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Project Dissertation Report on

Impact of Covid-19 Pandemic on consumer behavior of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.

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DECLARATION OF AUTHENTICITY

I, the undersigned, Michael Munashe Mpandari, declare that this dissertation is my original work, gathered and utilized especially to fulfil the purposes and objectives of this study, and has not been previously submitted to any other university for a higher degree. I also declare that the publications cited in this work have been personally consulted.

_____ Signature

CERTIFICATE FROM THE INSTITUTE

This is to certify that the project titled "**Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020**" is an academic work done by **Michael Munashe Mpandari** submitted in partial fulfilment of the requirement for the award of the degree of "**Master of Business Administration** "from Delhi School of Management, under my guidance.

To the best of my knowledge and belief, the data and information presented by him in this project has not been submitted earlier elsewhere.

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Executive summary

This paper was written the middle of the global corona virus (covid-19) pandemic focusing on Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.

In the year 2015 the forecasted value for 2020 personal consumer electronics was expected to top 838.85 Billion but no one had forecasted the covid-19 virus. The virus stated at a wet market in Hubei province in Wuhan city in China to cause global pandemic. The first case was recorded in China on 19th of December 2019 and it went to spread and infect all countries by April 24th having infected 2 663 492 people and killing 176 492 individuals. The World Health Organisation declared the virus a pandemic which more serious than the 2003 SARS virus epidemic that bared resemblance to the covi-19. Travel restrictions were put in order to slow down the spread the disease the government went a step further to introduced economic lock downs to stop the spread. The challenge was that most of technology manufacturing companies as of 2020 were manufacturing most of their hardware in China. In example Apple had 90% of its products parts manufactured in China and Chinese market accounted for 18% of its revenue.

The paper makes use of the 1876 theory of Demand by Alfred Marshall. States that demand is a function of five variable namely price, income, future price expectation, price of substitute and consumer tastes. $Q=f(P,Y,Pr,T,Pe)$

The paper also made use of the 1790 income theory by David Davis that stated that poor families spend more of food than wealthier people. It also states that the richer one become they spend on food yes but more on non-essential products as clothing. It is important to note that back in the 1700s when this theory was proposed by a church clergyman on family budgets collected among his congregants who were largely peasant farmers the clothing industry was regarded as non-essential.

The results proved that the income theory is true the covid-19 pandemic caused a major impact on consumer behaviour of essentials and

nonessential (consumer electronics). Also it showed that consumers started to spend more on food when 52.5% of them had reported that the pandemic had caused a fall in their income. Consumption of electronics fell but not with a huge margin while essentials consumption increased.

The study was necessary in adding knowledge to the area of consumer behaviour in a viral pandemic. The study also can help managers to steer their businesses in the new crisis of respiratory infections.

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CHAPTER 1: INTRODUCTION

Major historic catastrophes and calamities have always have a negative impact of the global economy for example the Persian Gulf War of 1991, the 911 terrorist attack on the twin towers in America. These events have seen the worst tumble in stock prices in their wake negatively affecting the global economy.(Kim & Gu, 2004)

Corona virus as a strategic inflection point.

According to Andy Grove who is Intel co-founder "strategic inflection point as an event that changes the way the think". Corona virus was a strategic inflection point that affected consumer behaviour causing some industries to make profits as companies like Zoom and Netflix while others started to make losses as the airline industry. A strategic inflection can either spell beginning of profits for an industry as well as an end of an industry. This research focuses on the impact of corona as a strategic inflection point on consumer behaviour of essential products and non-essential products specifically consumer electronics.

In another familiar case of 2003 SARS epidemic. This disease shows great resemblance to the Corona virus the world is fighting. They both cause severe respiratory complications in their patients. They both originated out of China itself. The first recorded case of the SARS virus was in China Guangdong Province in a city called Foshan City on 16 November in 2002. World Health Organisation declared the outbreak an epidemic on June 17 2003. The SARZ had so many negative impacts on the global economy. There was so much of damage to the tourism industry as flights were suspended , the consumer electronics was affected negatively again as the supply chain was compromised due to efforts by authorities to curb the virus.(Pine & Mckercher, 2004)

But according to (Chen, 2014) the impacts were not all negative there were also some positive aspects out of the crisis. There were stocks that gained so much value as well especially those that dealt with pharmaceuticals. It then becomes clear that out of each crisis there are both negative as well positive

impacts to the different industries. It became important to the researcher to investigate the impact of the covid-19 on the consumer electronics market.

