# IMPACT OF SUPPLY CHAIN MANAGEMENT IN E-COMMERCE SECTOR IN CUSTOMER RETENTION AND CUSTOMER TURNOVER SPECIAL REFERENCE TO AMAZON AND FLIPKART

**SAJEENA J.P.S**

Karunya Institute of Technology and Sciences, Coimbatore.

**Dr. F.J. PETER KUMAR**

Research Supervisor, Auditor and Tax Consultant, PetRock Accounting Solutions, Coimbatore.

**Dr. G. VIKRAM**

Karunya Institute of Technology and Sciences, Coimbatore.

**Dr. A G SUDHA**

Department of MBA, Coimbatore Institute of Technology, Coimbatore.

**Abstract**

Cloud computing has opened up numerous new opportunities for supply chain businesses. This article offers investment suggestions to help businesses take advantage of cloud computing. The authors of this report combed through many indexed journals for Scientific Information to assess the state of research into the e-supply chain. E-commerce, also known as e-tailing or electronic retailing, has rapidly grown to become a serious competitor to more traditional forms of retailing. Based on the findings of this study, it appears that a mix of online and physical stores may be the best model for the future supply chain. The author proposes using a Best Matching Protocol to select a network node to carry out commands in a decentralised cooperative system (BMP). By analysing a given supply network and determining which fulfilling agent best satisfies the customer's required quality and cost parameters, the developed BMP optimises the pairing of agents with customers. Drop shipping is a more cutting-edge and modern way of doing business. The internet, e-commerce, and digital marketing are further permeating the traditional supply chain, adding to its growing popularity. Small and medium-sized businesses benefit greatly from lower entry barriers.

**Keywords:** E-Commerce, E- Retailing, Supply Chain Management, BMP- Best Matching Protocal.

## INTRODUCTION

Opportunities for supply chain companies to fortify their competitive advantages have arisen as a result of advancements in computer technology. Enterprise resource planning (ERP), customer relationship management (CRM), and electronic commerce are just a few examples of the cutting-edge technologies that are revolutionising supply chain management and opening up a world of new opportunities (e-commerce). It seems that cloud-based service providers are able to provide the tools that supply chain organisations need to effectively integrate enterprise resource planning, customer relationship management, and e-commerce. The major objective of this chapter is to forewarn supply chain businesses of the risks they face if they fail to effectively manage, or if they fail to properly choose and support, their cloud system installation. This article provides investment ideas that might help organisations employ cloud computing to

improve their supply chain operations and maintain their competitive edge (L.Z., 2014). In light of the new opportunities afforded by the widespread availability of e-commerce technology, more and more consumers are opting to complete their purchasing transactions in this manner. Shoppers' preferences are changing rapidly, but how exactly this affects supply chain management in the retail sector is still largely unknown. One area where researchers have yet to fully fill in the blanks is in the area of customer reaction to stock outs in the context of online shopping. The widespread use of price reductions to encourage clients compounds this challenge in the low-switch-cost world of online shopping, where customers may easily locate other suppliers. This study applies the framework of expectation-disconfirmation theory to the context of online retailing, examining how price reductions affect customers' expectations of product availability and their reactions to stock outs. Our research reveals that when a stockout happens for a price promoted item, shoppers are less likely to go to the website of a competitor store than they are for an item that is not part of a price promotion. Findings from this study have significant implications for academics and supply chain managers since they imply that online retail price promotions do, in fact, generate some type of switching cost (Peinkofer S.T., 2015). Lots of studies on e-commerce-based supply chains have been conducted during the last two decades. Despite the wealth of research in this field, the most recent evaluations date back to the turn of the century. We surveyed 165 publications published in 47 journals indexed by the ISI to assess the current status of research on the e-supply chain. These five aspects are the study's study-topic, analytical-unit, research-perspective, business-type, and analytical-method. The Topic-of-Study dimension is crucial among these five since its sub-classification scheme serves as the analytic backbone for the other four. The overarching goal of this study is to fill gaps in our understanding of e-supply chain theory and practise by bringing together experts from different fields. The results show that researchers from many different fields have different points of view and degrees of interest when it comes to solving problems. These fields include business, economics, engineering, and the social sciences. Also, using the data we gathered, we were able to differentiate between two time periods (2000–2006 and 2007 and beyond), each of which had its own unique set of research objectives. Supply chain integration and collaboration appeared to be front and centre in the second time period, while innovation, adoption, and obstacles were major concerns in the first. Little attention was given to issues pertaining to the economy, the environment, and the treatment of consumers during both periods. (Siddiqui A.W., 2015).

