Third party logistics orchestrator role in reverse logistics and closed-loop supply chains

Mohd Rizaimy Shaharudin*
Faculty of Business,
Universiti Teknologi MARA,
P.O. Box 187, 08400 Merbok, Kedah, Malaysia
E-mail: rizaimy@kedah.uitm.edu.my
*Corresponding author

Suhaiza Zailani
Faculty of Business and Accountancy,
Universiti Malaya,
50603, Lembah Pantai,
Kuala Lumpur, Malaysia
E-mail: shmz@um.edu.my

Mahazir Ismail
Faculty of Business,
Universiti Teknologi MARA,
P.O. Box 187, 08400 Merbok, Kedah, Malaysia
E-mail: mahazir@kedah.uitm.edu.my
E-mail: adett@yahoo.com

Abstract: This paper aims to propose a theoretical framework to study 3PLs changing role towards sustainable service offerings in reverse logistics (RL) and closed-loop supply chains (CLSCs). RL and CLSCs are the latest emerging concept that can help firms to achieve their sustainability objectives. Firms with or without RL and CLSCs capabilities may outsource several or full activities from the 3PLs. Nonetheless, firms are still facing limited service coverage from 3PLs and that are forcing them to source the service from other multiple service providers. Through role changes as a service ‘orchestrator’, appropriate full services with the best practices at the maximum efficiencies in RL and CLSCs are expected to be served to customers. Customers on the other hand can reap the benefits by having to deal its supply chain as a single entity so that the focus of building the efficiency will be much easier and effective.

Keywords: third party logistics; 3PLs; changing role; orchestrator; reverse logistics; RL; closed-loop supply chains; CLSCs.

Third party logistics orchestrator role in RL and CLSCs

Biographical notes: Mohd Rizaimy Shaharudin is a Transport/Logistics Lecturer with the Faculty Business and Management, Universiti Teknologi MARA, Kedah, Malaysia. His main research interest is in the field of supply chain management, particularly in reverse logistics and closed-loop supply chains.

Suhaiza Zailani is a Professor of Supply Chain with the Faculty of Business and Accountancy, Universiti Malaya, Malaysia. Her research interest is mainly on the development of three key areas: quality management, supply chain management and Halal issues. Her achievements in supply chain management is excellent as evident in the number and quantum of publications, research grants, consultations, training, industrial linkages and professional appointments that she has successfully secured and fulfilled. Her expertise has also been recognised within the academia as she has been appointed as editorial board member for almost 50 international refereed and conferences.

Mahazir Ismail is a Senior Lecturer at the Faculty of Business and Management, Universiti Teknologi Mara Kedah, Malaysia. His main research interest is in the field of international business and management, international human resource management, international intermediaries and international logistics.

1 Introduction

Reverse supply chains is opposite with the forward supply chains in the sense of forward deals with the movement of materials, products and information from suppliers, manufacturers and until the distribution to the end users (Schary and Skjott-Larsen, 2001). On the other hand, reverse supply chains relate with the managing of return flow of products from end users to the initial producers for the purpose of capturing the value or proper disposal. It involves with the functions performed to recover a used or unused product from a customer for the sake of disposal, reuse or resell it (Guide and van Wassenhove, 2002). The reverse flow of products is on the rise due to several reasons such as the increase in online marketing, catalogue purchases, self-service stores, and uncompromised buyers on quality – which so far has been successfully addressed by only few companies (Stock et al., 2002). The rise of firm’s commitments towards reverse logistics (RL) has given a way to the development of closed-loop supply chains (CLSCs). CLSC is a new emerging concept where the forward flows of products are combined with the reverse flow to attain the sustainable objectives of economical operations, corporate social responsibility and environmental protection.