What is the corona virus (Covid-19)?

The covid-19 virus better known as the corona virus that has the whole globe on lock down is an acute respiratory disease caused by a virus. It started to make global waves in December 19 in a city called Wuhan in Mainland China. The sources say that it started at wet market shops. however according to (Tao et al., 2020) argues that the novel corona virus origins are from the same city of Wuhan from Hubei province but not from wet market shop but from a sea food market.

The disease has some resemblance to the SARS flue that was troubling China a few years ago. As this disease surfaced in the early December the authorities rushed to understand more about it. The chines government did not fully understand much at time they ordered measures to be put in practice as shutting down all wet markets, shutting down sale and consumption of wild animals as bats and pangolins. The disease spread quickly as it was highly contagious. The wold health organisation (WHO) made frantic efforts to try and contain the spread of the respiratory virus.

WHO through it leader Director General Dr Tedro on 30 January 2020 took it upon itself to declare the Corona Virus a public health emergency

By the end of February of 2020 the corona virus had infected 81 109 individuals.

Covid-19 Declared a Pandemic

On the 11th of March 2020 the corona virus was burning throughout the world at an alarming rate and efforts by WHO were not as effective as everyone had hoped for. The cases of corona virus infected people outside China had increased 13 fold and the number of countries that had reported their 1st case of corona virus had tripled. Clearly the situation was getting out of hand and

further steps were needed to stop the virus spreading across the globe. The number of infected people was at a staggering 118 000 while the total countries that had reported cases of corona were at 114. At this day sadly 4291 people had lost their lives and countless more were being treated in various hospital in these countries.

With so much uncertainty of how the future may look considering the increasing number of cases of corona virus the WHO took a huge step to declare the virus as a Pandemic. This was the first ever time a pandemic was declared because of a corona virus. The problem of declaring the corona virus as a pandemic means that all other business activities would have to take a back seat as the Human race was now battling for sheer survival. The measures that were encouraged by the WHO were very clear.(Anon, 2020c)

- Countries should brace for impact.
- Test and treat citizens.
- Reduce transmission through social Distancing.

Mapping the coronavirus outbreak

As of 8:06am Apr 24 BST

Confirmed cases	Deaths
2,663,492	**176,492**

FRANCE
13,547

UK
18,739

SPAIN
22,157

US
44,116

ITALY
25,549

IRAN
5,481

CHINA
4,632

BRAZIL
3,331
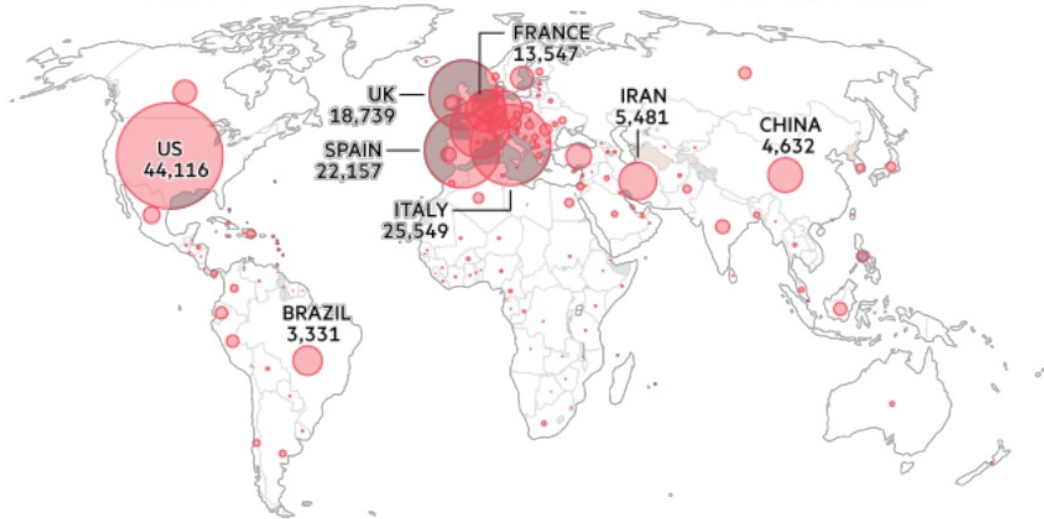
Graphic: Steven Bernard and Cale Tilford
Sources: Johns Hopkins University, CSSE; Worldometers
© FT

Figure 1.1 showed corona virus infections at 2 663 492 confirmed cases and 176 492 deaths as at 24th of April. It shows the aerial view of geographical data.