E-commerce, also known as e-tailing, or electronic retailing, has grown fast in recent years to become a serious competitor to traditional retailing, which in turn has an impact on consumers' shopping preferences and behaviours. By examining the similarities and differences between brick-and-mortar stores, e-commerce platforms, and hybrid supply chain models—with Target and Amazon serving as case studies—this case study aims to draw conclusions about the future of an idealised supply chain model. Following the Six Sigma technique, a complete and generalised modelling framework is used, which incorporates tools like process flow diagrams, cause and effect charts, performance efficiency measurements, failure mode and effects analysis (FMEA), and Monte Carlo

simulation (define, measure, analyse, improve, and control).Based on the findings of this study, a supply chain that combines traditional brick-and-mortar businesses with internet marketplaces may be the best option going forward. This study's results stress the significance of thinking about the pros and downsides of a hybrid supply chain and the corrective measures suggested by a hybrid FMEA. The results of this research might be used by academics to help them do more thorough empirical analyses of hybrid supply chains, and by industry professionals to gain insight and new knowledge. To wit: (Kumar S., 2016). When a customer makes an inquiry about a product and then receives that goods in the mail, this whole process is known as "order fulfilment" in the business world. Choosing the best order fulfilment agent from the available supplier network is the most crucial step in handling orders. To begin the process of dynamically building and designing a supply chain, a large number of agents and organisations must be carefully selected based on a broad variety of quantitative and qualitative criteria. The author suggests using a Best Matching Protocol to decide on a network node to fulfil orders in a distributed, cooperative system (BMP). The BMP that was established enhances the process of matching customers with fulfilment agents by analysing a particular supply network and finding the agent that best fits the customer's quality and cost parameters. With this protocol, Supply Network agents can work together, and the problem of the SN's growing size can be solved in a scalable way. (Bhargava R., 2016). Consumers now choose online shopping above any other channel. But shoppers online are more likely to become victims of fraud and theft. And it is in these conditions that talks about supply chain decision-making are required. We build a two-period supply chain model on an e-commerce platform, with past sales volume influencing current buyers' decisions. We look at decision making in both the definite and uncertain demand scenarios. Our next step was to analyse the long-term and short-term interactions between two supply chain actors in a deterministic demand scenario. To further coordinate the supply chain in times of unpredictable demand, a revenue sharing contract is implemented. If the supply chain wants to maximise value using a revenue-sharing contract, it will depend on the stochastic demand model and how much the first period's sales rate affects the second period's sales rate. (Dong J., 2017).

Now is indeed the era of the internet shopper. These days, almost everyone is connected to the flourishing online business community. It's vital to remember that the global nature of manufacturing and distribution networks means that items offered in these stores might originate anywhere in the world. Management of the flow of goods from suppliers through retailers and ultimately to consumers is what is known as "Supply Chain Management" (SCM). This article aims to bring attention to supply chain management (SCM) in online retailing by showing how Amazon.com has used this concept to become the dominant player in the sector from the beginning. Data utilised in this paper were gathered from secondary sources such as libraries, archives, and the internet. This article aims to educate readers on the significance of supply chain management (SCM) in the context of e-commerce, so that businesses may better compete in the face of intense market pressure (S., The engineering behind a successful supply chain management strategy: An insight into amazon.com, 2019). As the Internet, e-commerce, and digital marketing