To help in managing their sustainability efforts, firms may have an option of outsourcing several RL activities to third party logistics (3PLs) provider (Meade and Sarkis, 2002). Firms are raising the demand of outsourcing of non-core due to the increasing forces of competition that necessitate them to concentrate on their core business (Zacharia et al., 2011). Previous research supported the notions that using 3PLs is one of the alternatives instead of building a good RL system in-house (Brockmann, 1999; Gooley, 1998; Pogorelec, 1998; Rowley, 2000). This is due to the managing of returns can interrupt other operations in the organisation (Meade and Sarkis, 2002). To those firms that are non-focus to RL as a core business, they may find difficulties in managing, implementing and controlling the activities properly due to time constraints.
and lack of resources (Stock, 2001). As evidently in a study by Sohail and Sohal (2003), 20.2% of respondents in Malaysia are engaging RL services from 3PLs. This is further supported by Frost & Sullivan (2011) report that RL services is one of the top ten functions most outsourced in 2010 in Malaysia together with other value-added services such as packing and labelling, quality assurance and control and information management. In India alone, RL services are among top five functions that will record a maximum growth in five years period of time (Sahay and Mohan, 2006). Nevertheless, the study on value for the return process is still under-explored and insufficient (Dapiran and Mollenkopf, 2010).

Past study have mentioned on the reason why firms are generally outsourcing the logistics activities in the supply chain to the 3PLs. Zacharia et al. (2011) in their study argued that in order to leverage the supply chain best practices especially for non-dominant business without leadership roles firms, outsourcing to 3PLs may be the best alternative. By creating efficiencies to deliver value to customers, firms need to focus on the core business and outsource the non-core to the third-parties which are capable of doing it effectively (Christopher, 1998; Lambert et al., 1999). The traditional logistics functions such as transportation and warehouse management often regarded as non-core functions by most of the firms (Zacharia et al., 2011). In this case, functions such as logistics are significant in determining the basic for cost savings and faster interactions, normally work well in outsourcing (Christopher, 1998, 2005). Along with extra cost in the asset requirements, firms may find the outsourcing in logistics is more attractive than in-sourcing. Hence, the outsourcing activities are escalating worldwide recently especially to those companies that are offering broad range of logistics services (Power et al., 2007).

In terms of product returns management, Meade and Sarkis (2002) in their study mentioned many companies are outsourcing the RL activities to preserve the value of the returning products in the fastest way possible so that restitution can be made at the shortest time possible in order to please their customers. According to Govindan and Murugesan (2011), the recent development in the reverse supply chains have seen the significant role of 3PLs towards the RL network strategies. One of the companies which have experienced the benefits is Kmart in USA. Through outsourcing its RL functions, the company managed to save between USD 5 million to USD 6 million per USD 1 billion in sales (Barsky, 2001). Customers regularly find that outsourcing could refrain from administrative disruption since the providers are expert in managing the product return flows which includes the remanufacturing and refurbishing services (Rogers and Tibben-Lembke, 1998).

Nonetheless, not all 3PLs are offering the complete range of RL or CLSCs services either. Although RL is among the most sought services by the customers in Malaysia, customers are still facing limited service coverage from 3PLs and that is forcing them to source the service from multiple service providers. 3PLs are aware of the opportunities in RL but failed to offer services due to lack of understanding of the overall process of successful implementation in the area (Kannan, 2009). In practical, 3PLs are supposed to be a one stop centre where customers can obtain a wide range of service offerings, along with well-built infrastructure and competitive pricing. Too much focus in assuming their traditional mediator functions in forward logistics causing the limited service offerings in the reverse flow chains. In this respect, Sohail and Sohal (2003) study clearly demonstrates that most of the services offered by 3PLs in Malaysia were prevalent dominance in the forward logistics services such fleet management, shipment,
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consolidation, freight payment, carrier selection and warehouse management. Out of the total 39 players in the industry, nearly all of the 3PLs are operating in small size with duplication of the service offerings (Sohail and Sohal, 2003). Hence, in view of the 3PLs business that depends largely on the outsourcing, 3PLs should respond by significantly increase their prominent role in restructuring the service offerings to meet the ever changing of competitive market environments. In this context, 3PLs need to provide sustainable value added services that can be realised through effective relationships with the customers.

