A STUDY ON LOGISTICS SERVICE PROVIDERS AND THEIR IMPACT ON E-COMMERCE IN VARIOUS INDUSTRIES

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Abstract
Logistics is the process of scheduling, executing, and managing the seamless and efficient movement of products, services, and data from one place to another to satisfy the requirements of consumers. This study aims to identify the elements that add value to consumers in the domain of online commerce across various industries. Industries play a vital role in overcoming regional disparities by setting up businesses in tribal and undeveloped areas. Online ordering allows regulars to place their guidelines and deliver products or services to their preferred location without any geographical restrictions. The backbone of electronic commerce consists of three crucial functions financial oversight, vendor supervisors, and advertising campaigns. In the realm of e-commerce, the website of the online store plays a vital role as it serves as the most visible aspect of digital sales. E-commerce digital. The utilization of information dispensation technology in commercial enterprises is crucial enabling the creation, transformation, and redefinition of associations for worth making between organizations and individuals. Tamil Nadu, the quarter largest state in India, boasts a diverse manufacturing sector and is a prominent player in industries such as automobiles, components, engineering, pharmaceuticals, garments, textiles, leather products, chemicals, plastics, and more. This study specifically focuses on the logistics industry, tourism and hospitality industry, textile industry, fast-moving consumer goods sector (FMCG), and manufacturing industry.

Key Words: Industry, Firms, Logistics, Commerce.

Introduction

The term industry refers to all industries and works that transform raw supplies into goods or offer useful services. It is responsible for producing and distributing the goods and services needed by society. Industry can also refer to a group of businesses. For instance, all the factories, mills, and other establishments that produce steel are part of the steel industry. Despite operating independently, the industry encompasses a diverse array of companies, ranging from massive corporations employing hundreds of thousands of workers to small businesses with just a handful of employees they are interconnected through business transactions. Small businesses rely on larger corporations to purchase their products or utilize their services. General Motors, a major automobile manufacturer, supports numerous lesser engineering and service corporations that supply the necessary parts for its vehicles. Each sector of the industrial economy contributes to the overall output. Various classification methods explain the industry and its role in generating national income.

Review of Literature

Fernando's (2016) research aims to uncover the correlation and influence of Third-Party Logistics (3PL) services, which are currently gaining popularity in the Sri Lankan apparel industry. To ensure accurate sampling, the simple random sampling method was employed. The study found a notable disparity in the utilization of 3PL, the extent of outsourcing, the adoption of quality services, and the

proportion modification additionally, a significant distinction was observed between the implementation of 3PL among both medium-scale and large-scale apparel companies.

Panigrahi (2016) In today's market, there is an abundance of e-commerce options available for shoppers to choose from. Introduction of innovative products and services, providing customers with a plethora of choices. The growth of e-commerce manufacturing in India has been remarkable as more and more shoppers are realizing the benefits of this platform online business in India, provided they understand the mind set of Indian shoppers and cater to their needs effectively. Witnessed the implementation of diverse e-commerce applications, with a specific focus on India. Highlighting the global marketing opportunities, it offers for products and markets. However, it is important to acknowledge that e-commerce also presents a challenge in the form of channel conflict between existing and new customers.

Schöder et al (2016) propose viable solutions for urban logistics. The authors investigate the obstacles faced by urban logistics as a result of the surge in freight volumes caused by the expansion of e-commerce. By examining sustainable practices adopted by companies and exploring the potential of new electric power train technologies, they suggest that the utilization of electric vehicles in urban distribution can lead to significant reductions in carbon emissions. Through a comprehensive analysis of existing literature and insights from ongoing research projects on electric mobility, the study argues that electric vehicles are often disregarded in achieving more efficient transportation processes advantages for companies, diminish their environmental impact, and even enhance the level of service provided to customers.

Kawa (2017) main focus is on identifying and defining the different processes related to the fulfillment service, highlighting their strengths and weaknesses. Additionally, the paper seeks to identify the future development directions of the self-actualization service market offering fulfilment services or potential bidders. The article provides a detailed characterization of the self-actualization service, emphasizing its increasing importance in e-commerce logistics. The author describes the various models of fulfillment services and discusses potential trends in the market. By reviewing and analyzing different implementations of fulfillment services, we can assess the extent to which logistic processes should be delegated to specialized companies, allowing businesses to focus on their core competencies. Especially during periods of rapid growth, such as higher fees, limited physical contact with goods, and a partial loss of control over the process.

