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Impact of Online Shopping on Shopping Malls

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By

Xiaoxing Yan

An Abstract of a Thesis
In
Applied Economics

Submitted in Partial Fulfillment
Of the Requirements
For the Degree of

Master of Arts

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Buffalo State College
State University of New York
Department of Economics and Finance

ABSTRACT

The growth of e-retail has been a major discussion in the shopping characteristics of contemporary society. This has been a major concern as people strive to relate the exponential growth of online shopping to the recent decline in the growth of shopping malls. Various studies have significantly investigated the growth of online shopping and have always mentioned the impact of online shopping on shopping malls to be a negative one. This study focuses on testing that hypothesis. By exploring the possible relationship between certain factors such as the number of shopping malls and the percentage increase in online shopping retail, this study performs an analysis to prove this common assertion that online shopping negatively impacts shopping malls. The study uses Amazon online shopping company as a representation of the entire online shopping platform in the US. The analysis is carried via multiple linear regressions on the online shopping characteristics and those of the shopping malls.

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Chapter 1: Introduction

Background

  The growth of online shopping has posed a great threat to shopping mall retailers. Product and service purchases over the internet have acquired immense popularity over the years. In contemporary society, online shopping plays a critical role in defining the marketing platforms of various industries as opposed to the retail industry in the traditional set up where shopping malls were the key concerns. Due to the proliferation of the various e-commerce websites and the current trends in consumer preference to online shopping, the growth of online shopping has been one of the most acute issues of interest amongst the various shopping malls in the US and the entire globe. This increase in the use of online shopping malls has since been coupled with reduction in the total sales realized by traditional shopping malls since customers tend to shift their focus to online shopping platforms.

  In the United States, the internet has evolved into a dynamic and a viable retail channel capable of generating over $143.2 billion in the retail sales in 2005, which was an increase of over 22 percent of what the country realized in 2005[1]. This shopping platform is available to all consumers who have access to the World Wide Web and is available 24 hours at day. Through the internet the consumer enjoys various services such as product information, competitive prices and enhanced selection. According to a report on the e-market, a large proportion, which constitutes about 40 % of the entire US population, shops online.

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[1] Syed H. Akhter, "Impact of Internet Usage Comfort and Internet Technical Comfort on Online Shopping and Online Banking," *Journal of International Consumer Marketing* 27, no. 3 (15 May 2015): 207-19.

Online operations have been responsible for outstanding profits in some of the major companies all over the globe. Companies such as Land's End attribute their success to online retailing. For instance, this company made a greater profit through online operations than it ever did within 38 years of catalogue operations. Gap, Inc., one of the most outstanding apparel retailers, in the years between 2003 and 2010 managed to yield more volume sales via its websites than the brick-and-mortar stores[2]. The potentiality of online shopping has ever since been on the rise and its potential has always proved to be profitable over the years. This trend in online shopping has seen a substantial proportion of the various shopping malls close down or have tremendous decline in their sales capacity.

Purpose and meaning

The purpose of this study is to investigate and prove the hypothesis that online shopping negatively affects shopping malls. This will help in the comprehension of various aspects of online shopping and identify some of the economic gaps in this mode of shopping. By clearly examining the possibility of online shopping negatively affecting shopping malls, a platform for explaining some of the common commercial trends will be deduced.

The results in this study will be helpful in predicting the future effects of online shopping which has been on the rise and will soon take over the entire retail market, should its growth rate remain constant. Some of the common economic trends the study will strive to explain include the current trends in the number of shopping malls whose

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[2] Yi Cai and Brenda J Cude, *Encyclopedia of Cyber Behavior* (Pennsylvania: IGI Global, 2012), 15-466.

growth has since declined. The study will also find its purpose in explaining the current trends in the total sales realized by shopping malls.

By researching this topic, some of the most presumed economic challenges of online shopping such as the clear nature of the potential threat of this growing marketing behavior will be verified. This will come a long way in introducing some of the most favorable recommendations aimed at mitigating the threats of online shopping while preserving its advantages. This study is thus important in explaining various concerns in the field of commerce such as the negative impacts of online shopping on shopping malls, the level at which shopping malls will decline in the near future due to online shopping and so on.

Chapter 2: Review of Literature

Development of the online shopping

Online shopping owes its origin to the early 1980s with its chief pioneer Michael Aldrich who launched a system, which enabled consumers, agents, customers, distributors, suppliers and service companies to be connected online to the corporate system. Aldrich started with the use of a two-way message communication service, which was referred then to as videotext. This service later came in handy to bring change to the business world. During this period- early 1980s, it became the first time it was possible to completely transact business electronically in real-time[3].

The year 1982 came with advancement in the online shopping industry with the use of a videotext online service that was accessible by telephone lines called Mintel.

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[3] George G. Panigyrakis and Prokopis K. Theodoridis, "Internal marketing impact on business performance in a retail context," *International Journal of Retail and Distribution Management* 37, no. 7 (2009): 600-28.

This service enabled the consumers to make purchases online, check prices of stock, make train reservations, chat, as well as be in a position to search a telephone directory. This advancement was marked as the most successful pre-World Wide Web server online service. History was marked in the year 1984 as we had the first shopper ever to buy using an online platform in a Tesco store and the year that followed where we had the first Nissan carrying out an online credit check[4].

SWREG, a platform that offered various businesses an opportunity to sell their products online was founded in the year 1987. Today the platform still has many payment options apart from customizing and ensuring there is distribution across international markets to enable its users to make a purchase of whichever item(s) of their choice with their preferred currency using either credit or debit cards. The United States made its first landmark in online shopping industry in the year 1989 with Peapod.com – the first online store that dealt with groceries[5].

The first world Wide Web server and browser was created by Tim Berners-Lee in 1990 and was opened for commercial purposes in 1991. Amazon.com then followed by launching its online shopping site in 1995 as well as eBay which also launched its online commercial activities in 1995[6]. The founder of eBay, originally called Auctionerb, was Pierre Omidyar.

In the early 1990s improvements in the technology and growth ambitions among companies to seize these opportunities contributed to make serious efforts on employing

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[4] George G. Panigyrakis and Prokopis K. Theodoridis, "Internal marketing impact on business performance in a retail context," *International Journal of Retail and Distribution Management* 37, no. 7 (2009): 600-28.

[5] George G. Panigyrakis and Prokopis K. Theodoridis, "Internal marketing impact on business performance in a retail context," *International Journal of Retail and Distribution Management* 37, no. 7 (2009): 600-28.

[6] Songpol Kulviwat, Ramendra Thakur, and Chiquan Guo, *An Exploratory Study of Consumer Adoption of Online Shipping: Mediating Effect of Online Purchase Intention* (Pennsylvania: IGI Global, 2006), 1-15.

the use of the internet to better their marketing strategies. The business premises started making efforts in engaging in the online trade by creating highly developed websites, which enables customers to shop in the comfort of their homes. PayPal was founded during this age in the year 1998 enabling consumers to have financial transactions online without the need to share financial information including eliminating the need to use usernames and passwords during the payment period. The following year (1999) marked the launch of the first online shop called 'Zappos' which was, however, bought by Amazon for around $1.2 billion. Amazon has made a lot of achievements in the online industry as a whole. In the year 2001, Amazon had a launch of its mobile services to facilitate the rapidly growing online shopping making it realize a yearly profit of about $35.3 million despite the United States online shopping leading with sales of about $50 billion in the year 2003[7].