Governments Lock downs

India's Case

On 24th of March 2020 following the declaration of the Corona Virus as a pandemic the Prime Minister of India Narendra Modi announced a lock down of 21 days on 1.3 billion people of India. The lock down was to last to the 14th of April. This was a very serious step in an effort to stop the corona virus. India being close to the source of the covid-19 China because they share borders was having 500 positive cases. Considering the cases that were in European countries India was performing very well in managing the spread of the virus. India had gotten its first covid-19 case on 30th of January 2020 from its province of Kerala. The case was brought by a student who had come back home from the state of Wuhan in china where the virus started. The case was tracked and the affected people were quarantined and received treatment. Eventually the number grew to 500 infections.

The Janata curfew

On the 22nd of March 2020 48 hours before the prime minister announced the 21 days of the 1st phase of government imposed lock down the started there was a Janata curfew. The curfew was 14 hours long it was meant to break the cycle of infection of the corona virus. The Indian population was to stay indoors and not step out of their homes the whole day. The only exception was essential people which include service men as police and security forces and delivery man. At 5pm at the end of the 14 hour curfew people were to stand at their doors and balcony and clap and ring bells to cheer the selfless work of Indian people on the front lines.

Fast forward 48hours as India's prime minster announced the lockdown. The only objective was to fight the spread of corona in India.

After the initial lock down of 21 days the numbers were getting better. The rates of infection were getting better but with no vaccine in place and so much uncertainty the Indian government extended by 19 days the lock down.

How was it implemented?

I. Citizens were not allowed to move out of their residence.
II. All non-essential services and shops were closed with exception of pharmacies, banks, grocery shops and hospitals.
III. All business were to close and working from home arrangements made.
IV. All religious places were to close as all public gathering were banned.
V. All public transport stopped including grounding of metro rail.
VI. Banning of all gathering for any reason be it sport, academic, cultural or religion

1.1: back ground

Global consumer electronics market.

Sales of personal consumer electronics market in 2015 were expected top USD 838. 85 Billion By 2020. Of course that was a prediction made by captains of industry without proper knowledge of the 2020 Covid-19 threat to humanity. According to a research done by grand view research the key factor to push this drive in demand in consumer electronics was the advent of smart technology. The devices were supposed to be cheaper and less expensive to use. This was due to the fact that there were so many investors who were willing to invest in technology and the increase in mass production of smart phones led to companies being able to use economies of scale to lower prices.

Consumers tastes for the past decade has been changing, consumers now prefer electronic gadgets that offer amalgamated functions. Some interesting case is of 2013 that saw a steep rise of smartphone users at the same there was a sharp decline in users of single function goods as digital cameras. In the same mode of changing consumer tastes in this sector, consumers are becoming more open to experiment and trying new things. With 3 operating software's at the market mainly Android, iOS and windows this more availability had caused steady increase in sales of electronics.

The consumers have shown more demand to gadgets that have a wider screen and longer battery life as such there has been a trend by major technology producers as Samsung to increase screen size and increase battery life span.

The electronics sector covers the following products.

- Smart phones
- Tablets
- PCs laptops
- Desktops
- Digital cameras

- E-readers

Smart phone sector

The smart phone sector has seen unimaginable growth even with stiff competition rising. The past decade saw the Chinese brands as Huawei coming in to compete with world class brands as Apple and Samsung. The sector has had steady increase over the past 10 years with the advent of technology of like GPS and high resolution cameras. The year 2019 saw so much anticipation of the use of 5g network that was showing high promise of sales to any company that would introduce it. In May 15 Huawei was banned from using Google android services and was banned in the USA on grounds that they were spying. This was seen as a move by the USA Federal government to try and slow down Huawei advancement in 5g network so as to give US based companies a boost to win the 5g race.

Laptops/ Desktops

There has been significant fall laptop prices as the producer realised that consumers were price sensitive since 2013. There are now lower end cheap laptops that were created to tap into markets like university students as e-learning has become a reality of the 21st century. The overall change how ever is expected to come from tablets demand that is eventually replacing the desktop and laptop eventually.