Nair (2017) worldwide can be accredited to the benefits of this growth are already evident in developed countries, the positive outcomes are expected to be even greater as businesses expand into developing and underdeveloped nations. E-commerce provides a platform for global trade, which will continue to experience significant growth in the future. As globalization and trade barriers continue to diminish, economies around the world will witness advancements in knowledge and information technology. Furthermore, E-commerce will revolutionize marketing practices and job markets.

Gitonga (2017) highlights the significance of logistics management in the realm of retail logistics, particularly in addressing the last-mile problem in e-commerce. The main goals of the research were to study how these companies handle their logistics, see how it affects their performance, when trying to improve their logistics strategies.

Ying Yu and colleagues (2017) aim to showcase the latest advancements in E-commerce logistics within supply chain management with supporting techniques. The authors also discuss the potential integration of future technologies such as the Internet of Things, Big Data Analytics, and Cloud Computing. These advancements have the potential to enhance E-commerce logistics at various levels, including system, operational, and decision-making, leading to real-time and intelligent solutions in the coming decade.

Krishna (2018) provides an insightful analysis of the e-commerce landscape in both consumer and B2B markets the same cannot be said for B2B markets which operate on thin profit margins and have different scales and volumes of operations.

Alam (2018) paper focuses on finding the criteria to provide the optimal level of services provided within the premises of the storage and distribution centers (warehouses). The findings include ways of increasing efficiency and decreasing costs to provide the right product to the right consumer in the right quantity. Assessing the present method of conducting 3PL activities. The conclusive idea was to optimize the in-house processes as much as possible as well as take on some of the managerial decision-making burdens from the FMCG producers.

Suresh (2018) the Indian rural and urban markets present numerous opportunities for organizations to establish themselves and flourish. India has emerged as a significant market for a inclusive range of crops and services, such as financial services, FMCG, healthcare, and telecommunications. In the current competitive environment, rural markets hold equal importance to urban markets for marketers. Fast-moving consumer goods companies encounter fierce competition and must seek out inventive approaches to generate revenue.

Krishna (2018) by assigning weights to these factors based on their relative importance in decision-making, the paper provides a comprehensive framework for understanding B2B adoption in the context of e-commerce particularly relevant for various stakeholders, including start-up entrepreneurs, digital B2B sellers, policymakers, and academia.

Pradha (2018) in today's technology-driven era, consumers have the convenience of ordering and using products from anywhere in the world. This significant shift in the business landscape innovative thinking of entrepreneurs who understand with the advent of the internet, running a successful business without a physical store is now possible, resulting in substantial profits. Additionally, the role of logistics is crucial in ensuring timely delivery and customer satisfaction, thereby contributing to the growth of the e-commerce sector.

Krishna (2018) understands the acceptability of e-commerce among B2B sellers in emerging markets. It argues that policy initiatives alone cannot yield comprehensive results without a solid foundation of acceptance from the B2B community. These factors are categorized into four broad themes: policy, culture, marketplace, and organizational factors.

Wisdom Amanor Hong-fen Lyu (2020) in the late '90s, the emergence of information advancements in e-commerce and logistics worldwide. Ghana, in particular, has witnessed a remarkable surge in e-commerce since the beginning of the 21st century. To further enhance the growth of this sector, it is recommended that the Government of Ghana plays a role in establishing a reliable housing addressing

system, which would facilitate the efficient delivery local communities. Additionally,e-commerce companies should collaborate to implement secure online payment systems on their platforms by incorporating SSL securities and Data Protection services.

Lacy (2020) explores the application of circular principles in 10 diverse industries, highlighting the advantages they can gain. These industries encompass metals and mining, oil and gas, chemicals, electricity, machinery, and industrial equipment, information and communications technology, personal mobility, household, and fashion. Each industry holds the potential to create circular value by reducing costs, shifting revenue, and establishing new revenue streams. While the specific opportunities for circular value may vary across industries, they all offer effective pathways to achieve widespread circularity.

In the study conducted by Okunade and Daodu (2020), they focused on designing a distribution network for fast-moving consumer goods. The main goal was to ensure that products were distributed efficiently, providing maximum customer satisfaction while keeping the distribution cost to a minimum. To evaluate the distribution process, the researchers examined two methods: direct shipment and intermediate shipment. The study considered four routing options and aimed to minimize the overall distribution cost. The findings revealed that utilizing intermediaries for distribution yielded a better solution compared to the direct shipment routing option. This suggests that incorporating intermediaries in the distribution network can lead to improved efficiency and cost-effectiveness.