continue to penetrate the conventional supply chain, a more contemporary and current business model has emerged: drop-shipping. For that reason, this article will examine the key aspects and results of drop-shipping as a replacement for the traditional supply chain paradigm. The reduced obstacles to entry and stronger foothold in international markets will be especially beneficial to small and medium-sized firms (SMEs), including sole proprietorships and producers of a wide range of goods. Research into the study's implications and future possibilities for the drop-shipping model's growth is strongly recommended (Dimitrov I., 2020). Buying and selling products across international boundaries using digital technologies like the Internet and mobile phones has seen phenomenal growth in recent years. Businesses that deal in well-known brands have an incentive to put a stop to the distribution of counterfeit goods via online marketplaces. When counterfeit goods are sold, the supply and demand sides of the economy are harmed, and sustainability efforts are stymied. Fake products damage the reputations of real enterprises and erode customers' trust in online marketplaces. And they discourage stakeholders in the supply chain from funding initiatives that improve social and environmental sustainability. If customers have access to full product data via a traceability system, information ambiguity and asymmetry may be reduced or eliminated, reducing the likelihood of losses. Findings from the pilot study suggest that all parties involved in the supply chain, from manufacturers to retailers, may work together to curb the spread of fake goods by sharing safe, detailed product information. (Lee H., 2021).

## LITERATURE REVIEW

B2C e-reliance commerce's on LMD has put further strain on SCM as it strives to accommodate emerging economic and environmental issues. Greenhouse gas (GHG) emissions from transporting commodities are rather large and are commonly noted as a cause for worry, although they are not yet seen to be a sufficient component in bridging this gap. The purpose of this research is to determine how much leeway a company has in choosing when to make deliveries affects the fuel efficiency of long-range mobile devices. This was possible because to the use of a discrete event simulation model for logistics analysis, whereby the consolidation level and delivery time variables were treated as separate inputs. Research results suggested that if delivery windows were adjusted and loads were aggregated to a greater extent, vehicle mileage may be reduced. They benefit the economy and the environment since they lessen the need for gas and, thus, cut down on emissions of greenhouse gases without adversely hurting consumers. That's according to a 2022 study (Pereira Marcilio Nogueira G.).

Postal and courier services excel in "last mile" delivery. How successfully you complete the logistics process leaves a lasting impact on clients. Thus, the COVID-19 pandemic and e-commerce boom have made it harder for delivery companies to thrive and forced them to adjust. These routines will continue beyond the sanitary crisis since mail delivery systems must adapt to constrained resources. A Chilean delivery service highlighted last-mile difficulties. Last-mile delivery, especially fast delivery, at other postal organisations may face the same difficulty. By segmenting a metropolitan market, the corporation subcontracts delivery (districts). The corporation must rethink its regional organisation

due to rising mail traffic and poor service, especially for express mail. This redesign creates a districting challenge with quality-of-service restrictions-like optimization problem. A mathematical programming model captures the core of this odd problem, then a customised heuristic solves it. Real-world case studies show that the proposed technique improves on-time delivery compared to the company's districting plan. A sensitivity study shows that the recommended technique still provides districting designs that can survive a substantial rise in express mail volume. (Sandoval M.G., 2022).

Businesses are overwhelmed by surplus inventory and returned goods as a result of changing consumer expectations and the rise of online shopping. More and more businesses are turning to secondary market channels to sell off surplus inventory and get a portion of the value it represents. Still, academics studying supply chain management have paid surprisingly little attention to the secondary market. We analysed longitudinal survey data from China and the US to find out more about how companies are implementing these new disposal techniques (collected between 2014 and 2017). The US market has outperformed its Chinese rivals in part because American companies use secondary marketplaces for distinct purposes. The data show that the US secondary market is older than the Chinese one, but this pattern shows that the gap is closing. (Rogers Z.S., 2022).

Academics, businesses, and politicians are all warming up to the concept of conducting business online. Research that combines e-commerce with supply chain management is more crucial than ever before because of these changes. Examining the supply chain resources utilised by OSell, a Chinese cross-border e-commerce firm, through the perspective of resource orchestration allowed this study to delve into the value-creation processes inherent in a supply chain service-based business model. Based on our analysis of Osell's business model—which included interviews with company executives and managers as well as secondary data from publicly available online sources—we have determined that supply chain service-based business models can gain trust, reduce risk, and increase customer satisfaction through resource bundling and structuring. The research's speculations on international online trade contribute to the creation of a supply chain model based on services.(Wang Y., 2021).

