2016). Most of the business organizations are outsourcing their logistics activities such as transport and warehousing to the third party which is known as third party Logistics Provider (3PL). The 3PL is an external party that is expert in transportation, warehousing and handling logistics activities from one place to another (Rahman, 2012). This includes road, sea and air transport. Logistics outsourcing involves any externalization activity which was previously performed in-house.

In business, a part of logistics outsourcing (business process) been outsourced, there is avarious function that is also outsourced to an external party. For instance, there is Information Technology (IT) and Knowledge Process (KP) outsourcing. Outsourcing can be defined as contracting out some or full business function to an external party (Razzaque and Sheng, 1998; Min, 2013). It is also can be defined as the engagement of an external party, outside their organization to handle their business activities. External party here refers to the expert party that is called as 3PL. An earlier study by Sanders *et al.* (2007) show that outsourcing can be categorized into four categories namely out-tasking, co-managed services,

Table 1: Description of four type of outsourcing

Type of outsourcing	Description	References
Out-tasking	This term is not only used to explain outsourcing in business and management but also in IT study in environment and facilities studies. Out-tasking here refers to the activity that uses or specialized vendors, rather than “full-service single suppliers”. Out-tasking is the simplest activity of outsourcing where the responsibility assigned to the provider is relatively small, confined and specific. For example, a provider assigned to handle a client’s returned inventories, arranging for packaging, arranging for item disposal or restocking	Kleeman (1994), Krishnamurthy <i>et al.</i> (2009) Sanders <i>et al.</i> (2007) and Rahman (2012)
Co-managed	At this stage, the arrangement involves assigning a larger scoped task or function to the supplier compared with the previous engagement. However, this is performed under direct client control Here client and provider share responsibility for managing tasks and assets and in many cases, work collaboratively. Although, the overall function can have a strategic impact, it is the tasks with lesser strategic significances that are typically performed by the supplier	Sanders <i>et al.</i> (2007) and Rahman (2012)
Managed service	At this phase, the responsibility assigned to the provider is larger in scope than that of the previous engagements. Here the client typically engages with the provider to plan, design, implement and manage an end-to-end solution for a complete function such as the full management of a client’s transportation systems. The provider is now responsible for all aspects of the functions including equipment, facilities, staffing, software, implementation, management and ongoing improvement It is about reconfiguring the whole process in new ways. This change affects logistics in particular, where the need for process integration is a challenge that calls for new ways to share responsibilities among supply chain partners	Kaipia and Transkanen (2003) Sanders <i>et al.</i> (2007)
Full outsourcing	At this stage, the customer assigns total responsibility to the provider for the planning, design, implementation, management and often the strategic direction of the function operation or process. The services are typically highly customized to the business environment of the customer	Sanders <i>et al.</i> (2007) and Antonietti <i>et al.</i> (2016)

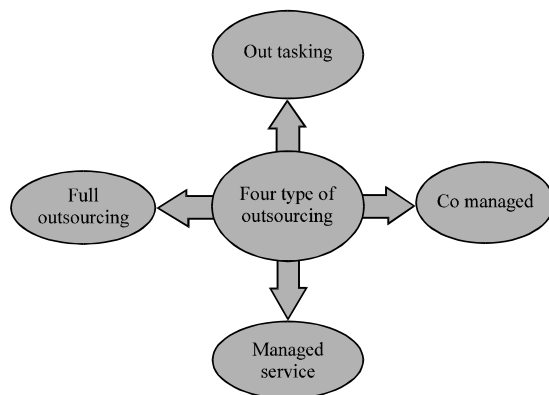


Fig. 1: Type of outsourcing

managed services and full outsourcing (Fig. 1). Table 1 explains the difference between these four type of outsourcing in term of monitoring and coordination activities. Type one, type two and type three is also known as partial outsourcing while type four is known as full outsourcing.

Past studies have shown that research in outsourcing has increased year to year including logistics outsourcing. From the previous study we can see that logistics outsourcing activity involves a high cost. However, manufacturers are willing to pay to ensure their business activity is smooth and so that they can concentrate on their core business activity. As mentioned by Laarhoven *et al.* (2000), Bardi and Tracey (1991), the potential benefits of logistics outsourcing include cost saving, improved cash flow, greater distribution network and better asset management. This is in line with what

that has been discussed in Transaction Cost Theory (TCT) that when transaction cost is low and transaction uncertainty is high, logistics outsourcing is the best solution for any organization compared to performing it in-house (Williamson, 1975).