Bin (2020) e-commerce new marketing channel due to the rapid development of Internet technology. It has brought about changes in various industries and has a significant impact on industrial manufacturing. In the context of big data, has influenced manufacturing companies and provided some guidance on how they can maximize the benefits of e-commerce.

Qin et al (2020) have extensively studied the success of hybrid online platforms in e-commerce. Among the various operations in e-commerce, logistics service stands out as one of the most costly and crucial aspects in driving online purchases. In the e-commerce industry, the seller typically contracts with third-party logistics service providers to handle product delivery, while the platform typically sets up its own logistics service system. However, a new trend in logistics is starting to emerge business-to-business service sharing. The authors do point out that when the TPLP's market potential and logistical service level are in the medium ranges, a win-win scenario can be reached. The authors hope to offer important insights into the logistical service-sharing model in e-commerce by taking these interactions into account.

Vasić et al (2021) conducted a study to examine the impact of various aspects of logistics services on customer satisfaction in the context of e-commerce. This implies that the satisfaction of customers in the e-commerce sector is influenced by the aforementioned scopes of logistics service. The development of the procedure and measuring instrument in this study contributes significantly to enhancing our understanding of the dimensions of logistics service and customer satisfaction in the realm of e-commerce. Moreover, the measuring instrument can be effectively utilized to enhance the satisfaction of e-commerce clients.

Rizaldi and Madany (2021) the impact of this trend on logistics, driven by the increasing number of E-commerce enterprises, cannot be ignored. Focusing on practical perspectives. It provides a

Research Paper
Impact Factor: 7.358
Peer Reviewed & Indexed Journal
www.ijmsrr.com

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

comprehensive review of global implementations, corresponding models, and supporting techniques. The paper concludes by summarizing the opportunities and prospects derived from these practical implementations, offering guidance to interested companies in the E-commerce and logistics sectors as they consider their business strategies.

Kawa's (2021) paper aims to identify the elements of logistics value and analyze their impact on customer satisfaction in the field of e-commerce. The study explores the moderating effect between these variables by considering the overall service level across various e-commerce industries. The logistics factors discussed in the paper have diverse effects on customer value, which is subjective and ever-changing. To ensure a sustainable value proposition, online sellers should establish a system that caters to individual preferences, such as delivery options, collection dates, changes, and product returns. Consequently, customers have the autonomy to determine the order execution process, thereby shaping the value chain.

Njuguna (2021) conducted a study in Nairobi, focusing on the logistics and IT managers of 37 FMCG manufacturers. The results indicated that warehouse management systems and inventory management systems greatly impacted the supply chain performance of the firms. The study suggested that further research should be conducted to explore the effects of logistics organization arrangements on performance, considering different variables and firms from various sectors, including the service industry in the Kenyan market.

Cheunkamon et al (2023) present a challenge for entrepreneurs and the government sector to enhance service quality and develop effective marketing strategies that encourage tourists. Hence, the objective of this study was to examine the interrelationships between various elements such as tourism logistics, tourism supply chains, commitment, satisfaction, and trust, and their impact on the loyalty of domestic tourists.

Zennaro et al (2022) in the global market, e-commerce is being used as a selling channel more and more, and the COVID-19 epidemic has increased the importance of this trend. This change has given businesses a lot of chances because it eliminates the necessity for actual stores where they may sell their goods. But it has also resulted in modifications to the function of logistics in the supply chain. It also seeks to identify the variables and KPIs that each logistics study field should take into account, with an emphasis on sustainability issues. The analysis's conclusions are finally summarized in a methodological framework. The above structure is a useful resource for managers looking to start or grow their e-commerce businesses. This study's methodological framework covers a number of research subjects from a logistics perspective, whereas many studies focus on a single research area and investigate important variables, models, and techniques for its implementation.

Pishdar, Ghasemzadeh and Antuchevičienė (2022) aimed to identify a range of indicators that can contribute to the improvement of sustainable logistics systems in developing nations. The findings are highly applicable, as they demonstrate that when managers prioritize sustainability principles in all economic situations, they can establish an effective vision. Interestingly, risk management was given the least importance in this research. These results assist managers in allocating limited budgets to projects aimed at enhancing each indicator.

Parvin (2022) argues that the presence of small and medium enterprises (SMEs) plays a crucial role in reducing poverty and creating job opportunities, thereby contributing to sustainable economic growth.

