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Service quality of e-Commerce logistics services

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Abstract: The research paper titled the service quality in E-commerce logistics services. The objective of the study is to identify the factors that influence service quality in the E-commerce logistics industry. causal research design is used in the study as the research design and the sampling method used is convenience sampling. The sample size of the study is 85 respondents and it is analyzed using the SPSS tool. The collected data were analyzed with statistical tools such as frequency analysis and Regression analysis. It is found that factors affecting customer satisfaction are packing factor, communication factors, delivery speed and quality factor. Among the factors, The packing factor has a strong positive linear relationship with customer satisfaction.

Keywords: Third party logistics, E-commerce, customer satisfaction, packing factor, logistics services, delivery problem.

INTRODUCTION

In logistics and supply chain management, third-party logistics (abbreviated as 3PL) is an enterprise that uses third-party companies to outsource elements of its distribution, storage and delivery services. Third-party logistics companies typically specialize in integrated warehousing and transport networks, which can be scaled and adapted to consumer needs, on the basis of market conditions, to meet the demands and service delivery requirements for their goods. Services also extend beyond logistics to include value-added services related to the production or purchase of products, such as services that integrate parts of the supply chain. The supplier of such managed services is referred to as a third party provider of supply chain management services or as a provider of supply chain management services. 3PL targets various roles within the context of supply management, such as warehousing, transport or supply of raw materials.

Third-party logistics suppliers may be used to broaden their client base, move into new markets or build positive consumer experience, but more and more large and small companies are looking for external help and resources to handle their supply chain more effectively and to gain competitive advantage. And that's where the third-party logistics provider (3PL, also known as TPL) comes in.

3PL providers provide tailored solutions that meet the unique assembly, packaging, storage and on-site integration needs. A good 3PL provider has a comprehensive knowledge of logistics and a variety of tools to help recognize and fill any visible holes that an organization may have.

To save time: Outsourcing Logistics to a 3PL provider will free up resources to focus on core competencies.

Because Someone else can do it better: even though you have available resources, another company within the supply chain can do it better simply because of its relative position in the supply chain, its experience in the supply chain and its economies of scale.

Share Accountability: 3PL companies should share responsibility for managing global supply chains, keeping customers and shops fully stocked and compliant with perfect orders at all times.

Re-Engineer Distribution Networks: Logistics outsourcing to third-party logistics companies can be a fast way to re-engineer distribution networks to meet global business demands and gain a competitive advantage.

Nowadays, customers are the king in any sector. Given this perspective, all e- commerce companies need to rework their priorities and understand that if there has been a mistake committed by these companies, how much it would affect its customer base. This study is purely conducted to understand the steps to overcome service failures. The main objective of the study is to identify the factors that influence customer satisfaction in the e-commerce industry and also aims to find out how Logistics service influences customers buying behaviour in E-commerce sites.