Having, reviewed the past studies, most of the logistics outsourcing study focus on all modes and not many studies concentrate on a specific industry, especially in air freight. Air freight logistics outsourcing is vital for every business unit across the world as it supports import export activity and also contributes to the growth of the economy in the country. Next subsection will further discuss the logistics outsourcing in air freight and the development of the research question and aims of this study.

The importance of air freight provider in agile supply chain:

It is well recognized that the role of 3PL is not only significant to local or domestic activities but also important for international operation such as sea and air to support import and export business activity. The idea of contracting out such activity (transportation) to the external provider, 3PL is not a new phenomenon. In Malaysia, it started many years ago. Most of the business activities also focus on sea freight as it is cheaper compared to air freight. However, air freight is still significant to business players especially for those who business in the luxury product or high-end product, electronics, microchips and any other high-value product.

Air freight is now an essential element in global business activities (Chu, 2014). Air freight can be

defined as commodities that comprise the bulk of air freight shipments including high-value product, time sensitive product, luxury commodities, electronic goods, personalized or customized products, telecommunication equipment, photographic equipment, electronic chips, medical and pharmaceutical products. This diverse range of products shows the importance of air freight logistics business to the shipper's daily needs (Rahman *et al.*, 2015). In another word, air freight is a revenue freight which includes all forms of property that are transported by air excluded mail and passenger baggage.

The 20 years ago, research in logistics outsourcing has begun generally in many perspective such as provider selection (Chao and Kao, 2015; Anderson *et al.*, 2011), information sharing, dyadic partnership (Rahman, 2012) and relationship marketing, customer satisfaction, loyalty, service quality, halal logistics provider and also branding in logistics (Davis, 2008; Marquardt *et al.*, 2011; Rahman *et al.*, 2014). In Malaysia, research in logistics started and became famous in the early 2000s. However, little is known about the air freight industry since the previous study focused on a large scale and is not unique to each industry or modes of transport. Logistics study in Malaysia is still lacking and previous studies have many searching for Western perspectives. Thus, this study would like to contribute by providing an insight into logistics outsourcing activities in air freight perspective in Malaysia.

Although, an important component of logistics and an area of customer perception study on 3PL has been investigated (Marasco, 2008), it remains difficult for 3PL providers to understand the expectations of their customers and determine what drives their choice of one provider over another (Power *et al.*, 2007, Rahman, 2012). In fact, in relation to Transaction Cost Theory (TCT) in logistics outsourcing activities, the drivers of the firm's subcontract or outsource some or full of their logistics activities to an external provider (3PL) due to few factors. There are asset specificity, uncertainty, information asymmetries and risk of incurring opportunistic behavior (Williamson, 1975, 2008). As suggested by transaction cost theory both provider and customer are interdependent, one has the asset and the other party does not have the asset). Furthermore, several studies suggest that logistics outsourcing is an important factor since it can be a cause of business organization failure and disappointment. In Western perspective, there is a study that shows many companies that have taken outsourced function back in house (Alkaabi and Debbage, 2011). Therefore, the selection of air freight provider is still an important issue to discuss and it is justified that this issue is still valid to be discussed.

Thus with that, the purpose of this study is to determine the factors for air freight logistics outsourcing and which specific factors have the most influence in shape air freight logistics outsourcing in Malaysia. From here we develop our research questions as.

Research question: What are the main drivers that lead the company in Malaysia to outsource their logistics functions to air freight provider?

MATERIALS AND METHODS

The data for this study has been obtained from the questionnaire. For our preliminary study we have distributed 40 questionnaires to manufacturers. Theoretical sampling has been used as we already identified the main user of air freight industry in Malaysia. The list of the manufacturers was obtained from FMM, Federation of Malaysian Manufacturers. We bought a CD for the price of RM30 from FMM in June 2016 and got the information about manufacturers in Malaysia. The 40 questionnaires were distributed to the electrical and electronic companies, computer and IT Software company, pharmaceutical product and personal care and household industry product. However, after about 2 months waiting, only 10 forms were returned. The selection of our pilot respondent is guided by literature review from the past studies. It shows that there is the main user of air freight services coming from the industry such as electrical and electronic industry.

Our pilot questionnaire was developed with a valid and reliable measure. We performed content validity to identify any items which remain unclear. We sent the questionnaire to two industry representative and also to two academicians in the logistics field. Two is justified since from the previous scholar; it is recommended that the ideal number of expert suggested be in a range of 2-10 (Gable and Wolf, 1993). Two criteria were used to evaluate the questionnaire namely the clarity of the questions and the representativeness of the content. The clarity here refers to how clear the question is worded.