By utilizing electronic devices, e-commerce provides a convenient and efficient means of communication for conducting business transactions. Focusing on the logistics industry, investigate the influence of adopting e-commerce technology on the satisfaction levels of both customers and agents. Employing the difference in difference methodology, the authors analyze the effects and discover favorable outcomes for both customers and service providers.

Mukherjee (2023) has explored the concept of service robots in the tourism and hospitality sector, aiming to enhance the touchless experience for travelers. Their research involves a systematic literature review (SLR) that categorizes the articles into three main themes and nine sub-themes through a thematic analysis. The study not only offers valuable insights from both theoretical and practical perspectives comprehensively reviewing the articles, this study underwrites the existing knowledge and paves the way for further exploration in this field.

Yuliawati (2023) to thrive in the ever-intensifying business landscape, companies must strive to fulfill customer demands promptly, accurately, and with the utmost quality. Overall, approximately 69% of LSP's current performance has successfully met the company's set objectives, with two indicators surpassing the targets and seven indicators meeting them. Nevertheless, the company should prioritize addressing the four indicators that exhibit negative deviations, as their actual performance falls short of the company's expectations. These negative indicators primarily stem from the availability and condition aspects.

In the research conducted by Kawa and Zdrenka (2023), they introduced a new model of logistics value in e-commerce specifically computer-assisted telephone interviews (CATI) and computer-assisted web interviews (CAWI). To further examine the data, exploratory factor analysis (EFA) and structural equation modeling (SEM) were employed.

Objectives of the Study
i) To identify the Opportunities of E-Commerce in various business.
ii) To determine the benefits and Challenges of E-Commerce on Business.

Methodology
A descriptive research design was used to explore the subject issue. This specific study methodology was selected because it enables the researcher to collect information that answers questions about the subject's present condition. 150 samples were chosen using a stratified sampling strategy in order to guarantee a thorough representation. A self-administered questionnaire with both open-ended and closed-ended questions for ease of administration was used to gather primary data. After that, SPSS was used to input and evaluate the gathered data.

Table 1: Sampling Population

Various Industry	Sample
Logistics Industry	30
Tourism and Hospitality Industry	30
Textiles Industry	30
Fast-Moving Consumer-Goods Sector (FMCG)	30
Manufacturing industry	30
Sample Size	**150**

Analysis

Table 2: Frequency of the Respondents

Classifications	Frequency	Percent
Gender		
Male	102	68.0
Female	48	32.0
Age		
18-24 Years	38	25.3
25-35 Years	32	21.3
36-45 Years	45	30.0
46-55 Years	28	18.7
Above 55 Years	7	4.7
Size of industry		
Small	40	26.7
Medium	67	44.7
Large	43	28.7
Employees working in the industry		
1-10 Employees	43	28.7
11-51 Employees	61	40.7
51-100 Employees	46	30.7

Table 2 represents the Frequency of the Respondents, male respondents 68% and Female respondents 32%. The highest age group of people 36-45 Years is 30%. Industry representing the highest percentage is medium. Employees working in the industry 11-51 Employees are 40.7%.

Table 3: Analysis Patterns – CCF

Model Description		
Model Name		MOD_2
Series Name	1	OPP
	2	Various industry
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Range of Lags	From	-7
	To	7
Display and Plot		All lags
Applying the model specifications from MOD_2		

Case Processing Summary		
Series Length		150
Number of Excluded Cases Due to	User-Missing Value	0
	System-Missing Value	0
Number of Valid Cases		150
Number of Computable Zero-Order Correlations After Differencing		150

Opportunities of E-Commerce on Business with Various Industry

Cross Correlations		
Series Pair: Opportunities with Various industry		
Lag	**Cross-Correlation**	**Std. Error**
-7	.014	.084
-6	.040	.083
-5	.031	.083
-4	-.002	.083
-3	.028	.082
-2	.043	.082
-1	-.014	.082
0	.038	.082
1	.014	.082
2	-.017	.082
3	.021	.082
4	.007	.083
5	-.040	.083
6	-.005	.083
7	-.028	.084