REVIEW OF LITERATURE

(Cheong, 2004) Logistics was an important part of any economy and business enterprise. Global developments in globalization have led many businesses to outsource their logistics functions to third-party logistics (3PL) companies in order to focus on their core competencies.
(Halldórsson and Skjøtt-Larsen, 2004) This paper considers third party logistics (3PL) from a resource and knowledge perspective. New competences are being formed in the relationship between the shipper and the TPL provider. A typology of TPL ties has been developed, ranging from market exchanges to joint logistics solutions.
(Knemeyer and Murphy, 2004) Users of third party logistics services can spend an average of almost one-third of their total logistics budgets (compared to 20 percent today) to support 3PL services (Gooley 2000). However, very little research has explored the management practices that could affect the efficiency of these logistic outsourcing relationships.
(Yeung, 2006) Third-party Logistics (3PL) denotes 'a partnership between a shipper and a third party that, compared to basic services, has more personalized offerings, encompasses a wider variety of service functions and is characterized by a longer-term, mutually beneficial relationship.'
(Selviaridis and Spring, 2007) To provide for third party logistics taxonomy (3PL) research and, on that basis, to establish a research agenda for this field of study. The analysis shows that 3PL research is of an empiric-descriptive nature and typically lacks a theoretical basis. Survey research is the primary approach used, representing the optimistic research tradition within logistics It identifies such information gaps and generates five ideas for potential research.
(Hamdan and (Jamie) Rogers, 2008) This paper presents data envelopment analysis (DEA) as a method for measuring the performance of third-party logistics (3PL) warehouse logistics operations. DEA is a linear programming methodology used to test the efficacy of decision-making units (DMUs) where multiple inputs and outputs are involved.
(Kayakutlu and Buyukozkan, 2011) The continuity of the logistics companies in the twenty-first century is highly dependent on the success of the value chain. As the range of services outsourced to third party logistics (3PL) companies expands, the performance strategies for these companies need to be updated. This research discusses and demonstrates an empirical method for the evaluation of 3PL success factors. Companies from a managerial viewpoint. Factors that integrate the strategic and organizational goals.
(Mothilal et al., 2012) This paper uses existing literature to define key success factors correlated with results in the Indian third-party logistics service provider (3PL) market. We contribute to the scarce literature that examined the relationship between key success factors and performance in the Indian 3PL context.
(Meidutė-Kavaliauskienė et al., 2014) This article analyzes customer satisfaction with logistics services; however, special attention is paid to their consistency. This practice is part of the service sector, the key characteristic of which is that the origin of the service is induced by market demand and its acceptance by customer satisfaction. Customer satisfaction is very critical for logistics companies seeking competitive advantage, approval of orders, implementation or solution of problems.
(Huo et al., 2015) Logistics outsourcing has become an effective practice for companies seeking competitive advantage. However, opportunistic behavior often occurs in the outsourcing process, and such behavior can harm the collaborative partnership between third-party logistics providers (3PL) and users.
(Hettiarachchi and Ranwala, 2015) The main purpose of the 3PL contract is for domestic and foreign purposes. The majority of logistic managers have been encouraged to take decisions on outsourcing logistics services. In Sri Lanka, the most favoured reasons for outsourcing logistics services are cost savings, emphasis on core market, and capital expenditure reduction. Of the 3PL clients, 25 per cent are very happy with their 3PL providers.
(Chen and Qi, 2016) Low logistics service efficiency is a key factor in the growth of e-commerce. In order to increase customer satisfaction, this paper sets up an index framework for measuring customer satisfaction with the quality of third party logistics services and designs a questionnaire based on the assessment index.
(Seneviratne and Premarathne, n.d.) Logistics plays a major role in helping companies to achieve strategic advantage over rivals. The present study addresses this issue by describing the factors influencing the satisfaction of 3PL customers in the clothing industry in Sri Lanka. Primary data were obtained using a semi-structured questionnaire from a random sample of 56 clothing firms.
(Batarlienė and Jarašūnienė, 2017) The article describes the findings of the investigation of the "3PL" areas which need to be improved. The purpose of this article is to present the findings of the "3PL" market impact research and to select key factors that have an impact on business growth.
(Chu et al., 2018) In response to growing competition and increasing consumer demands, third-party logistics (3PL) providers need to become more innovative. External relations are essential sources of resources and expertise in the field of logistics service innovation.
(He et al., 2019) Resource sharing between competing B2C e-commerce companies has been popular in recent years. However, various B2C e-commerce firms also make different decisions regarding the provision of logistics services.

RESEARCH METHODOLOGY

The research design used here was the causal design of the research. This type of research is used to measure the impact of a specific change on existing standards and assumptions. Most social scientists are seeking causal explanations that reflect the test of hypotheses. The causal effect occurs when the variation in one phenomenon, an independent variable, leads to or results, on average, in variation in another phenomenon, the dependent variable. Our research idea is based on the rich knowledge acquired by our peer teams across the university.(A.C.Gomathi, S.R.Xavier Rajarathinam, A.Mohammed Sadiqc, Rajeshkumar, 2020; Danda et al., 2009; Danda and Ravi, 2011; Dua et al., 2019; Ezhilarasan et al., 2019; Krishnan and Chary, 2015; Manivannan, I., Ranganathan, S., Gopalakannan, S. et al., 2018; Narayanan et al., 2012, 2009; Neelakantan et al., 2013, 2011; Neelakantan and Sharma, 2015; Panchal et al., 2019; Prasanna et al., 2011; Priya S et al., 2009; Rajeshkumar et al., 2019; Ramadurai et al., 2019; Ramakrishnan et al., 2019; Ramesh et al., 2016; Sankar et al., 2020; Venugopalan et al., 2014)

Frequency Analysis

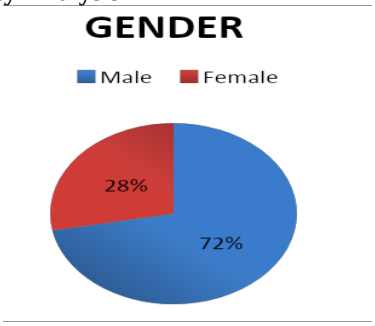


Fig.1: The figure 1 shows the frequency analysis of gender of respondents. It is clear that majority of the respondents are Male (72%) and female respondents are (28%)

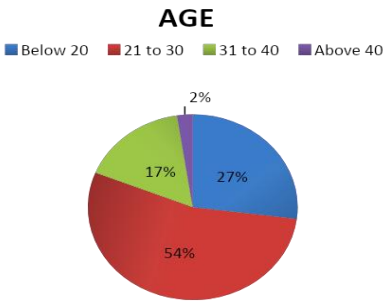


Fig.2: The figure 2 shows the frequency analysis of age of respondents. It is clear that majority of the respondents are those whose age group lies between 21 to 30 years old (54%) followed by the age group which lies between Below 20 (27%) followed by the age group between 31 to 40 (17%) and followed by the age group Above 40 (2%)