The procedure of our pilot data started with contacting relevant personnel who took care of the logistics activities in that company. We call and ask for their support to be our pilot respondent. After the phone conversation we then post the questionnaire to them. We also attach an envelope (with stamp) and returning address. After 2 weeks we did follow up and within 2 months we got the feedback from the respondents. Our preliminary data is analyzed using SPSS Version 21.

RESULTS AND DISCUSSION

Key findings: From our findings, our main respondent comes from electrical and electronic manufacturing industry, 20% of personal and health care product and 10% of computer and IT equipment product. This shows that the main customer for air freight industry in Malaysia is aligned with other countries where electrical and electronic products are manufactured. This is because the product is not only expensive, it is also sensitive and tendency to get stolen during transit or shipment is also high. Therefore, the best is transport them through air freight.

With regards to a determinant on air freight logistics outsourcing, the reason for outsourcing among the manufacturers in this pilot study is tabled in Table 2. From Table 2, we can see that 100% of the respondent says that the reason why they go for air freight outsourcing as they want to improve their logistics activities. This is aligned with what been discussed in the past literature (Bardi and Tracey, 1991; Rahman, 2012). What is new in air freight perspective is 90% of the respondent does not agree with the statement of the reason why they go for air freight is to reduce the air freight logistics cost. For them, high logistics cost is not the main reason why they go for outsourcing but there are also other factors. This shows that they have no choice even when the price for air freight outsourcing is high they are dependent on air freight provider to deliver their product fast and safely to the desired customer/destination. Meaning that they are all aware that the price of logistics is costly. However, the aim of air freight is to ensure the product can be delivered with fast and safely. That aligns with past studies saying that the commodity or product that is delivered through the air is a sensitive and high-value product. That is why, even the cost of delivery by air is high but the manufacturer got no choice they have to spend to ensure the product is safely delivered and on time.

Our third findings show there is no one respondent who agreed with the statement that they go for air freight outsourcing because they want to avoid investment in non-core activity. This is a new finding in air freight perspectives. However, it is logic as in different study especially by air, according to Transaction Cost Theory (TCT), the customer goes for logistics outsourcing because they do not have an asset and they do not want to perform in-house as the cost of logistics is high. Thus they go for outsourcing.

Eighty percent from our pilot respondent agree that they want to obtain service from logistics expert and again another 80% also agreed with the reason why they go for air freight is to improve service to their customer. This

Table 2: Key findings-reason for outsourcing in air freight

Reason for air freight outsourcing	Results (%)	No. of respondent
To improve air freight logistics service	100	10
To reduce the air freight logistics cost	10	9
To get a more flexible air freight services	70	3
To avoid investment in non-core activity	0	0
To obtain service from a logistics expert	80	8
To improve service to our customer	80	8

shows that the manufacturer/shipper willing to pay more (high price) to ensure that the customer is happy with them. They are well aware that if they go for sea freight, the delivery would be long and the customer will not be happy. Moreover, the tendency of the freight to get stolen and broken is high.

CONCLUSION

As a conclusion, we could say that air freight logistics outsourcing among the manufacturers especially in an electrical and electronic company specifically is dependent to air freight provider. No matter the price is high; they have no choice as to make sure the product is safely delivered and on time. These preliminary findings will be used as a basis for us to explore further on air freight outsourcing issue. This study contributes to outsourcing theory specifically focus on air freight industry perspectives in Malaysia.

SUGGESTIONS

Future studies should concentrate on the large scale data focusing on reason or determinants of air freight outsourcing and the air freight service quality. This study also suggest for future research to investigate the interaction between buyer (the manufacturer) and the provider (air freight provider). Even it is well-understood that air freight is expensive, however, it seems like it is dependent to the shipper to use air freight provider to carry their products no matter if the service is not good. This remains the issue that the researcher need to explore further.

ACKNOWLEDGEMENTS

This study was supported by Ministry of Higher Education (MOHE), under FRGS Grant, FRGS/2014/SS05/UNIKL/02/1. The researchers would like to thank the manufacturer that is involved in this study.

REFERENCES

- Alkaabi, K.A. and K.G. Debbage, 2011. The geography of air freight: Connections to US metropolitan economies. J. Transp. Geogr., 19: 1517-1529.