As a consequent of the growing demand of RL services, some logistics providers have responded by developing more strategic role of product return flow instead of merely servicing in activity-based outsourcing requirement (such as transportation, warehousing, and cross-docking). The strategic role here means partnering or outsourcing engagements with customers to facilitate the best practices through provision in holistic view of full services in RL and CLSCs. By reaching to this level, 3PLs providers are able to assume as a ‘leadership role’ or ‘orchestrator’ to maximise the performance in the product return management. Here, the 3PLs will have a full responsibility in managing, coordinating and controlling the RL functions on behalf of the customers. By serving as a focal role in integrating internal and external firm activities, the service is presented to the customers in an integrated manner to raise to a higher level of competitiveness and overall customer satisfaction (Murphy and Poist, 2000; Knemeyer et al., 2003). Firms on the other hand can reap the benefits by having to deal its supply chain as a single entity so that the focus of building the efficiency will be much easier. The evolving role of 3PLs is caused by many factors and one of the main reasons behind it is the changing of outsourcing engagements and relationships. Such phenomenon is further supported by three social economic theories namely transaction cost economies (TCE), resource-based theory (RBT) and network theory (NT).

The above discussions have triggered some questions. What are the problems facing by 3PLs in providing complete range of services in RL and CLSCs? What role does 3PLs is playing in providing the services in the area? Does the changing role of 3PLs to become an orchestrator could lead to a more range of service offerings in the area? Therefore, this study is taking a step to propose a theoretical framework on the 3PLs evolving role which could potentially stimulate sustainable service outcome in the RL and CLSCs. By assuming such a leadership role, 3PLs are expected to have a better command in managing the product returns flow for further value extractions of the recovered products in the reverse supply chains.

2 Literature review

2.1 Third party logistics

3PLs involves the engagement of external logistics company to perform logistics functions which have been traditionally performed within the company itself. The functions performed by the 3PL can encompass the entire logistics process or selected activities within that process (Lieb et al., 1993). This definition entails the functions carry out by 3PLs are the externalisation of logistics activities previously performed ‘in-house’ by their customers.
A similar definition has been brought up by Coyle et al. (2003) who highlighted that a 'true' 3PL providers offer an integrated multiple logistics activities with solutions to logistics or supply chain problems. Past studies have evidently shown on the specific 3PLs logistics service offerings as indicated by Lieb (1992), Dapiran et al. (1996), Bhatnagar et al. (1999), Sahay and Mohan (2006) and Sohail et al. (2006). The service includes specific outsourced of logistics services such as warehouse management, shipment consolidation, fleet management, order fulfilment, product returns, carrier selection, logistics information systems, rate negotiation, product assembly, order processing, inventory replenishment, order picking, inbound transportation, outbound transportation, labelling and packaging, distribution, custom clearance and forwarding, import export management and customer service/support.

In view of the growing concern on sustainability in operations, many firms turn to 3PLs for assistance in the service for managing their product returns. More specifically, the outsourcing of RL activities to 3PLs is growing to enable firms to focus on their main businesses (Quinn and Hilmer, 1994) and play a crucial role as a main decision factor in the RL (Lee et al., 2002; Meade and Sarkis, 2002). As evidently in a study of retailing in UK which have concludes that collaborations with 3PLs expertise is required in order to obtain the capabilities in RL area (Bernon and Cullen, 2007).