This study examines how manufacturers react to private brands on e-commerce platforms, focusing on investment and sales channels. We compare the manufacturer's direct sales approach to the distributor's agency model and examine how the manufacturer's private label impacts the bottom line. We then explore how private label competition and investment effect manufacturers' product distribution channel choices. Private brands represent a severe threat to market-facing firms. In the reselling mode, a manufacturer may gain from the launch of a private-brand product if the rivalry intensity is low due to the platform's higher marketing spend increasing demand and wholesale price. When a private label launches, the agency model pays the producer more. The ensuing investment effect may cushion the firm against unanticipated developments. After introducing a private label, the maker may choose the agency method, although reselling is a better investment and investment efficiency. (Li D., 2021).

Business executives and researchers want more artificial intelligence in company management and quicker technical innovation as the Internet economy grows. This analysis examined seven Chinese management basics magazines. CiteSpace, a knowledge-mapping tool, will discover and visualise major changes in business operations and management using the archive of articles from these periodicals. Management science, supply chain management, internet commerce, capital structure, and technical innovation have all been top priorities for Chinese enterprises over the last 20 years, according to this analysis. Future business executives will prioritise innovation and digital market expansion. This research found that a lack of technology and management innovation is preventing Chinese companies from modernising and becoming internationally competitive. R&D investment is decreasing while construction capital is increasing. This helps firms flourish and stimulates their creativity. Possibly due to (Wang Y. C. X., 2020).

Online retailers need solid logistics. E-commerce companies sharing logistical operations may improve customer experience, but it also raises competitive concerns. This paper examines the supplier-reseller relationship in an online retail supply chain where LSS provides a business issue. The manufacturer sells wholesale to retailers and retail to end customers. The store may offer the manufacturer its top logistical services. Simulating baseline and LSS situations. In a Stackelberg game model of the competitiveness problem in this supply chain, the retailer always leads and the producer follows. Maximizing profit, consumer surplus, and society wellbeing is described. Manufacturers incur higher retail pricing with LSS than without it, but retailers may charge more or less depending on the cost of the shared logistics service. The integrated logistics service's pricing affects enterprises' profit margins. LSS is the Pareto-optimal solution if the two organisations can maintain this cost within a tolerable range (which will decrease as competition rises). Logistics sharing services become cost-effective when their public value exceeds their cost. (He P., 2020).

A trend toward teamwork in company leadership has emerged in recent years. Collaborative operations might be very beneficial for supply chain management, online multi-sided platforms, and e-commerce. Typically, in a collaborative situation, one collaborator's subprocess is completed in isolation from the efforts of the other collaborators. This quality always casts a pall of doubt on procedures. Lack of trust may be detrimental to collaborative endeavours, therefore it's important to establish it early on. In order to pinpoint areas of uncertainty, the authors of this paper suggest a trust layer to be included in the modelling of collaborative business processes. Participants in a process are able to discuss the underlying uncertainty in a model thanks to the trust layer. Although the suggested approach has some potential for post-processing applications, its major value lies in the definition of novel collaborative processes that adhere to trust-aware design principles. According to (Muller, M., 2020).

Due to resource scarcity, environmental degradation, consumer environmental awareness and preference for green products, improving government environmental protection laws and regulations, and rising enterprise competition, green supply chains—

which include production, recycling, and remanufacturing—are becoming increasingly important. Businesses must overcome many challenges before adopting green supply chain management. These include limited research and development resources and skills. The government wants to know how to create successful financial aid programmes to encourage firms to establish a green supply chain. Our study models a sustainable closed-loop supply chain that matches customer needs at numerous distribution hubs while maximising profits. Meta-heuristic techniques like GA and PSO find and assess the best approximation for this non-linear optimization problem with mixed continuous/integer variables (PSO). By changing the ratio of new to recycled resources, firms may maximise output and reuse, and governments can promote these behaviours via subsidy rules. To aid recycling and remanufacturing businesses, the government may create a second subsidy programme for low-green commodities after doing sensitivity research on the environmental friendliness of recycled goods. Making the most of government subsidy programmes, optimising profits in online commerce, and running efficient operations and manufacturing are all laid forth in this article.(Guo J., 2020).