Figure 1.2

Global personal electronics market by product, 2012 – 2020 (Million Units)
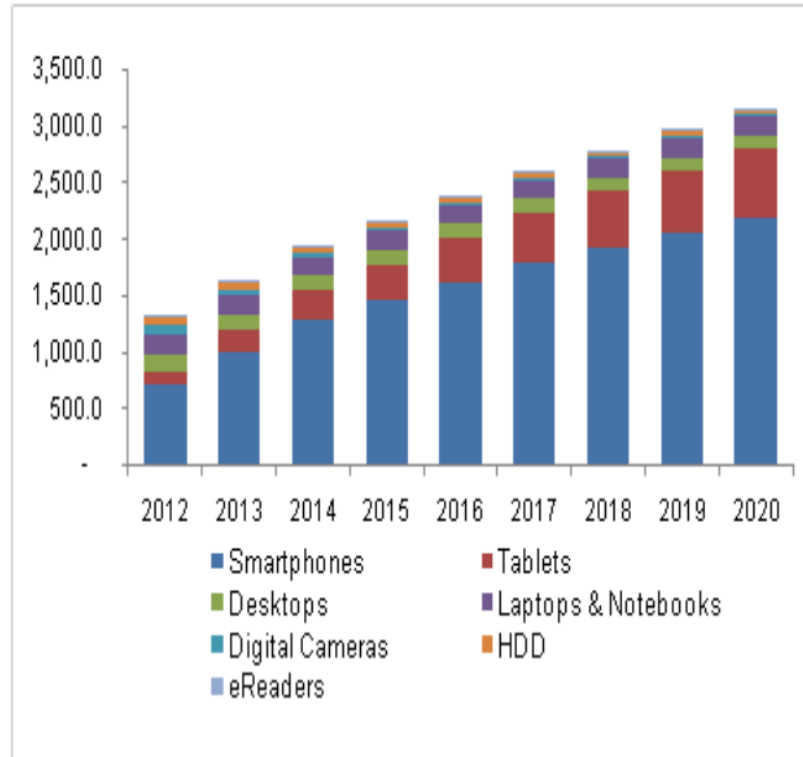
(Instastats 2020)

Figure 1.2 showed an interesting trend of growth of the consumer electronics industry over 8 years. If a closer look was taken one can see the disappearing demand for HDD and the growth of Tablet market.

China is affected

One of the emerging giants in the past 2 decades in the consumer electronics industry is China. China had a GDP growth of 7.8% in 2019 and was expected to go above this figure in 2020. But the GDP average was recorded at 6.1 for 2020 as the country was battling corona virus pandemic. With China being the epicentre of the corona virus the province of Hubei were Wuhan City is located was put under lock down. International travel restrictions were also put on China and companies had to take out their workers (expats) who were based in China. During the SARS outbreak in 2003 the global economy lost an estimated 40 billion USD. Since then the chines economy grew 8 times. With this outbreak of corona virus the loss to the global economy is huge but cannot be fully understood yet. When china came back from the lunar annual holiday on 3 February 2020 and opened business, the market tanked (dropped) the benchmark Shanghai fell by 7.7%. This signalled 375 billion USD loss of value in a single day. In 2019 according to the IMF the Chines contributed 39% to the world economic growth. At the same time China contributes 16.3% of Global GDP. Without a shadow of doubt the corona virus affecting China will have impact on the consumer electronic market demand .(Ayittey et al., 2019)

The major companies in this sector have seen their business opening factories in China because of its favourable business policies. The country has lenient labour restrictions as well as the cheaper labour force. Samsung Apple and Google have factories in china or they outsource key components manufacturing. Apple designs its products in the USA but the components are shipped from China. The numbers are very worrying in the case of Apple. About 90% of Apple parts are manufactured in China while the Chines market accounts for 18% of its revenue. According to an article by The Verge, Tim Cook the CEO of Apple was hopping that Apple factories in China would be opened to start manufacturing as numbers of infections were lowering. (Peters, 2020)

According to an article by the Financial Times China exports tumbled by a staggering 17% from the period between January to February 2020. With the

supply chain being affected badly it has delayed the launch of a lot product launches. A lot of critical components that needed to be shipped did not get shipped in time as workers were put in lockdown mode. This was all due to the government commitment to overcome the corona virus outbreak. The chines exports decreased by 17.2% while at the same time the imports decreased by 4%. This directly led to the Chines government to record a trade deficit of 17 billion in these first two months of the year 2020.