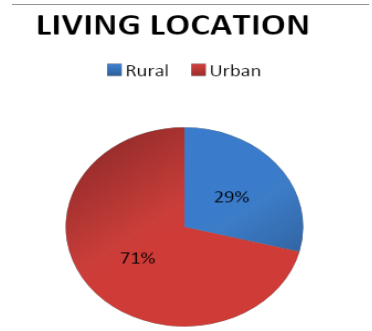


Fig.3: The figure 3 shows the frequency analysis of living location of respondents. It is clear that majority of the respondents from Urban (71%) and followed by Rural (29%)

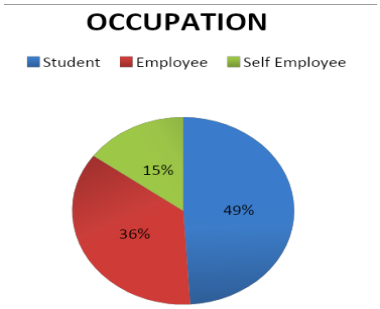
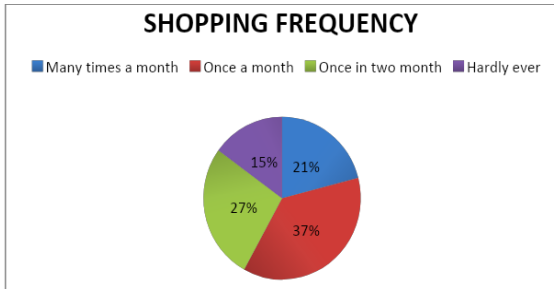


Fig.4: The figure 4 shows the frequency analysis of occupation of respondents. It is clear that majority of the respondents are Students (49%) followed by Employee (36%) and followed by Self Employee (15%)

Fig.5: The figure 5 shows the frequency analysis of online shopping of respondents. It is clear that majority of the respondents prefer online shopping (74%) and few respondents does not prefer online shopping (26%)



It is clear that majority of the respondents prefer online shopping once in a month (37%), followed by once in two month (27%), followed by Many times a month (21%) and followed by Hardly ever (15%)

Fig.6: The figure 6 shows the frequency analysis of shopping frequency of respondents.

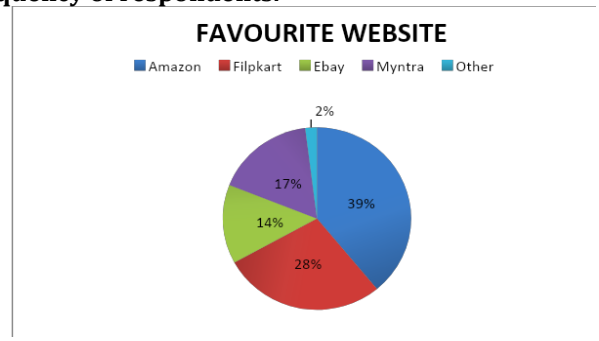


Fig.7: The figure 7 shows the frequency analysis of the favourite website of respondents. It is clear that the majority of the respondents like to shop on Amazon (39%), followed by Filpkart (28%), followed by Myntra (17%), then followed by EBay (14%) and lastly followed by Others (2%).

REGRESSION TEST

Table 1: Regression

S.NO	R	R SQUARE	ADJUSTED R SQUARE	SIGNIFICANCE
1	0.690	0.476	0.450	0.00

Interpretation:
The values R and R2 are shown in the table 2.1. The R value represents a simple correlation and is 0.690 ('R' column) which indicates the degree of correlation. The R2 value (the "R square" column) shows how much of the total variance of the dependent variable can be explained by the independent variable. The modified R square value of 0.450, which shows 45 percent of the difference between dependents variables have been explained by independent variables.

Table 2: Regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.944	.410		2.304	.024
	munication	.181	.100	.210	1.807	.075
	Delivery	.122	.159	.101	.766	.446
	Employee	.137	.114	.133	1.196	.235
	Packing factor	.328	.084	.391	3.904	.000

INTERPRETATION

From the table 2.2 indicates regression analysis with B & Beta value for the independent and dependent variables which are assumed. As a rule of thumb, we say that a b coefficient is statistically significant if its p-value is lesser than 0.05. From the analysis it is found that all the Communication factor, delivery factor, Employee factor do not have relationship with the quality factor. The packing factor has a strong positive linear relationship with Quality Factor.

CONCLUSION

The study was conducted to understand the perception of the customer's satisfaction towards service quality of e-commerce logistics services. The reason why there were failures in the services was narrowed down influencing

customer satisfaction and quality factors such as communication factor, delivery factor, packing factor, employee factor. To know the customer's perception, a questionnaire was built and circulated among the general public and a sample of 85 was obtained. It was found that the main concerns of the customers were the packing of product, product delivery speed and quality of the product. And these factors contribute to the majority of the reason why there have been service failures in the logistics service. The analysis revealed that the packing factor does play a very important role in customer satisfaction.

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