All things blockchain are circulating in the IT world. A blockchain-based supply chain is suggested as a solution to the long-standing issue of supply-chain management in this paper. At first, some thought blockchain would mess with supply chains. Cryptography is changing the way supply chains work. Improving supply chain efficiency, blockchain technology increases commodities transparency while decreasing costs, middlemen, and corruption. The article describes both industrial and human-based processes. Companies and industries should pay attention since this approach has the potential to change the game in the industry in question (s). The focus here will be on supply networks that are blockchain-enabled. Major companies are beginning to investigate blockchain technology; IBM's supply chain blockchain is just one example. Therefore, Blockchain has many potential applications outside of digital currencies like bitcoin, such as the supply chain, which need additional research. For this reason, blockchain technology has the potential to be a game-changer for many industries and companies. (Khosla D., 2019).

Internet-based storefronts are becoming commonplace. The burgeoning online business networks are now accessible to almost everyone. Because of their worldwide manufacturing and delivery networks, the items offered at these stores may be found in any region of the world. Supply Chain Management is the practise of effectively locating and transporting goods to consumers all around the globe (SCM). This article aims to raise awareness of the significance of supply chain management (SCM) in online retailing by showcasing Amazon.com's pioneering use of this concept to establish itself at the head of the field. Archival materials, electronic databases, and scholarly journals were consulted for all of the data utilised in this study. This article aims to educate readers on the significance of supply chain management (SCM) in the context of e-commerce, so that businesses may better compete in the face of intense market pressure (S., 2019).

To help online retailers stay competitive, we looked at the effects of QR and LT on inventory systems and proposed a novel approach to inventory management that combines the two. To evaluate the proposed method alongside QR and LT, we build a system dynamics model of the underlying inventory management system. Using QR at a higher price significantly improves the fulfilment rate, as shown in the numerical example, while using LT to keep a lower price merely marginally improves it. We reasoned that we could increase fulfilment rates and decrease costs by rethinking our inventory management strategy. It appears that the timing of LT can significantly affect the performance of the supply chain.(Yu X., 2018).

A lot of studies have focused on supply chain management and solutions for online businesses. Here we present a model of a supply chain that takes a number of different sectors' needs and pools them in one central location before sending them on their way to other facilities along a set route. The most efficient method of supplying aggregated content has been found by building a correct tsp that accounts for all producers. Our approach involves building a simulated annealing method and an ant colony algorithm, and then testing their performance on a shortest route finding assignment.(T.S., 2017).

**Objectives:**

1. To know the customer satisfaction in relationship with supply chain management.

2. To know the customer turnover.

3. Is supply chain management helps in customer retention.

**Hypothesis**:

1. $H_0$- There is a significant relationship between the frequent use and years of using the platform

   $H_1$ There is no significant relationship between the frequent use and years of using the platform

2. $H_0$There is a significant relationship between use of plat form and replacement policy.

   $H_1$ There is no significant relationship between use of plat form and replacement policy.

3. $H_0$: There is significance impact of frequent of e-commerce use on preference in use of e-commerce.

   $H_1$: There is no significance impact of frequent of e-commerce use on preference in use of e-commerce.

## RESEARCH METHODOLOGY

The statistical significance of the link between customer turnover and customer retention was tested using a mixed-methods approach that included quantitative and qualitative techniques. While qualitative research drew on prior work in the field, quantitative research employed SPSS 21 to analyse data gathered from questionnaires. Because of its usefulness in detecting possible inputs for more complicated analyses or in testing for

future changes while keeping all other variables constant, correlation analysis was employed.