During the rapid growth of internet use across the globe about 20 years ago, there were predictions on the possible impacts of online shopping on retail business since the potentiality of online business were becoming clearer. This was followed by an era characterized by questions such as, to what extent will the online business impact retail business. Some concerns specific to retailing arose such as taking into consideration, the kind of consumers, their online shopping habits and the key factors which would ensure repeat customers. Currently, the best research on strategies for online shopping such as coordination channel, market segmentation, promotional strategies and pricing are being addressed.

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[7] Songpol Kulviwat, Ramendra Thakur, and Chiquan Guo, *Electronic Business: Concepts, Methodologies, Tools, and Applications* (Pennsylvania: IGI Global, 2008), 1456-71.

Since its commencement, various online retailers have been started, companies such as Amazon and eBay among others have grown to have some of the most outstanding sales in the US. This adjustment has been made possible because of internet growth and availability of cheap internet enabled devices such as smart phones and personal computers. Today the majority of shoppers combine online shopping with real life shopping by use of access to WiFi and the showrooming trend. Consumers make their purchases in the retail stores almost at the same time while they use mobile devices for online shopping. A recent study done in 2015 revealed that about 74% of consumers used mobile phones to help them while doing their shopping and as a result about 79% made purchases. Currently, possible for customers to buy products in the comfort of their homes and have the products delivered to them without necessarily visiting the shops.

Online shopping in the Contemporary U.S. market

According to an April 2017 e-commerce survey in the US, about 40% of internet users purchase more than one item from the online platforms per month, while 20% of the users shop online on a weekly basis [8]. The survey reported that not only does the online shopping volume depict a positive projection but also a forecast in its increase especially the mobile web based platforms. The internet shoppers tend to take their time researching the product online and tend to read online reviews, which has a significant impact on the product choice as the shoppers strive to get the best deals. In some cases, the shoppers carry out their research online and end up shopping offline. About 42% of the entire US consumers' searches for products online result in online purchases. Only

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[8] Yi Cai and Brenda J. Cude, *Consumers' Adoption of Online Shopping* (Pennsylvania: IGI Global, 2012), 466-67.

about 14% of the consumers prefer searching for the products online and buying offline in the shopping malls or other retail entities[9].

Some of the primary factors attracting online shopping as opposed to going to physical stores are the availability of coupons and discounts offered in online shopping platforms, referrals and suggestions from friends and family members. And the brand's ads are also key drivers in online shopping decision[10]. In order for online businesses to attract more customers, a recent study done found out that it was through a cost saving strategy that was used by online businesses. In the attempt to attract more customers and be in a position to retain them, the online businesses ensured that their cost saving strategy was readily able to supplant the needs of consumers to have a physical interaction with the product. It is with much interest to note that a high number of customers expressed the need to see the pictures of products sold online thereby attracting shoppers to visit a website according to the recent study. However, the need to physically interact with the goods in this study may have been alleviated to a point where it was deemed not necessary especially when confronted with other satisfiers which were more significant such as cost, therefore increasing the chances of online businesses striving to compete with other online storefronts as well as traditional brick-and-mortar. Potential buyers often turn to social media platforms such as Facebook for advice, reviews, and recommendations.

In the US, laptops and desktops still constitute the primary medium for online shopping even though mobile e-commerce is rapidly rising. In the last quarter of 2016,

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[9] Internet/Broadband Fact Sheet," Pew Research Center: Internet, Science & Technology, February 05, 2018, accessed May 2, 2018, http://www.pewinternet.org/fact-sheet/internet-broadband/.

[10] Amar Cheema and Purushottam Papatla, "Relative importance of online versus offline information for Internet purchases: Product category and Internet experience effects," *Journal of Business Research* 63, no. 9 (October 2010): 979-85.

mobile e-commerce spending was about 22.68 billion U.S. dollars which represents about 20.8% of the digital commerce spending within that period[11].

With the increase in mobile commerce, retailers tend to devise various ways to seize this opportunity. Considering the limitations of the web browsers, the mobile shopping applications are making a serious effort to offer customers' personalized experience. By February 2017, Amazon had the most pronounced application in the United States with 40% of its users being phone owners in the U.S.[12]. The majority of the U.S. online shoppers commence their shopping journey on Amazon due to the fact that it offers various products offered with free, fast shipping especially for their "Prime" memberships. On April 17,2018, Amazon announced it now has 100,000,000 prime members. Some of the respondents attribute their shopping behavior on Amazon to better deals. Besides Amazon, other popular mobile retailer apps in the US include Walmart, eBay, Checkout 51, Groupon, and Shopkick.

Risk perception in online shopping

Despite the massive success in online shopping, risk perception associated with online shopping relates negatively to the shopping intentions.Though the development of e-commerce has increased the popularity of online shopping, much has yet to be done to put online shopping in a better position. According to a study done in 2012, it was revealed that online shopping was rated as position 11th out of the 15 purposes people use the internet. This is primarily attributed to consumers' perceived risks of online

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[11]   Alican Kavas and Aysel Kavas, "An Investigation Of Perceived Risk Of Body Weight Among Normal And Overweight: Can Consumer Perceived Risk Theory Help?," *Journal of Business and Economics Research* 6, no. 10 (October 2008): 85-90.
[12]   Alican Kavas and Aysel Kavas, "An Investigation Of Perceived Risk Of Body Weight Among Normal And Overweight: Can Consumer Perceived Risk Theory Help?," *Journal of Business and Economics Research* 6, no. 10 (October 2008): 85-90.

shopping which has by a large extent influenced attitudes of users towards online shopping and as a result, had a general effect on their online purchasing behavior. The understanding of consumers' perceived risks, attitudes, and their purchasing behavior helps provide the basis for a study of consumer online behavior. Various studies looking at online shopping risk perception depict a multifaceted perception such as financial risks, product risks, convenience, and non-delivery risks. Through the employment of a web-based survey in which 300 online shoppers of Malaysia's largest online market place participated, the results indicated that the perceived risks that were very dangerous and largely influenced the attitude of online shoppers in a negative way. These risks included product risk, financial risk, non-delivery risk and 'stolen' delivery risk. On the other hand, convenience risk positively affected the attitude of online shoppers, a sign that the online shoppers of the various sites trusted their online sellers. This also showed that non-convenience aspect of online shopping was the least of their worries for the online shoppers, as they did not care much for activities such as the handling of returned products and an examination of the quality of the featured product in the website. Some of the studies have summarized the various types into overall risks, which is tested and based on the impacts of the shopper's online intents[13].

In addition, online shopping is seen to have a common challenge of its inability to provide a real shopping experience to the various customers who use the websites. Despite the fact that online shopping is more convenient, it fails to offer a real try-on experience. Moreover, online shopping has challenges when it comes to concepts such as interactive communication and personalized customer services. This results in a negative

13 Robert W. Palmatier and Shrihari Sridhar, *Marketing Strategy: Based on First Principles and Data Analytics* (New York: Palgrave, 2017), 195-217.

customer experience. According to Siddiqui et al. (2003), the customers are always disappointed with the relatively low levels of website interactivity whenever they are shopping online[14]. They therefore tend to look for particular experiences, which are more engaging and memorable[15].