2.2 Reverse logistics

RL is opposite with the forward supply chain in the sense of forward deals with the movement of materials, products and information from suppliers, manufacturers and until the distribution to the end users (Schary and Skjott-Larsen, 2001). On the other hand, reverse supply chain relates with the managing of return flow of products from end users to the initial producers for the purpose of capturing the value or proper disposal. It involves with the activities performed to recover a used or unused product from a customer for the sake of disposal, reuse or resell it (Guide and van Wassenhove, 2002). The reverse flow of products is on the rise due to several reasons such as the increase in online marketing, catalogue purchases, self-service stores, and uncompromised buyers on quality – which so far has been successfully addressed by only few companies (Stock et al., 2002).

Furthermore, Stock (1998) and Daugherty et al. (2005) also have indicated that although RL is a critical component for success in many businesses, it is often overlooked or inadequately supported. The scope of RL has now expanded from service parts management to other areas, e.g., post-service, repair, remanufacturing, etc. However, as the RL process has not been mapped under the broaden scope of RL, companies find it difficult to plan, implement and control the process properly (Stock, 1998). Also according to Stock (1998), most companies developed RL programmes by a non-logistics-related group or department. This situation has caused further complications that could be cumbersome to the whole process of product returns management.

Throughout the globe, the outsourcing of RL services to 3PLs is increasingly grown from years to years. Figure 1 depicted the percentage of outsourced RL services in all regions from year 2006 until 2011.
It is clearly seen in Figure 1 that although shippers in Europe were already dominated the outsourcing of RL services 3PLs since the year 2006, in accordance to the establishment of stringent waste electrical and electronic equipment (WEEE) regulations imposed to the manufacturers. On the other hand, the shippers in Asia Pacific began to catch up especially in the year 2008 until 2012. This denoted of the need for more in-depth study in Asia Pacific region due to the latest development in the RL outsourcing environments. Nevertheless, the whole market for the RL services has recorded lower consumption across the regions in the year 2011 and 2012.

2.3 Closed-loop supply chains

The development of sustainability is getting the attention by the industry practitioners lately. The most prevalent initiatives are clearly shown in the RL and CLSCs practices. A CLSC is a concept in supply chain (SC) that combines forward and reverse activities into a unique system (Guide et al., 2003b) that aims for economic, environmental, and social accomplishments. The expansion of product flows in forward logistics into reverse flows is explicitly related to the firms sustainability efforts by increasing the environmental performance of manufacturing operations to new standards (Pappis et al., 2004), besides
generating new profit opportunities and competitive advantages to all parties involved in supply chain operations (Ferrer and Whybark, 2003). In this context, firms are interested in the higher volume of returns due to the recovered value in the RL which can be interpreted as attainment towards the superior operational efficiency environments (Guide and van Wassenhove, 2009). The utilisation of value obtained from the salvaging returns activities can help firms to reduce the cost of resources, thereby enhancing their competitive advantage.

In relation to this, Simpson and Samson (2008) described CLSC as the most recent topics in GSCM strategy, which involves integrative type of activities and considered the most complicated compared to the earlier concepts in supply chains. The sources of materials are recaptured and recovered from by-products, returned products, end-of-use and end-of-life products through re-manufacturing (high value products) or recycling (low value products) processes (Kocabasoglu et al., 2007). In other words, CLSC are those supply chains concerning products or items that are no longer desired or can no longer be used (Liu et al., 2012). It is related to the wider strategy that integrates the firms entire supply chain towards the environmental operations and performance (Simpson and Samson, 2008).

Reverse supply chains is a part of CLSCs and carry similar ‘functions and activities’ towards journey of the returns. CLSCs are the final destinations of products at the end of reverse supply chain where at this point, the companies can make a decision either to create a loop or leave it open. In this manner, both method serves as a product recovery network but the only things that distinguished them is the connection between the inbound and outbound products or materials movement in the network. It contains an extra loop (Saibani, 2010) that connects additional activities (also known as reverse supply chain) to the traditional forward supply chains activities. Hence, the activities related to CLSCs as identified by Guide et al. (2003a, 2003b) are as follows:

1. product acquisition to repossess the products from end-users
2. reverse distribution to move the products from end of use point to disposition point
3. testing, sorting and disposition to identify the product’s condition and determine the best reuse option for the product maximum residual values
4. refurbishing by executing the selected reuse option through direct reuse, repair, remanufacture, recycle or disposal
5. remarketing by creating and exploiting markets for refurbished goods and re-distribute them

2.4 3PLs changing role

In the past few decades, 3PLs service offerings were confined to a narrow scope with insufficient number of services. However, the number of services is growing immensely today reflecting of its sign of importance to remain competitive in the market. The rising of the services occurred as a result of the increasing in outsourcing, thus contribute to the overall changes to the 3PLs role in the supply chain management (Zacharia et al., 2011). According to Stefansson (2005), this role is different based on the outsourcing level, from
just transportation services to a fully integrated, value added services and worldwide services in the customers’ logistics functions. In other words, the role of 3PLs is have changed from previous traditional services of transportation to a combined services in warehousing, inventory management, packaging, cross docking and technology management and lately in the broader strategic role (Vaidyanathan, 2005). As a consequent of the changing role of 3PLs from traditional, functional to a broader supply chain concentration has affected the whole 3PLs role in the area of logistics (Bolumole, 2003), which is evidently demonstrated from the broad range of service offerings to their the customer demand. On the basis of this, according to Bolumole (2003), the 3PLs role in supply chains is depend on the type of outsourcing engagements which was emerged from the customer’s strategy in the supply chain management. Hence, from the type of outsourcing engagements, 3PLs can determine the service offerings which can influence their roles in the customer’s supply chain management. Figure 2 shows the relationships between the outsourcing engagements and the 3PLs overall role changes in offering broad range of services to the customers.

Figure 2  3PLs relationship and outsourcing outcome

Upon realising on the importance of relationship building in the outsourcing, Sanders et al. (2007) have developed framework about the partnership development in the perspective of outsourcing. According to them, outsourcing relationships can be distinguished into two main dimensions; scope of the outsourcing and criticality of the task outsource. In summary, the outsourcing relationships are summarised and presented in Table 1.

Table 1  Outsourcing relationships

<table>
<thead>
<tr>
<th></th>
<th>Managed services</th>
<th>Full outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>High scope</td>
<td>Contractual relationships</td>
<td>Strategic relationships</td>
</tr>
<tr>
<td>Low scope</td>
<td>Non-strategic transactions</td>
<td>Partnership</td>
</tr>
</tbody>
</table>

*Source: Zacharia et al. (2011)*

The framework illustrates in Table 1 is essential in explaining the extent of services offered in different degree of responsibility (scope) and nature of outsourcing relationships (criticality) in the context of product return management. Here, in order to perform the best practices by offering a comprehensive service in RL and CLSCs, the 3PLs role should be changed from out-tasking (scope) with non-strategic transactions (criticality) to full outsourcing (scope) with strategic relationships (criticality). These characteristics suit with the contemporary 3PL arrangements, which are assuming more strategic role particularly by coordinating activities along the supply chain (Zacharia et al., 2011).

The changing role towards a full outsourcing relationships rather than out-tasking eventually will lead the 3PLs to become ‘orchestrator’ in RL. A number of other studies...
have differently defined on the meaning of ‘orchestrator’ within the context of supply chain. Nevertheless, most of the studies have reached a common theoretical position on which orchestrator plays an important role in the supply chain efficiency (Hacki and Lighton, 2001; Christopher, 2005; Lee, 2006) through managing the resources, capabilities and technology of their own and their collaborators in order to deliver a complete supply chain services to the customers (Hertz and Alfredsson, 2003). Specifically, this includes the overall planning activities, logistics design and systems preferred by their customers (van der Vorst et al., 2007).