Opportunities of E-Commerce in Business and Various Industries, there is no periodicity, and the range of Lages from -7 to +7. Case Processing Summary, The Length series is 150 and the user missing value and System missing value are zero. Lag -7 Cross-Correlation 0.014 Std. Error (0.084), Lag -6 Cross-Correlation .040 Std. Error (0.083), Lag -5 Cross-Correlation 0.031 Std. Error (0.083), Lag -4 Cross-Correlation -.002 Std. Error (.083), Lag -3 Cross-Correlation 0.028 Std. Error (0.082), Lag -2 Cross-Correlation 0.043 Std. Error (0.082), Lag -1 Cross-Correlation -.014 Std. Error (0.082), Lag 0 Cross-Correlation 0.038 Std. Error (0.082), Lag 1 Cross-Correlation 0.014 Std. Error (0.082), Lag 2 Cross-Correlation -0.017 Std. Error (0.082), Lag 3 Cross-Correlation 0.021 Std. Error (0.082), Lag 4 Cross-Correlation 0. 007 Std. Error (0.083), Lag 5 Cross-Correlation -.040 Std. Error (0.083), Lag 6, Cross-Correlation -0.005 Std. Error (0.083), Lag 7 Cross-Correlation -.028 Std. Error (0.084).
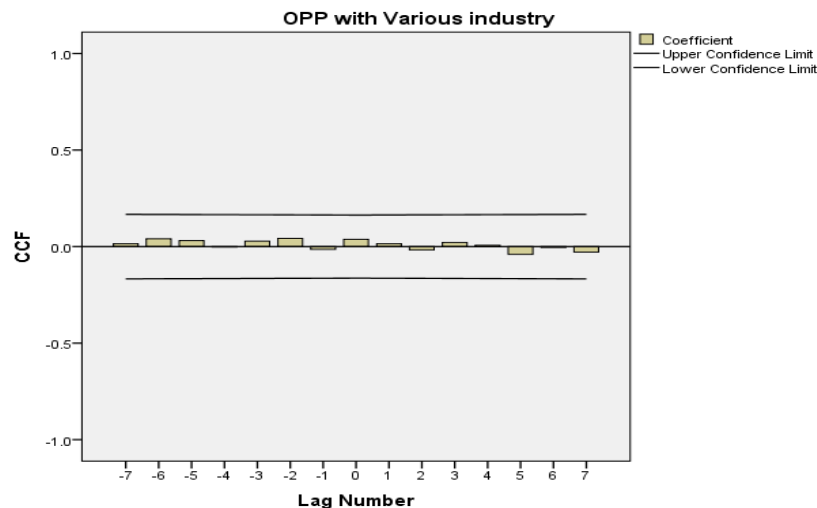
Figure 1: Opportunities of E-Commerce on Business with Various Industry Plot

Table 4: Model Description: Benefits of E-Commerce on Business

Model Description		
Model Name		MOD_5
Series or Sequence	1	Benefits
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Standardization		Not applied
Distribution	Type	Chi-square
	df	1.000
Fractional Rank Estimation Method		Rank
Rank Assigned to Ties		Mean rank of tied values
Applying the model specifications from MOD_5		

Case Processing Summary		
		Benefits
Series or Sequence Length		150
Number of Missing Values in the Plot	User-Missing	0
	System-Missing	0
The cases are unweighted.		

Estimated Distribution Parameters		
		Benefits
Chi-square Distribution	DFA	1
The cases are unweighted.		
a. User-specified value		