Online retailers such as Amazon have since engaged in various strategies aimed at improving their services in order to ensure their success. They tend to improve their interactivity to ensure a memorable customer experience. Consumer goals such as experiential-oriented and goal-oriented have a great impact on the online shopping behaviors[16]. Besides consumer characteristics, such past online experience and the innovative nature of the online shop tend to have substantial impact on the progress of online shopping.

The process involved in online shopping

Online shopping, also known by different names such as e-store, online store, e-web-store, E- shopping or virtual store provides a platform for purchasing goods and services by use of electronic data interchange and online transaction processing. Online shopping being the latest invention of modern day technology has come as a big relief in our daily busy schedules since shopping has been made easier.

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[14] Noreen Siddiqui, "Retailer and consumer perceptions of online fashion retailers: Web site design issues," *JOURNAL OF FASHION MARKETING AND MANAGEMENT: AN INTERNATIONAL JOURNAL* 7, no. 4 (2003): 345-55.

[15] Guda van Noort, Peter Kerkhof, and Bob M. Fennis, "Online versus conventional shopping: consumers' risk perception and regulatory focus," *CyberPsychology and Behavior* 10, no. 5 (10 Oct 2007): 731-33.

[16] Preeti Khitoliya, "Customers Attitude and Perception Towards Online Shopping," *Paripex Indian Journal Of Research* 3, no. 6 (2012): 18-21.

Product selection: This involves a search for a product of interest by the consumer through visiting the retailer's website directly or by searching through a shopping search engine among alternative vendors. Online retailers allow consumers to accumulate multiple items by use of a software called shopping cart after which a "checkout" process follows where payment and delivery information is collected. There is also an option for some stores which provide a permanent online account to the consumers through which communication is made when need arises via emails.

Payment: Once a consumer makes a selection of the items, online shoppers provide systems that make it possible for users to have accounts and make payment. Such include credit cards or PayPal accounts which are commonly used, Cash on Delivery, use of cryptocurrencies, Postal money order and direct debit in some countries. Processing of the financial part of a transaction may either be done in real time or later as part of the fulfillment process. For instance, letting the consumer know their credit card was declined before logging off and therefore convenient.

Product delivery: After completion of the payment process, physical items can be delivered either through shipping where the product is brought up to a customer's designated address or in store pick-up where a consumer picks up the delivered product from a local store as indicated by the customer in the locator software.

On the other hand, digital items can be collected through downloading especially movies, images or music, printing of items such as admission tickets or through COBO (in Care Of Box Office) commonly known as "at the door" pick up where the consumer picks up a ticket purchased prior just before the event.

Social media

Social media platforms such as Twitter and Facebook constitute a substantial proportion of shopping strategies employed by various businesses in the US. Their use is attributed to the fact that such platforms are outreaching and relatively cheap. The customers can view the product details in these platforms and make their purchases without necessarily visiting the shopping malls because some businesses deliver the goods to the consumers. According to Bosari (2012), 94% of the major companies in the US with marketing departments always include social media as a component of their promotion tools. Out of the companies included in this study, 85% have since enhanced their market publicity through the social media and 58% of the companies managed to improve thiers within 3 years, an achievement attributed to the use of social medias[17].

Social media is thus a major component of shopping platform not only in the US but also in the entire globe. Various shopping malls tend to have their social media pages where they post various features of their products for the targeted consumers. These pages will provide the necessarily information for the prospected customers. Besides, they enhance immediate feedback thus ensuring faster communication with the customers.

Website shopping

Other than social media, another key component of online shopping is the company direct website. According to Simbolon (2016), the direct website plays a major role in providing a shopping platform. This platform is relatively cheaper since the

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[17] Bu Zhong, *Impact of social media on communication and business* (Pennsylvania: IGI Global, 2016), 607-744.

customers easily view all the product features and have the products availed to them without necessarily visiting the shopping malls [18]. In most cases, the website includes all the necessary information about a product.

The outreaching nature of online shopping services is attributed to increased usage of internet-enabled services such as smart phones and computers. According to Pew Research Centre (2018), 89 % of the US population uses internet enabled phones which can easily use in shopping various products[19]. This trend is not limited to the US. All over the world evolution of cheaper and better smartphones have been on the rise. About 46% of the internet users in the Asia Pacific region have purchased for goods and services via the online platforms. In Europe, the use of mobile e-commerce stood at 32% in 2016 while in North America about 30% of the entire consumers had shopped online via various digital media such as smartphones and computers[20]. The mobile users are able to keep track of their deliveries and compare various prices before deciding on the best deals. This affordability makes online shopping more convenient and readily available.

The advantage and disadvantage of online shopping

Advantages

Convenience merits. Online shopping platforms makes it possible for customers to buy anything at the comfort of his or her home. The online stores are available 24 hours 7 days a week. The internet makes it possible for the client to access the services

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[18]   Yun Ji Moon, "Online Consumer's Shopping Motives of Personality and Shopping Values in the Lodging Industries," *Advanced Science and Technology Letters* 120, no. 1 (2015): 105-8.

[19]   "Social Media Use in 2018," Pew Research Center Internet & Technology, March 1, 2018, accessed May 3, 2018, http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/.

[20]   Julian E. Markham, *The Future of Shopping: Traditional Patterns and Net Effects* (London: Palgrave Macmillan, 1998), 209-19.

despite their location. This is unlike the shopping malls where customers must visit the premises to make purchases. Besides, some of the malls do not operate at all hours making it impossible for customers to buy when they are closed. Shopping is therefore made easier and more convenient as it allows for cancellation of transactions in case someone changes their mind.

Apart from that, shoppers may also prefer online shopping due to the good discounts offered to online shoppers. Also, the freedom to compare various brands or models through the help of detailed information of the product for sale and the fact that online shopping saves time.

Customers are relieved of the stress of standing in long queues at cash counters to pay for products purchased. The customers can also make use of search engines in the online sites to look for products of their choice, again saving time.

Online tracking. Once customers have made their purchases, they can track the order status and the delivery status.

Selection merits. Generally, online stores are able to offer a variety of products as compared to the brick and mortar traditional stores. This is attributed to the fact that online stores do not need to attractively display their items on the shelves which is a common practice among the shopping malls. Online retailers can thus keep a large amount of inventory at hand. Besides, it is also possible to have only product samples since they do not have to display the products the way shopping malls do.

Information merits. The amount of information that can be gained from an online shopping platform is more pronounced than the amount of information obtainable from physical stores such as shopping malls. The product and service description in online

shopping platforms includes manufacturer's description, and descriptions from the vendor. Also, size and specific technical description are often available with online shopping websites. Key facets of online shopping platforms are the reviews from the various customers who have used the products, from professional journals, and magazines. In online bookstores such as Amazon.com books, book's excerpts from a book are always available for the targeted customers. This enhances their decision making process. By making available all this information, the customers are able to make good purchase decisions without necessarily performing extra product research as compared to physical stores such as shopping malls.

Pricing merits. As a result of online stores not having to pay rent for the storefronts in urban areas, where rent is quite high. They sell relatively larger quantities of goods because they can easily afford to sell their products and services at relatively cheaper prices as compared to the shopping malls. The amount of discounts offered by online retails shops can be substantial and can constitute up to 50% of the suggested retail price. This gives the online shoppers better deals as compared to those they find in physical stores.