According to Fulconis et al. (2006), the 3PLs orchestrator characteristics include the change leader, decisive in dealing with various companies and posses sufficient physical assets that allow for sufficient coordination between the multiple firms. By taking the responsibility in coordinating and managing the supply chain network on behalf of their customers (Delfmann et al., 2002), 3PLs are expected to play the significant role towards the efficiency of the supply chain activities.

### 3 Development of theoretical framework

Being an orchestrator allows 3PLs to work in full responsibility with maximum efficiency in the RL and CLSCs services. At this level, 3PLs are entitled for a full command, assuming the leadership role and facilitate the best practices for the whole product return management process.

Three theories have been used to support the development of the theoretical framework. The first theory is the TCE. TCE stated that the customers’ outsourcing is depending largely on the outsourcing cost. If the cost is economical, customers will increasingly outsource the product returns management to 3PLs. The higher demand from many firms allows greater consolidation of tasks which can lower the transaction cost (Ellram, 1991; Ellram and Maltz, 1995; Hobbs, 1996). As a result, 3PLs will be able to provide more services and continuously adding value including offering cost saving to customers. Eventually, 3PLs role will evolve from merely offering limited services in out-tasking to full services in strategic relationships.

The second related theory is RBT. In this theory, resource and capabilities are the core competencies to survive and improve its operational performance. However, not all firms may possess these criteria. Hence, it is suggested that firms must obtain them from the environment (Olavarrieta and Ellinger, 1997; Rungtusanatham et al., 2003) through outsourcing from other parties. Through outsourcing, firm may acquire resources and capabilities that they do not have presently. Again here, when the outsourcing is increasingly grew, the 3PLs will add more value by introducing more enhanced services that will create more efficiencies to the services. Ultimately, as the 3PLs will move towards the orchestrator role by providing full services particularly in the RL and CLSCs.

The third theory that has been utilised is the NT. In this theory, firms that have the ability to work and coordinate well with other firms are in the position to create a competitive advantage. This can be interpreted as the partnership with 3PLs can help firms to build an inimitable position to achieve the sustainability in RL and CLSCs. In addition, 3PLs are not only providing effectiveness in the network but also allow firms to obtain the benefits from the network relationships (Zacharia et al., 2011). In relation to this, by receiving a wider networking through higher outsourcing, 3PLs will be able to
offer more services and expand their role to become orchestrator with complete services in product return management to the customers.

In view of the preceding discussions, Figure 3 illustrated the proposed theoretical of the study:

**Figure 3** Proposed theoretical framework

The proposed antecedent-outcome framework in Figure 3 implies that being trusted in assuming orchestrator role, 3PLs is likely to support the RL and CLSCs activities which eventually could lead to more sustainable services that can offer better cost savings, enhanced the corporate social responsibility and environmental protection to the customers. Without such evolving role, the 3PLs is expected to experience a stumbling block and remains offering limited services in the existing non-strategic transactions.

### 3.1 Hypotheses development

#### 3.1.1 The effect of 3PLs orchestrator role on the RL and CLSCs activities

The supply chain leadership or orchestrator role is a critical factor that necessitates in bringing major strategic change for the success and failure of organisations (Bass, 1990). In a complex supply chain, leadership role allows 3PLs to manage effectively all activities across supply chains (Lambert et al., 1998). The position of supply chain leaders has always being associated with the basis of power and the capability to in dominating other organisations’ supply chains (Byrne, 2004; Maloni and Benton, 2000). Thus, by taking RL and CLSCs in a strategic ways, the overall efficiencies across the supply chains can be achieved which eventually could enhance the competitive advantage of the firms. In other words, by serving as a focal role in integrating internal and external firm activities, the service is presented to the customers in an integrated manner to raise to a higher level of competitiveness and overall customer satisfaction (Murphy and Poist, 2000; Knemeyer et al., 2003). Therefore, it is hypothesised that:

H1 3PLs orchestrator role affects the RL and CLSCs activities.