- Anderson, E.J., T. Coltman, T.M. Devinney and B. Keating, 2011. What drives the choice of a third-party logistics provider?. *J. Supply Chain Manage.*, 47: 97-115.
- Antonietti, R., M.R. Ferrante and R. Leoncini, 2016. Local market size, social capital and outsourcing: Evidence from Emilia Romagna. *Small Bus. Econ.*, 47: 243-260.
- Bardi, E.J. and M. Tracey, 1991. Transportation outsourcing: A survey of US practices. *Intl. J. Phys. Distrib. Logist. Manage.*, 21: 15-21.
- Chao, C.C. and K.T. Kao, 2015. Selection of strategic cargo alliance by airlines. *J. Air Transp. Manage.*, 43: 29-36.
- Chu, H.C., 2014. Exploring preference heterogeneity of air freight forwarders in the choices of carriers and routes. *J. Air Transp. Manage.*, 37: 45-52.
- Gable, R.K. and J.W. Wolf, 1993. *Instrument Development in the Affective Domain*. Springer, New York, USA., ISBN:978-94-011-1400-4, Pages: 275.
- Gligor, D.M. and M.C. Holcomb, 2012. Understanding the role of logistics capabilities in achieving supply chain agility: A systematic literature review. *Supply Chain Manage. Intl. J.*, 17: 438-453.
- Kaipia, R. and K. Tanskanen, 2003. Vendor managed category management-an outsourcing solution in retailing. *J. Purchasing Supply Manage.*, 9: 165-175.
- Kleeman, W.B., 1994. Out-tasking: More widespread than outsourcing in the USA. *Facil.*, 12: 24-26.
- Krishnamurthy, K., D. Jegen and B. Brownell, 2009. Strategic out-tasking: Creating win-win outsourcing partnerships. *Inf. Manage.*, 46: 42-51.
- Laarhoven, P.V., M. Berglund and M. Peters, 2000. Third-party logistics in Europe-five years later. *Intl. J. Phys. Distrib. Logist. Manage.*, 30: 425-442.
- Leuschner, R. and D.M. Lambert, 2016. Establishing logistics service strategies that increase sales. *J. Bus. Logis.*, 37: 247-270.
- Marasco, A., 2008. Third-party logistics: A literature review. *Intl. J. Prod. Econ.*, 113: 127-147.
- Marquardt, A.J., S.L. Golicic and D.F. Davis, 2011. B2B services branding in the logistics services industry. *J. Serv. Marketing*, 25: 47-57.
- Min, H., 2013. Examining logistics outsourcing practices in the United States: From the perspectives of third-party logistics service users. *Logist. Res.*, 6: 133-144.
- Power, D., M. Sharafali and V. Bhakoo, 2007. Adding value through outsourcing: Contribution of 3PL services to customer performance. *Manage. Res. News*, 30: 228-235.
- Rahman, N.A.A., 2012. The car manufacturer (CM) and third party logistics provider (TPLP) relationship in the outbound delivery channel: A qualitative study of the Malaysian automotive industry. Ph.D Thesis, Brunel University Library, Uxbridge, England, UK.
- Rahman, N.A.A., M.F. Mohammad, S. Rahim, S.A. Kadir and M. Khairuddin et al., 2015. Aviation Logistics Service Quality (ALSQ) model in Malaysia: Literature review and conceptual model. *Proceedings of 12th Conference on Asian Business Research Conference*, October 8-9, 2015, Novotel Hotel Bangkok on Siam Square, Bangkok, Thailand, ISBN:978-1-922069-85-6, pp: 1-1.
- Rahman, N.A.A., T.C. Melewar and A.M. Sharif, 2014. The establishment of industrial branding through dyadic logistics partnership success (LPS): The case of the Malaysian automotive and logistics industry. *Ind. Marketing Manage.*, 43: 67-76.
- Sanders, N.R., A. Locke, C.B. Moore and C.W. Autry, 2007. A multidimensional framework for understanding outsourcing arrangements. *J. Supply Chain Manage.*, 43: 3-15.
- Shi, Y., T. Arthanari and L. Wood, 2017. Developing third-party purchase services: New Zealand third party logistics provider's perspective. *Supply Chain Manage. Intl. J.*, 22: 40-57.
- Williamson, O.E., 1975. *Markets and Hierarchies, analysis and antitrust implications*. Free Press, New York, USA., ISBN: 9780029353608, Pages: 286.
- Williamson, O.E., 2008. Outsourcing: Transaction cost economics and supply chain management. *J. Supply Chain Manage.*, 44: 5-16.