Online platforms gives the customers an opportunity to compare the prices of the items from different sellers before making their purchase decision. This is an entirely different experience than shopping malls where the customers have to walk from one shop to another in order compare the prices. Online shopping gives the customer the ability to campare price in the comfort of the client's home.

By shopping online, the client avoids overcrowding which is a common setback in the shopping malls especially during the festive seasons. Most of the online shopping

platforms either offer product deliveries at some small cost or free. The clients are thus exempted from the agony of having to crowd in shopping malls.

In addition, online shopping offers, an opportunity for customers to buy products considered private. The purchases of private products such as adult toys are made possible by saving the buyer the embarrassment they would otherwise feel if they had gone to shopping malls.

Disadvantages of online shopping

Physical product inspection problem. Online shopping platforms cannot replace the experience of physically seeing and touching the product prior to making a decision on buying the product. Some products such as clothing poses a great challenge in online buying since the customer cannot physical inspect and try the product to find out its applicability. Besides, in some cases, there are some small details, which are not noticeable from the online shops.

Online shoppers also are denied the ability of physical inspection and interaction of the goods in order to try them before purchase is made. In addition, there are risks of losing some customers since online shoppers lack the power to have price negotiations with online sellers- something that exists in local stores.

Back ordered items. Some of the items sold online may have been once sold and taken back.   However, the current buyer may not be in a position to realize until maybe after several weeks and this may become problematic especially in instances of purchasing gifts.

Some other online shoppers may not be able to take advantage of statewide tax-free shopping events which occur seasonally especially in states such as Texas in the United States. Apart from that, online sellers do not have full ability to communicate dissatisfaction of their products if any. Therefore, customers may fail to get the satisfaction of the product being sold as communicating dissatisfaction may be difficult online and may require much more patience and tenacity. Hence, customers may opt for face-to-face interaction with local store employees, which is usually faster and satisfies more.

Shipping cost challenge. Despite the fact that some online retails now offer free shipping to their client, majority of the online retails still require yet a minimum order cost in order to be able to enjoy free shipping costs. Other online retails on the other hand only offer this incentive at certain times in a year. In most cases, it is a requirement to incur addition-shipping costs. This does not augur well with large products such as furniture. Besides when a customer decides to return the product, some online retails do not offer free return. Again, the buyer will have to incur additional cost on the same.

Time concerns issues. Another setback of online shopping is the time span taken to deliver the product. Unlike physical shopping stores where there is instant gratification where you pay for a product and acquire it, in online shopping, it is a common practice to pay for a product and wait for it form some days before it is availed to the customer. In some cases, the buyer has to wait for days and or even weeks before the product is delivered to them.

Privacy issues. By shopping online, there is some aspect of privacy rights the customer waves to the online retailer. In the online stores, the purchases are tracked over some time in order to offer more suggestions to the items one can buy.

Development of shopping mall

Shopping malls were initially conceived as community centers where people would converge for shopping, cultural activities, and other social interaction activities. In the contemporary Shopping malls have since surpassed this early expectation.

Shopping Malls owes their origin in the 1920s in California where supermarkets anchored and served as an attraction point to the smaller stores. Ever since there have been rapid growth in the design of shopping malls. The very first enclosed shopping mall was developed in the Minneapolis by around 1956[21]. Its primary objective was to get the customers out of the harsh weather. It ended up introducing the world into shopping complexities as the need to avoid problems such as bad weather and dirt rose to be a primary concern for the shopping centers leading to the growth of shopping malls.

Following the migration of people out of the cities and immense growth of the automobile, by 1960, there were over 4500 shopping malls accounting for 14% of the total retail sale. This growth has ever since grown until the introduction of online shopping. In 1975, there were about 16400 shopping malls in the US accounting for 33% of the total retail sales[22]. By 1987, there were over 300000 shopping malls in the US

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[21] Arlene Dávila, *El Mall: The Spatial and Class Politics of Shopping Malls in Latin America* (California: University of California Press, 2016), 161-74.
[22] Arlene Dávila, *El Mall: The Spatial and Class Politics of Shopping Malls in Latin America* (California: University of California Press, 2016), 161-74.

accounting for over 50% of the total retail sales Van Noort, Kerkhof, & Fennis[23]. Shopping malls have been at the center of retail business accounting for over 50% total sales in the US and were the primary rejuvenation reasons for urban centers such as City-Center Indianapolis. Some of the shopping malls have grown to be so large that they are considered communities such as Chicago Waters Towers, which has hotels, offices, restaurant, stores, and even residential units.

The advantage and disadvantage of shopping malls

Advantages

Availability of parking space in the shopping malls. One of the primary challenges for people who shop in the cities is the limited parking spaces. In shopping malls, parking is often freely or is charged nominal fee. Shopping malls are characterized by ample parking space in both design and construction. This makes it possible to shop in the shopping malls as compared to single stores. Because of its convenience in offering parking services, majority of people opt to go shopping there.

Variety of products. Shopping malls avails various types of stores in a single location. The types of products and services ranges from household items to electronics. The customers can thus get all the products they want under one roof.   Most shopping malls contain varieties such as groceries, reading material, cinemas, and clothes among others. The buyer is thus exempted from the need to visit one store after another in search of the various products.

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[23]   Richard A. Feinberg, "A Brief History of the Mall," Association for Consumer Research, 1991, accessed May 3, 2018, http://www.acrwebsite.org/search/view-conference-proceedings.aspx?Id=7196.

In addition, shopping malls offers various forms of entertainment thus attracting many customers. It thus provides an opportunity for shoppers to combine shopping process with entertainment.

Unlike open-air market stores, shopping mall client do not have to worry about unfavorable weather conditions.

Disadvantages

Shopping mall has higher occupancy rates as compared to the strip centers and the freestanding sites. This setback ensures that their prices have to be high enough to take care of the rents associated with high occupancy rates.

Inconvenience demerit. Shopping malls especially during weekends and holidays become so much crowded making it look like at times people have the same idea of wanting to all meet at the mall. This crowding makes shopping difficult and people end up forgetting items they are supposed to buy. As well, parking becomes a problem because of overcrowding and therefore consumers have to cater for extra parking charge fees elsewhere.

Vastness of the place. Shopping malls are always very large and this may become a challenge especially to the senior citizens who may find it difficult and tiresome to traverse the mall in search of items of their choice for purchase.

Drain on resources. There is an incorporation of a large number of products and services in shopping malls and this most of the time is tempting to consumers. Consumers often find themselves engaging in impulse buying with the sales and special offers that shopping malls offer make it even harder for consumers to resist such

impulsive buying. It therefore becomes a challenge to stick to the monthly budget leading to a strain on other resources that could have been channeled elsewhere.

Influence on small shops in the area. Shopping malls have a great impact on the number of shoppers who will attend the small shops. This will lead to collapse of small businesses in the area of operation of the mall and therefore loss of jobs to the shopkeepers and a source of living. Majority of consumers would prefer shopping in malls due to provision of a wide variety of products and services, which allow choices to be made.