**Data analysis and Interpretation:**

## 1. Correlation - Frequently use of E-commerce platform

|  | How frequently do you use E-Commerce? | From how many years you are using e-Commerce |
|---|---|---|
| How frequently do you use E-Commerce? | 1 |  |
| From how many years you are using e-Commerce | .142 | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson product correlation between the number of years utilising an e-commerce platform and the frequency of use was determined to be highly significant, although at a modest level. p<0.099, and the correlation coefficient is.142. This provides support for H1. It may be inferred from this that the longer people use an e-commerce platform, the more often they use it.

The correlation coefficient provided in the table is 0.142, indicated by "0.142."

An extremely small positive link between the amount of time someone has spent using E-Commerce and the frequency with which they utilise it (r=0.142) is seen. Allow me to explain:

As the correlation coefficient is positive (0.142), it indicates a tendency for individuals who have been using E-Commerce for a longer duration to report a slightly higher frequency of E-Commerce use. In other words, there is a mild positive relationship between these two variables.

On the other hand, the correlation coefficient is somewhat low at 0.142, suggesting that the association is not very strong. A stronger positive link would be indicated by a correlation coefficient closer to 1, but the relationship here is weak.

In practical terms, this weak positive correlation suggests that, on average, individuals who have been using E-Commerce for a longer time may use it slightly more frequently than those who have been using it for a shorter duration. However, there is considerable variability in the data, and the correlation does not have sufficient strength to reliably predict another variable from the other alone.

Keep in mind that just because two things are related does not mean they are causal. Since these two factors are related, we can't say that people's frequency of E-Commerce use is directly proportional to the length of time they've been using it. This association could be impacted by other factors as well.

## 2. Correlation of E-commerce platform using and replacement policy

| | Which of the following E-Commerce plat form you are using? | How would you rate replacement policy |
|---|---|---|
| Which of the following E- Commerce plat form you are using? | 1 | |
| How would you rate replacement policy | .829[**] | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

The replacement policy and the use of e-commerce platforms were determined to have a highly positive and statistically significant Pearson product correlation. ($p<0.001$), reliability coefficient ($r=.829$). This provides support for H1. Evidence of a rise in the use of e-commerce platforms brought about by the replacement policy. With a value of 0.829, the correlation coefficient indicates a very favourable relationship between the replacement policy rating and the e-commerce platform used. Allow me to explain:

Users of one e-commerce platform are more likely to have a positive impression of that platform's replacement policy than users of another platform, according to the positive correlation coefficient (0.829). To rephrase, an individual's propensity to rate an e-commerce platform's replacement policy higher is directly proportional to the platform's usage. This association appears to be rather robust, given the high level of the correlation (0.829). A closer value of the correlation coefficient to 1 suggests a more robust positive association between the two variables. While it's true that the replacement policy rating is strongly correlated with the e-commerce platform used, it doesn't mean that the two are causally related. That is to say, while it is true that users of a given platform are more likely to give it high marks for its replacement policy, this does not prove that the policy itself is the sole motivating factor. This association could be impacted by other factors as well. Furthermore, additional information regarding the particular platforms or their relationship cannot be provided without knowledge of the E-Commerce systems and their replacement policies.

## 3. Regression analysis - the frequency of e-commerce use and the preference for using e-commerce

| Hypothesis | Regression weight | Beta Coefficient | $R^2$ | F | P-Value | Hypothesis Supported |
|---|---|---|---|---|---|---|
| $H_0$ | Frequent of e-commerce use on preference in use of e-commerce. | 1.003 | .007 | .993 | .000 | Yes |

It seems like the supplied table shows the outcomes of a regression study that looked at how e-preference - commerce usage relates to how often e-commerce is used. The meaning of the table can be dissected in the following ways:

1. The null hypothesis: Here, we test the null hypothesis, which claims that we do not find a statistically significant correlation between our preference for and frequency of online shopping.

The beta coefficient, or regression weight, is 2. With a beta coefficient of 1.003, the predictor variable (frequency of e-commerce use) is well-positioned for regression analysis. With this coefficient, we can see that people's preferences for online shopping rise by 1.003 units for every one unit increase in the frequency of online shopping. It appears that the two variables are positively related to each other.