Table 4 denotes the Model Description: Benefits of E-Commerce on Business. There is no periodicity Length of Seasonal Period and No applied Standardization. Non-Seasonal Differencing and Seasonal Differencing are zero. The fractional Rank Estimation Method and the Rank Assigned to Ties is the Mean rank of tied values. Series or Sequence Length is 150. Both the user and System Number of Missing Values in the Plot is Zero. Chi-square Distribution is one.
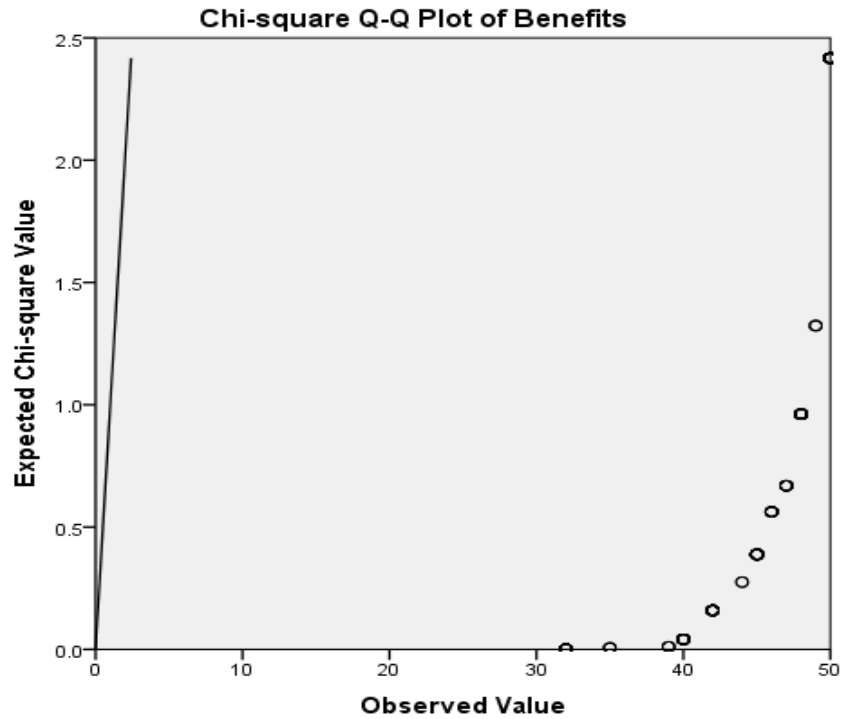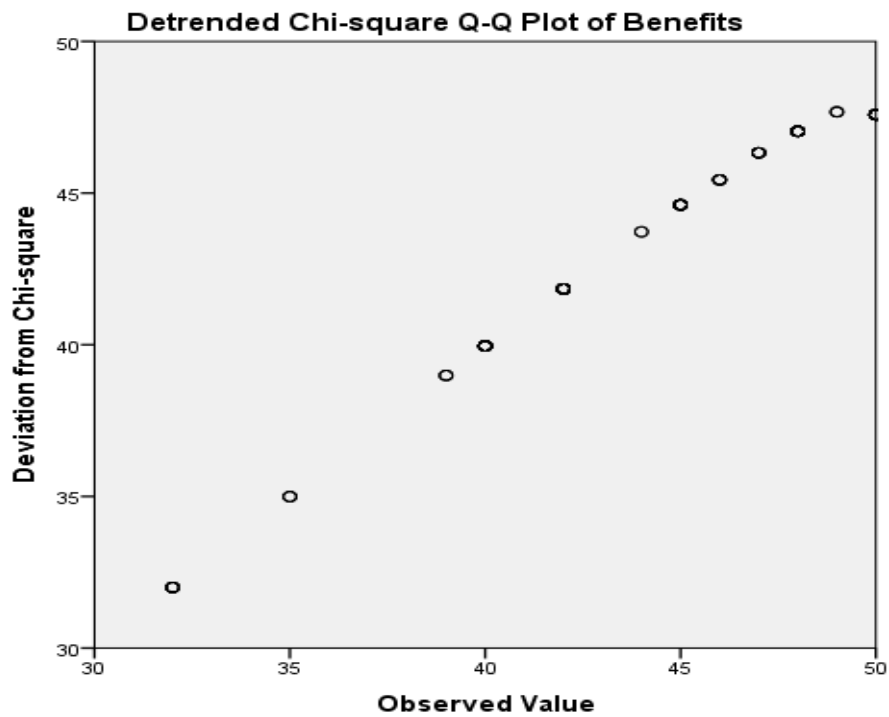
Figure 2: Q-Q Plot of Benefits

Figure 3: Detrended Chi-square Q-Q Plot of Benefits

Recommendations and Conclusion

The role of the logistics industry is expanding with technological advancements and it requires the necessary infrastructure, communication, etc. for its complete realization. It is going to be the business trend in the future. The business economy of the country should be ready to accommodate such a new trend. It is also equally important that the customers have to protect those operators in the field from cheating and the existing laws have to be amended to safeguard the customers. The traditional caveat-emptor concept can be reconceptualised as an electronic-emptor. The consumers should be accordingly educated with complete awareness to protect themselves from furious e-retailers. The consumer movement and the cyber laws have to be oriented together to safeguard the end-users.

When looking at E-commerce logistics from a practical standpoint, IT technology is crucial to increasing a supply chain the company's efficacy and efficiency. In the next ten years, future technologies such as the Internet of Things (IoT), cloud computing, and big data analytics may be utilized to improve E-commerce logistics at the system-wide, in effect, and decision-making levels. These decisions may be autonomous and real-time. E-commerce expansion in emerging markets presents a world of opportunities for businesses, fostering economic growth, and creating employment. However, navigating the associated challenges is crucial. By understanding the unique characteristics of developing markets and implementing effective strategies, businesses can take advantage of the immense opportunities offered by online commerce and promote inclusive growth. The intense competition has saturated the aspects of product features and pricing for all companies. Nowadays, customers expect more than just a high-quality product. To stay ahead of the competition, you need an outstanding omnichannel offering that sets you apart from your competitors.

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