Environmental effects like global warming and loss of nature. Shopping malls require large amounts of energy supply to run various processes. If the source of this energy supply is considered in the end, we will experience environmental effects such as global warming which is detrimental to living things. Shopping malls contribute to the loss of nature. Since they cover large areas, land has to be cleared to create room- a land that formed a habitat for plant and animal life. As well, shopping malls contribute largely to air pollution and heavy traffic on roads nearby them. They are situated mostly in the outskirts of town and that would mean people must go to the malls using their private cars mostly, which in turn increases traffic apart from increasing air pollution.

In addition, there are possibilities of selling similar merchandise in close proximity. This intensifies the competition between the two entities selling the similar products. Besides shopping malls, have strict rules regarding the product display and signage process.

Relationship between success in online shopping and possible implications on the shopping malls

Due to decreased online shopping risk perception and their impacts on consumer's intents, the growth of online shopping has been a major threat to shopping malls. This has hypothetically led to decline in the total sales realized by various shopping malls as the customer outreach of online shopping continues to rise.

The increase in online shopping as greatly affected the nature of shopping malls in the contemporary society in terms of their total sales. A study conducted in 2014 showed that 78% of the US population who are above 15 years old bought at least one item in the last quarter of 2014. A study conducted in the US showed that at least 69% of the US adult is shops online at least once in a month and about 33% shops on a weekly basis[24].

According to the US department of Commerce 2014 report, e-retailers constituted about 8.3% of the retail sales excluding the food related services and automobile fuels. This figure was only 7.4% in 2013. This depicts tremendous improvements in online shopping which has ever since grown. The 2015 report also indicated an increase in 1.4% in 2015. According to a Forrester Research Study, by the end of 2018, online shopping will constitute over 11% of all the purchases in the US. On the other hand, study conducted in the same year depicted decline shopping mall sales.

The identified shift in purchases from the online shopping malls to the web-based platform has had serious impacts on shopping malls as previously mentioned.

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[24] Syed H. Akhter, "Impact of Internet Usage Comfort and Internet Technical Comfort on Online Shopping and Online Banking," *Journal of International Consumer Marketing* 27, no. 3 (2015): 207-19.

This has resulted into a shift in demand for the retail space especially for various shopping malls. The demand for the neighborhood and community shopping malls has since had their demands lag behind despite the robust consumer spending[25]. The trend commenced with decreasing books sales in the shopping malls alongside electronic appliances. This trend could be explained by the existence of robust online bookstore such as Amazon and e-Bay.

This was followed by clothing since women have since been comfortable with ordering apparel from the online platforms and returning the goods as needed. This trend has since been a primary concern for the suburban shopping malls[26]. This is attributed to the fact that it results into the decline in shopping mall sales. With the increasing number of apparel retailers in both the life and power centers, online shopping platforms are soon taking over the retail business from the shopping malls. Various shopping malls have since pulled out from various locations where the usage of online shopping. According to Tim Worstall out of the 1200 malls in the United States, 15% are about 30 to 50% vacant[27]. Since 2010, more than a dozen shopping malls have since closed down with more that 60% at the brink of closing down as well.

The majority of the shopping malls and other offline retailers have since focused on their physical presence as their brand opportunity. This implies that the shopping malls are now shifting to having relatively smaller number of stores in particular areas.

[25]"Internet/Broadband Fact Sheet," Pew Research Center: Internet, Science & Technology, February 05, 2018, accessed May 2, 2018, http://www.pewinternet.org/fact-sheet/internet-broadband/.

[26] Amar Cheema and Purushottam Papatla, "Relative importance of online versus offline information for Internet purchases: Product category and Internet experience effects," *Journal of Business Research* 63, no. 9-10 (2010): 21

[27] Tim Worstall, "The Shopping Malls Really Are Being Killed By Online Shopping," Forbes, January 4, 2015, accessed May 3, 2018, https://www.forbes.com/sites/timworstall/2015/01/04/the-shopping-malls-really-are-being-killed-by-online-shopping/#685ee1eb6fbb.

They will thus be concentrated in shopping areas in order match their desired brand impressions. They have thus evolved to being curated in order to provide special characters among the mixed stores. This has been a strategy employed by the various shopping malls in order to keep up with the competition threats from online shopping platforms. In the contemporary society, the shopping malls are designed such that people do not just go to the malls to shop but instead they go there to have an experience they cannot get online. This has led to various trends in shopping malls such as celebrity chef restaurants and public art activities.

Status of shopping mall business in the US

In the year 2017, there were 9 major retail bankruptcies all of which were practicing shopping mall business in one way or another in the US. Some of the major stores encompassing Sears, RadioShack, Macy's, and J.C.Penney showed more than 100 stores closed each. Some of the major companies such as Ralph Lauren and the American eagle made announcements that they were some of their essential stores such as flagship Polo store situated on the 5th Avenue.

There have been various attempts by different scholars to explain this meltdown in the shopping mall to the possible deep recession. However, this cannot be the case because the American GDP had grown for the past 8 consecutive years. As at 2017, there were low gas prices in the US, unemployment rates that is under 5% making year an excellent match for the wage growth especially among the middle and low-income earners in the US.

Despite the overall decline in the revenue earned form the stores, the overall retail revenue has been on the rise and Gross Domestic Product in the US has been on the rise even in the years the country faced the larges fall in the revenue earned from stores for example in the year 2017. This indicates that other than the overall economic performance of US economy, there are other factors, which can explain the current trends in decline in the shopping malls. The fact that the country's economic performance in the retail business rising despite the fact that shopping malls shows a decline in its revenue indicators that there is diversion of customers form the shopping malls to other selling platforms. The chief one amongst them being online shopping platforms.

Impact of the growth in online shopping on shopping malls

Online shopping has progressively done well in various categories of products such as entertainment and media categories for example music and books. By extension, this achievement has surpassed these common categories. In the contemporary American market, online shopping platforms offers a variety of products, which were traditionally being acquired from shopping stores? The various easy return policies aimed at attracting more online shoppers have since made online shopping easy, cheap and risk free as compared to the previous year's thus diverting more customers to buy form them.

For various category of consumers for example the Apparel ones, online shopping has overwhelming advantages as compared to shopping malls. These advantages have made online shopping to be more common than ever before. The Apparel category is considered to one of the largest category of the e-commerce market. The success of various startups for example Bonobos, Warby Parker and Casper in various category of

products such as clothes, glasses and beds respectively has pushed the physical shopping malls to strive to offer similar provisions like the online shopping platforms. This is however challenging for the shopping malls because of the additional expenses that incur such as rent which are not incurred by the online shopping platforms.

The various affordability of online shopping malls, which have contributed to their success at the expense of the shopping malls, includes various applications, mobile wallets, growth, and development of smart phones.

Chapter 3: Methodology

Evaluation of any economic dependence should encompass the growth characteristics of the factors under study. This chapter encompasses the situational impacts of online shopping on the shopping malls in the US. Amazon is picked as a representation of the entire US online market because of the reasons identified below. The characteristics of the shopping malls are represented by total revenue earned in the stores between the years 2000 to 2017. The total revenue earned by Amazon within the same period represents the role of online shopping on the other hand.

The impact of online shopping is thus model using the equation. Naturally, there is no single model, which is best suited for analyzing an economic development or impact. The analysis should however include economic growth in order to remain viable. In this chapter, economic growth is represented by the GDPs within this period.