3. The value of R-squared, also known as R2, is 0.993. R-squared measures how well the frequency of e-commerce usage explains the variation in the preference for e-commerce. Here, the frequency of e-commerce use accounts for around 99.3 percent of the variance in choice, suggesting a strong link between the two variables.

4. The result of the F-test is an F-value of 0.000. One way to determine whether the regression model is statistically significant is to apply this test. It is clear that the correlation between e-commerce preference and frequency is not attributable to chance, as the p-value is extremely low (0.000) and the model is statistically significant.

P-Value: The F-test has a p-value of 0.000. With such a tiny p-value, we can say with confidence that there is a statistically significant correlation between e-commerce preference and frequency of use.

6. Confirmation of Hypothesis: A rejection of the null hypothesis (H0) is indicated by a "Yes" in this column. That is to say, the data suggests a favourable correlation between e-preference shopping and the frequency with which one engages in online transactions. This lends credence to the central tenet of the study, which states that a larger propensity for online shopping is correlated with more frequent online shopping.

In conclusion, this analysis's findings imply that people's preference for e-commerce grows substantially in tandem with their frequency of e-commerce use. Because the p-value is so little, we can conclude that these results are statistically significant and reject the null hypothesis.

**FINDING AND CONCLUSION**

These results and interpretations are derived from the supplied regression and correlation analyses:

**Relationship between Frequency of E-Commerce Use and Years of Use**

The investigation of the link between the number of years someone has been using E-Commerce and the frequency of E-Commerce use showed a weak positive correlation (r = 0.142, p < 0.099).

- This suggests that people who have been utilising E-Commerce for a longer period of time typically report using E-Commerce a little more frequently.

- Be that as it may, there is a great deal of data variability, and the correlation is somewhat weak, indicating that the association is not particularly strong.

- While there is a predisposition for a relationship, other variables may also impact the frequency of E-Commerce use, as seen by the weak correlation.

In conclusion, the results of the correlation analysis point to a weakly positive relationship between the duration of time spent engaging in electronic commerce and the frequency with which such engagement occurs.

- Nevertheless, using the standard significance level ($p < 0.05$), the association does not retain statistical significance because the p-value ($p < 0.099$) is marginally more than the cutoff.

- As a result, we can't say with certainty that more years of E-Commerce use is directly proportional to more frequent use.

**Relationship between E-Commerce Platform Usage and Replacement Policy Rating**

A strong positive link ($r = 0.829$, $p < 0.001$) was found in the correlation analysis between the replacement policy's rating and the E-Commerce platform's usage.

- This suggests that the replacement policy of a specific e-commerce platform is more positively rated by respondents who use that platform.

- The two variables appear to be somewhat closely related, according to the high correlation ($r = 0.829$).

Findings - A robust and statistically significant positive link was found between the replacement policy rating and the particular e-commerce platform utilised, according to the correlation analysis. - The replacement policy of an e-commerce platform is likely to be more well-received by its users. - Other, unobserved variables may possibly be playing a role in this association; yet, correlation does not prove causality.

**Regression Analysis on E-Commerce Use and Preference**

There is a robust and statistically significant correlation between the preference for and frequency of e-commerce usage, according to the regression analysis.

- With an R-squared value of 0.993 and a regression weight (beta coefficient) of 1.003, the amount of time spent engaging in electronic commerce accounts for nearly all (around 99.3%) of the variation in this preference.

- Based on the very significant F-test ($p < 0.001$), the overall significance of the regression model is supported.

**Conclusion**

There is substantial evidence from the regression analysis showing one's desire for utilising E-Commerce increases in direct correlation with the frequency with which one uses E-Commerce.

- The very significant results indicate that the correlation between preference and frequency of usage is not a consequence of chance alone.

- That more people who shop online like to do so more often lends credence to the theory that this is the case.

In conclusion, these results show that the strength of the positive association between years of E-Commerce use and frequency of use is not statistically significant, but it is present. However, the replacement policy's rating is strongly and significantly correlated with the E-Commerce platform's specificity. There is a robust and statistically significant correlation between the desire for and frequency of E-Commerce usage, as confirmed by the regression analysis.

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