#### 3.1.2 The effect of the RL and CLSCs activities on the 3PLs sustainable services

Sustainable service has been recognised as the recent approach (Halme et al., 2007; Krcmar, 2010) towards establishing services with the concern on the environmental through awareness and effective utilisation of the natural resources. It also conceptualises the services as the effort for problem solving method which does not only involved in creating value but contemplating the firm effects in the long run. In relation to this, the creation of sustainable service necessitates the perspective of life-cycle-oriented in the relationship between the customers, service providers and the suppliers (Galbraith, 2002) including the requirements for the compatibility with the ecosystem (Wolfson et al., 2011). One of the ways as suggested by Wolfson et al. (2011) is through the innovative approach by blending the rule of nature or imitates the natural process into the service
itself so that the energy efficiency, future-oriented with life-cycle view and flexibility to changes can be achieved with greater success. The indicators for the innovativeness in the reverse supply chains can be traced from the product and technology itself, which conditioned the products on the lifecycle period, simplicity in dismantling, repairing, reconditioning and remanufacturing (Shaik and Abdul-Kader, 2012). By creating innovativeness in the RL and CLSCs activities, the sustainable service through administering the product returns and recovery can be effectively offered by 3PLs to their customers.

Hence, it is hypothesised that:

H2 The RL and CLSCs activities affect the sustainable service offerings.

3.1.3 Mediating effect of the RL and CLSCs activities on the relationship between the 3PLs orchestrator role and the sustainable service offerings

In order to help in managing the sustainability efforts, firms can opt by outsourcing RL and CLSCs activities to 3PLs. In fact, firms are demanding from 3PLs for a more proactive approach and willing to bear extra compensations for the efforts (Langley and Capgemini, 2012). The study by Power et al. (2007) showed that the customers emphasised more on the service solutions rather than cost benefits of the service provisions. As a consequent, firms can benefit by fully utilising the resources, increase the efficiency of costly returns processing and focus on producing good quality products for a long term profitable relationship with the customer. Hence, the outsourcing of the for the product returns is on the rise for firms to focus on their core business (Quinn and Hilmer, 1994).

To respond to the customers demand, 3PLs should increase their significant role towards restructuring the service offerings by providing sustainable value added services. This can be realised through assuming the ‘leadership role’ or ‘orchestrator’ in order to maximise the performance in their service offerings in RL and CLSCs activities. By reaching to this level, 3PLs are expected to have full authority and command in coordinating RL and CLSCs services for utmost efficiencies throughout the supply chain channels. Through this way 3PLs especially those with regional and international network connections can expand their range of services and making every effort to offer full complete package of services (Persson and Virum, 2001) including sustainable services to their customers.

Hence, it is hypothesised that:

H3 The relationship between the 3PLs orchestrator role and the sustainable service offerings mediates by the RL and CLSCs activities.

4 Conclusions

As a conclusion, the proposed theoretical framework provides an alternative solution for 3PLs to venture into a wide range of services in RL and CLSCs. The study also proposed three hypotheses that predict the effect of 3PLs orchestrator role on the RL and CLSCs activities, the effect of RL and CLSCs activities on the 3PLs sustainable services and
third party logistics orchestrator role in RL and CLSCs

Lastly, the mediating effect of the RL and CLSCs activities on the relationship between the 3PLs orchestrator role and the sustainable service offerings. By conducting empirical study based on the proposed hypotheses, the outcome of the study is expected to provide some measures and solutions that can contribute to the success of service provision in RL and CLSCs. In relation to this, 3PLs need to obtain the support from customers through extensive collaboration so that the outsourcing activities could be increased and created higher profits. By doing so, the level of outsourcing can be enhanced from merely providing out-tasking in a non-strategic transactions to full outsourcing in a strategic relationships environments. Eventually, 3PLs role is transformed to become an orchestrator in order to support the highest best practices for overall efficiencies in providing the RL and CLSCs services to the customers.

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References


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