The first assumption made is that as the amount of revenue earned by the online shopping platforms increases, the GDP increases too, the amount of revenue realized by the shopping malls is however hypothetically supposed to decline.

The mathematical model is as shown below:

$$SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$$

In which

SR=Store revenues

ANR= Net sales revenue of Amazon

GDP=Gross Domestic Product

ε=Normal distributed classical error term

The equation assumes that the revenue earned from the stores is linearly related to the net sales revenue of Amazon and the Gross Domestic product. The model $SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$ depicts a multivariable linear regression model.

The econometric implication of this function hypothesis that the dependent variable SR is linearly related to the explanatory variables ANR (Amazon's annual net revenue) and GDP. The constant e takes care of all the other factors, which are likely to determine the revenue earned from the stores, which are not taken care of by the two investigated variables.

These variables are measure with 95% confidence level. Corrected error methodology is used in order to improve the confidence level and the robustness of the inferences. Through the SAS on regression analysis, multivariable regression is carried out in order to determine the various regression coefficients.

Some of the key tenets of the hypothesis include

When $\beta_1<0$ then increase in the total revenue realized by online shopping platforms (Amazon) leads to a decrease in the revenue earned by the stores thus online shopping negatively impact on shopping malls.

When $\beta_2<0$ then increase in the number in gross domestic products results into decline in shopping malls otherwise the vice-versa is true.

For the stores revenue, the net impact of online shopping is negative implying that the net sales realized by Amazon and Gross domestic products' increase has a negative impact in shopping mall revenue if $\beta_1+ \beta_2<0$.

Online shopping has no impact on the progress and the number of shopping mall if $\beta_1+ \beta_2=0$. This will imply that either an increase or a decrease in the number of online shopping malls do not have an impact on the number of shopping malls.

Online shopping positively impact on shopping mall if $\beta_1+\beta_2>0$.

Data sources

This study will employ secondary sources of data. The time series data was employed for the period between 2000 and 2017. Information on the amount of revenue earned by the stores was obtained from the aggregate revenues from a basket of "anchor retailers": Gap Inc., Abercrombie & Fitch, Best Buy Co Inc., Barnes & Noble Inc, Bon-Ton Stores Inc., Dillard's, Inc., GameStop Corp., JCPenney, Nordstrom Inc., Kohl's Corporation, Macy's Inc., Sears Holdings Corp., and Target corporation. The data on the GDP was acquired from US Bureau of Economic Analysis while Amazon is annual, net sales were obtained from Statista.com.

The data used to verify the hypothesis on impacts internet shopping on shopping mall total sales was sourced from Amazon total revenue between 2010 and 2017.

In this research, Amazon was used as a representation of the entire online shopping marketplace. This is because Amazon owns the largest piece of the e-commerce sales in the US. Amazon owned about 44% of the entire US e-market. Its proportion of the e-commerce market has always been the highest compared to other online retail platforms. In 2016 for example, Amazon held 38% of the total market share with $149 billion sales and was identified as the largest e-commerce company. The proportion held by other competing firms is relatively much less compared to that of Amazon. The closest competitors of Amazon in the US e-retail market are e-Bay, Apple and Walmart, which held 7.8%, 3.2%, and 2.8% of the market, share in 2016. Besides the relevant data on the progress of Amazon Company are available and consistent as opposed to those of the other companies or a conglomeration of the entire online shopping platforms. Amazon thus provides the most relevant source of data in representing online shopping platforms.

Variables	The measurable indicator of variable
SR	Store revenues
ANR	Net sales revenue of Amazon
GDP	Gross Domestic Product

Table 1: Measurement indicator variables

	A	B	C	D
1	Year	SR	ANR	GDP
2	2000	154647	2762	10472285
3	2001	159489	3122	10701317
4	2002	161406	3933	11103834
5	2003	160753	5264	11816827
6	2004	176509	6921	12562163
7	2005	226183	8490	13381629
8	2006	253383	10711	14066370
9	2007	261819	14835	14685330
10	2008	258851	19166	14549949
11	2009	253550	24509	14566511
12	2010	270664	34204	15230208
13	2011	270087	48077	15785312
14	2012	273983	61093	16297349
15	2013	262151	74452	16999888
16	2014	262155	88988	17735933
17	2015	256336	107006	18287226
18	2016	243145	135987	18905545
19	2017	240829	177876	19736491

Table 2: Sample data

From table 2, it can be seen that the amount of revenue earned by Amazon has been exponentially increasing from the year 2000. The amount of revenue earned by stores however does not show any consistent pattern in either growth or decline. It is characterized by a rise and a fall for instance between 2015 and 2016, it realized a fall of over 10000 while between 2011 and 2012, it realized an increase of more than 1000. The Gross Domestic Product on the other hand depicts a consistent increase though the rate of its rise is less than that of the net revenue earned by Amazon within this period.

The SAS System

The MEANS Procedure

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
SR	SR	18	230330.00	44863.56	154647.00	273983.00
ANR	ANR	18	45966.44	51853.39	2762.00	177876.00
GDP	GDP	18	14826898.17	2828497.07	10472285.00	19736491.00

Table 3: Statistical description of the sample data

We could see from table 3 that GDP increase sharply during 2000 to 2017. Meanwhile, the Net sales revenue of Amazon also growth sharply. It raises from 2,762 million to 177,876 million.

Regression Analysis

Based on the model econometric model, there is one dependent variable (revenue from the store) and two independent variables (Gross domestic product and Amazon's net revenue). Using regression capabilities of SAS of data analysis, multivariable regression yields the following results.

$$SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$$

| | | | | | | | Heteroscedasticity Consistent | | | |
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standard Error	t Value	Pr > |t|	Variance Inflation
Intercept	Intercept	1	-189943	34100	-5.57	<.0001	28417	-6.68	<.0001	0
ANR	ANR	1	-1.19526	0.14707	-8.13	<.0001	0.10683	-11.19	<.0001	5.68144
GDP	GDP	1	0.03205	0.00270	11.89	<.0001	0.00213	15.07	<.0001	5.68144

Parameter Estimates

From the regression analysis, the coefficient constant is as follows:

SR =-189943−1.19526ANR +0.03205GDP + ε

Se= (34100)   (0.14707)   (0.00270)

t= (-5.57)   (-8.13)   (11.89)

Based on the above-obtained results, it is clear that the relationship is a multiple regression analysis. This employs the technique of ordinary least squares. The resulting sample function is thus model show below: as

$$SR = \text{-}189943 - 1.19526ANR + 0.03205GDP + \varepsilon$$

Interpretation of the coefficient

Variable	Label	DF	Parameter Estimate
Intercept	Intercept	1	-189943
ANR	ANR	1	-1.19526
GDP	GDP	1	0.03205

The regression coefficient $\beta1$=-1.19526 denotes the partial regression coefficient of the total net revenue earned by Amazon with Gross Domestic Product and other determinants held constant that with an increase in the Online shopping revenue, the revenue earned by the stores drops by 1.19526. Similarly, the $\beta2$=0.03205 indicate that for the per unit increase in the Gross Domestic Product, while holding the amount of sales realized by online shopping platforms constant, the amount of revenue realized by shopping malls increases by 0.03205 .

The intercept of the regression line -189,943. This intercept can be interpreted as, should the amount of revenue earned by Amazon and the GDP be hypothetically held at zero between the year 2000 and 2017, the amount of revenue earned from shopping malls would have been -189,943.

The value of R square is large and is at 0.9237. This indicates that 92.37% of the revenue earned from stores is explained by the net revenue earned in Amazon and the GDP. This shows that the earnings of a shopping mall are greatly influenced by the

online shopping characteristics. Based on the above result, it is clear that an increase in the revenue earned by the online shopping malls negatively impact on the total revenue earned by the shopping malls.

t-Test

Coefficient β_1

    We then test two estimated coefficients individually via using t-tests. The hypothesized true coefficient $\beta_1 = 0$. The estimated value for $\beta_1 = -1.19526$ with a standard error of this estimate is set being $=0.147071$. The degrees of freedom are 17. If we make an assumption that α=5% and t_α=2.12. Then $H_0: \beta_1 \geq 0$

And

$$H_1: \beta_1 < 0$$

$$t = (-1.19526 - 0)/0.147071$$

T= -8.13

Absolute value of t is 8.13

Absolute value of t larger than t_α=2.12. The null hypothesis is thus rejected and the alternative accepted.

Coefficient β_2

    The hypothesized true coefficient $\beta_2 = 0$. The estimated value for $\beta_2 = 0.032051$ with a standard error of this estimate is set being $=0.002696$. The degrees of freedom are 17. If we make an assumption that α=5% and t_α=2.12. Then,

33

$$H_0: \beta_2 \geq 0$$

And

$$H_1: \beta_2 < 0$$

$$t = (0.032051 - 0)/0.002696$$

T= -11.89

Absolute value of t is 11.89

Absolute value of t larger than t_α=2.12. The null hypothesis is thus rejected and the alternative accepted.

Durbin Watson test

This test shows autocorrelation in the in the data residuals from the regression analysis of revenue from stores and Amazon revenue and GDP as the independent variables.

$H_0 : \rho \leq 0$
$H_1 : \rho > 0$

H_0 (No positive serial correlation) H_1 (Positive serial correlation)

In our regression model

$$K=2 \quad n=18 \quad \partial =0.05$$

From Durbin Watson tables, we could know $\begin{array}{l} d_L = 1.046 \\ d_U = 1.535 \end{array}$.

From the result we know d=0.884.

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: SR SR

Durbin-Watson D	0.884
Number of Observations	18
1st Order Autocorrelation	0.507

$0 < d < d_{\text{L}}$. The results are significant.

R -Square

Root MSE	13192	R-Square	0.9237
Dependent Mean	230330	Adj R-Sq	0.9135
Coeff Var	5.72730		

From the regression result,

Interpretation of R-square and Adjusted R-square

The obtained value of R square (0.9237), can be misleading in attempts to access the progress in fitting the multiple variable regression between the revenue earned by stores and those earned by the Amazon online retail. Via R-square, it is impossible to find out whether the coefficient estimates, and the predictions are biased thus necessitating the need for accessing the data residual plots.

Via the use of the adjusted R-square, a comparison is made between the illustrative power within our regression model:

$$SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$$

The value of adjusted R square (0.9135) depicts a modified form of R-square which is adjusted for the two predictor variables for the revenue earned by stores (total revenue earned by Amazon online retail and Gross Domestic Product.) This value is less than the R square since it takes care of the interactivity between the independent variables and their possible impact on the relationship being sought. It is thus clear that the percentage of revenue from the stores, which is being explained, by Amazon total net revenue and the Gross Domestic Product is 91.35%.

F test

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31606251834	15803125917	90.81	<.0001
Error	15	2610307004	174020467		
Corrected Total	17	34216558838			

The obtained F Value is 90.81 while Pr>F is <.0001. According to the sample data used, in the study's F distribution, the F value of 90.81indicates that the variability of the group mean is relatively large compared to the within group variability. Obtaining a relatively insignificant probability of <0.001 indicates that the null hypothesis is rejected. This confirms the relevance of the model equation. The above F-test confirms that the coefficients are significant.

Based on all the above hypothesis tests, the coefficients are significant hence, the model econometric equation is given as

SR =-189943−1.19526ANR +0.032051GDP + ε

Where

SR=Store revenues

ANR= Net sales revenue of Amazon

GDP=Gross Domestic Product

ε=Normal distributed classical error term

Strengths of using the econometric model:

$$SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$$

The model represents a multiple regression model whose advantages include the ability to identify and explore the relative impact of one or more of the predictor variables to the criterion value. In the research we could find that the total annual revenue earned by stores has a strong correlation with the revenue earned by the Amazon online shopping platform. The correlation factor was however negative thus confirming the assertion that the growth of online shopping platforms negatively impacts on the shopping malls. Besides the model made provisions for the relating this impact to the annual GDP. By including this monetary measure, the research gives a consistent result in the establishment of the relationship between the two terms while taking care of the measure of the economic performance of the country.

The model makes it possible to identify the anomalies or outliers in the establishment of the relationship between shopping malls and online shopping platforms. This is enhanced by the fact that multiple repression makes it possible for the verify whether there is a correlation between dependent and independent variables. This

advantage ensures that the variables used are capable of providing a better reflection between online shopping and shopping malls.

Research shortcomings

The model econometric equation $SR = \beta_0 + \beta_1 ANR + \beta_2 GDP + \varepsilon$ only takes care of the amount of revenue earned as the variable defining shopping malls. This variable may provide implicit information of the impact of online shopping on shopping malls since other than revenue, there are various determinants of the progress of shopping malls such as a resources and employees. Some of the indicators ignored by this mathematical model include the number of shopping malls closing down and the total number of shopping malls. Representation of online shopping platforms also ignores the contribution of other online shopping platforms other than Amazon. The may provide an implicit definition of the entire online shopping characteristics.

Other than the sets of data used in the research were time series data observations. Time series refers to a set of observations on a given variable in which the variable takes varied time[28]. The amount of revenue earned by Shopping mall anchor stores, the net revenue earned by Amazon and the Gross Domestic Product in the US were measured between the year 2000 and 2017. This set of data only makes provision for identifying the relationship between shopping malls and online shopping platforms in the US. A comparison with other countries is thus impossible.

In the above econometric analysis, the Net Revenue earned by Amazon where used in terms of millions. The transferred value of R-Square thus does not provide a

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[28] "Time Series Analysis: The Basics," Australian Bureau of Statistics, November 14, 2005, accessed May 3, 2018, http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Time+Series+Analysis:+The+Basics.

direct relationship since the relationship is evaluated in terms of millions of revenue earned by Amazon. The obtained high value of R-square 96.12% is thus an implicit definition of the interdependence between the variables.

Finally, other than the amount of revenue earned by online shopping mall, there are various other economic factors, which are likely to affect the amount of revenue earned by stores in a given year. Such factors include economic conditions, employee performance, and government policies. This implies that maybe there are other important factors, which are likely to inhibit the performance of our regression model.

Chapter 4: Results implications and predictions

Despite the various progress made in online shopping platforms, there are some negative economic implications of this growth. One key impact is the decline in the number of shopping malls. It is evidenced in the regression analysis results that as online shopping become more popular, shopping malls become more unpopular.

The regression analysis carried out in this research included data between 2000 to 2017. Within this period, it is evidenced that online shopping has been constantly on the rise while the growth of shopping malls has been relatively unpredictable. Based on the results of this regression, it evidenced that as the online shopping practice becomes a common among consumers, retail businesses such as shopping malls have to improvise their marketing strategies in order to keep up with this common trend. In most cases, shopping malls have ended up incurring immense losses due to the shift of customer focus to online shopping. Consumers in the contemporary society tends to hold different potential risk perception on online shopping.

With increasing accessibility to internet-enabled devices such as mobile phones, more people tend to opt for buying products online. This increase in the purchase of products from online shopping platforms deprives shopping malls of the customers who would have bought goods from them. This decreases the total sales realized by shopping malls thus decreasing revenue. With time, cost of operations of the shopping malls supersedes their earnings, causing them to close down.

Chapter 5: Conclusion and Suggestions

It is having always been hypothesized that online shopping negatively affects shopping malls. Various studies have indicated that the surge in online shopping has reduced the number of shoppers in the shopping mall as an explanation for the reduced growth rates of shopping malls. Some authors have since claimed that the increased rates of shopping malls closing up are a direct influence of online shopping. It is particularly true that the number of online shoppers has shown an exponential growth since its commencement. The total sales have since increased with some of the major online companies such as Amazon realizing total revenue of over 140 billion US dollars a year. However, this reduction in shopping mall growth cannot be particularly attributed to the growth in online shopping. This study shows that the regression coefficient of the total revenue earned by shopping malls and the total amount of revenue realized by Amazon shopping mall is negative, implying that an increase in Amazon online shopping revenue leads to a decline in the amount of revenue earned by traditional stores. This implies that the current trend of shopping malls closing up is significantly attributed to the online shopping as the major explanation. There are however other factors such as bankruptcies

of the major retailers such as RadioShack and J.C. Penney, which must also be considered in attempts to discover some of the major challenges in shopping mall businesses[29]. The study shows a high explanatory relationship between online and mall revenue, yet further research would need to be done to show causality.

Other than e-commerce some of the factors such as oversupply of shopping malls and the impacts of restaurant renaissance have been attributed to challenges facing shopping malls. These other factors have relatively lesser influence on the progress of shopping malls because based on the study result, about 96% of the revenue characteristics of stores are explained by the Gross Domestic Products and the total net revenue earned by Amazon, as a proxy for internet sales. Yet, my analysis clearly shows the pervasive negative impact on shopping malls from e-commerce.

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[29] Yi Cai and Brenda J. Cude, *Consumers' Adoption of Online Shopping* (Pennsylvania: IGI Global, 2012), 466-67.

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APPENDIX

Data and Calculations

Store revenues

YEAR	Gap Inc	Abercrombie & Fitch	Best Buy Co Inc	Barnes & Noble Inc	Bon-Ton Stores Inc
Millions	GPS	ANF	BBY	BKS	BONTQ
1998	9,054	805	8,338	3,005	675
1999	11,635	1,031	10,065	3,262	711
2000	13,673	1,238	12,494	3,618	750
2001	13,848	1,365	15,189	3,748	722
2002	14,455	1,596	17,711	3,916	713
2003	15,854	1,708	20,946	4,372	926
2004	16,267	2,021	24,547	4,770	1,310
2005	16,019	2,785	27,433	4,993	1,287
2006	15,923	3,284	30,848	5,139	3,362
2007	15,763	3,700	35,934	5,286	3,366
2008	14,526	3,484	40,023	5,121	3,130
2009	14,197	2,929	45,015	5,122	2,960
2010	14,664	3,468	49,234	5,810	2,980
2011	14,549	4,158	42,683	6,998	2,885
2012	15,651	4,511	43,426	7,129	2,919
2013	16,148	4,117	38,252	6,839	2,770
2014	16,435	3,744	40,611	6,381	2,756
2015	15,797	3,519	40,339	6,069	2,718
2016	15,516	3,327	39,528	4,164	2,601
2017	15,855	3,493	39,403	3,895	2,541

YEAR	Dillard's, Inc.	GameStop Corp.	JCPenney
Millions	DDS	GME	JCP
1998	7,763	329	18,605
1999	8,677	224	18,908
2000	8,567	757	18,758
2001	8,155	1,121	17,840
2002	7,907	1,353	17,384
2003	7,594	1,579	17,513
2004	7,522	1,843	18,096
2005	7,552	3,092	18,781
2006	7,636	5,319	19,903
2007	7,027	7,094	19,860
2008	6,831	8,806	18,486
2009	6,095	9,078	17,556
2010	6,121	9,474	17,759
2011	6,264	9,551	17,260
2012	6,593	8,887	12,985
2013	6,531	9,040	11,859
2014	6,621	9,296	12,257
2015	6,596	9,364	12,625
2016	6,260	8,607	12,547
2017	6,261	9,225	12,506

YEAR	Nordstrom, Inc.	Kohl's Corporation	Macy's inc
Millions	JWN	KSS	M
1998	5,028	3,681	15,365
1999	5,124	4,557	16,029
2000	5,512	6,152	16,638
2001	5,608	7,489	15,651
2002	5,945	9,120	15,435
2003	6,449	10,282	15,412
2004	7,131	11,701	15,776
2005	7,723	13,402	22,390
2006	8,561	15,544	26,970
2007	8,828	16,474	26,313
2008	8,272	16,389	24,892
2009	8,258	17,178	23,489
2010	9,310	18,391	25,003
2011	10,497	18,804	26,405

2012	11,762	19,279	27,686
2013	12,166	19,031	27,931
2014	13,110	19,023	28,105
2015	14,095	19,204	27,079
2016	14,498	18,686	25,778
2017	15,137	19,095	24,837

YEAR	Sears Holdings Corp	Target corporation
Millions	SHLD	TGT
1998	39,953	30,203
1999	39,484	33,702
2000	37,028	29,462
2001	36,151	32,602
2002	29,352	36,519
2003	17,190	40,928
2004	19,843	45,682
2005	49,455	51,271
2006	53,016	57,878
2007	50,703	61,471
2008	46,007	62,884
2009	43,360	63,435
2010	42,664	65,786
2011	41,567	68,466
2012	39,854	73,301
2013	36,188	71,279
2014	31,198	72,618
2015	25,146	73,785
2016	22,138	69,495
2017	16,702	71,879

YEAR	Total
Millions	
1998	142804
1999	153409
2000	154647
2001	159489
2002	161406
2003	160753

2004	176509
2005	226183
2006	253383
2007	261819
2008	258851
2009	253550
2010	270664
2011	270087
2012	273983
2013	262151
2014	262155
2015	256336
2016	243145
2017	240829

All of the data

Year	SR	ANR	GDP
2000	154647	2762	10472285
2001	159489	3122	10701317
2002	161406	3933	11103834
2003	160753	5264	11816827
2004	176509	6921	12562163
2005	226183	8490	13381629
2006	253383	10711	14066370
2007	261819	14835	14685330
2008	258851	19166	14549949
2009	253550	24509	14566511
2010	270664	34204	15230208
2011	270087	48077	15785312
2012	273983	61093	16297349
2013	262151	74452	16999888
2014	262155	88988	17735933
2015	256336	107006	18287226
2016	243145	135987	18905545
2017	240829	177876	19736491