1.2 problem statement

There is very thin information and literature on consumer behaviour in a covid-19 pandemic since it is the first of its kind hence this paper aims at adding literature to the field of consumer behaviour.

The research problem particular focus on how the consumers income was affected by the covid-19 pandemic and it goes on to further analyse how the consumer behaviour has been impacted by the virus to shift from essential goods consumption from unessential goods(consumer electronics) consumption.

This research findings will be of use to the marketing managers of organisations that deal in essential and electronics market in case of a similar pandemic. They can know what to expect and how to counter challenges that may arise due to the pandemic.

1.3: research objective

To:

- To see the impact of Covid-19 on consumers income
- To see if corona causes a shift consumer from spending on non-essentials (consumer electronics) to essentials.
- To see importance of income to consumer behaviour.

1.4: research purpose and scope

As highlighted from the above literature above the spread of Covid-19 virus is still on going. There has been major changes to people's way of life due to the limitations being put by the authorities in an attempt to curb the effect of the covid-19 pandemic.

The world we live in now has been challenged by characterised by different types of shocks as pandemics, terrorist attacks and natural disasters as tsunamis as well earthquakes. There is little literature on how respiratory pandemic like the Influenza outbreak of 1918 caused by world war, SARS epidemic of 2003 and the Covid-19 Pandemic of 2020 affect consumer behaviour of essential and non-essential products. Respiratory infections in 1980 was an outbreak, SARS 2003 was epidemic now Corona 2020 was a pandemic. The level of the outbreak is escalating and the frequency is increasing more research on how it affect consumer behaviour is critical to the future of marketing.

This study seeks to investigate the Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.

1.5: research questions

1. Does covid-19 affect consumer income
2. Does covid-19 cause consumers to shift consumption towards essential products at the expense of nonessential (electronics)
3. Does income have an impact on consumer behaviour

CHAPTER 2 LITERATURE REVIEW

This study of the impact of covid-19 pandemic on consumer behaviour of essential goods and non-essential goods specifically focusing on consumer electronics was based on the theory of demand. As evidence bellow will indicate in the literature that the covid-19 disrupted a lot of commercial activities affecting people's income. This paper tries to focus if consumer behaviour has been shifting comparing essential products and nonessential products.

The major conversation of the literature evolve around how consumer income has been affected by the corona virus, Importance of income as a determinant of consumer purchases .I an article of what affects green consumer behaviour by (Zhao et al., 2013) they expressed that attitude to buy any green product which was influenced by income was the biggest determinant of consumer behaviour. This gives a hint that how consumers purchase what they purchase largely due to the disposable income they have. It influences their attitude leading to decisions that benefit them in the current situation.

The literature discussion also focused the impact of Covid-19 on consumer's income in major sectors of industries tourism, aviation as well as electronics. Also literature looked to see if corona causes a shift consumer from spending on non-essentials (consumer electronics) to essentials.

Essentials goods are defined as" products that are necessary for the health and safety or welfare of consumers".

For essential goods five products were selected to act as variables namely:

- Food
- Medicine
- Toiletry
- Soap and detergent
- Beverages

For electronics five products were selected to act as variables namely:

- Phone
- Laptop
- Tablet
- Video game set
- Tv

2.1 theoretical frame work (the demand theory)

The researcher saw it fit to make use of the theory of demand so as have a proper frame work of variables at play in the study.

Alfred Marshall was a British economist in the 1800s in 1876 publications were the stepping stone to the demand law. In the year 1890 Alfred Marshalls "principles of economics" developed a supply and demand curve that we still use to date.(Moscati, 2007)

The whole idea behind the inception of the theory of demand was to determine what are the different factors affecting demand. In a technical way of looking at this theory Demand is a function of four variables explained below.

$$Q=f(P,Y,Pr,T,Pe)$$

The common mistake people make is to assume that the demand theory gives rise to the law of demand that says demand is negatively affected by price. This in turn makes the price the only important determinant of demand, this is not true.

The assumption will be Demand is a function of price ceteris paribus meaning other factors held constant.

$$Q=f(P)$$

Figure 3.1

Demand Function - Movement and Shifts
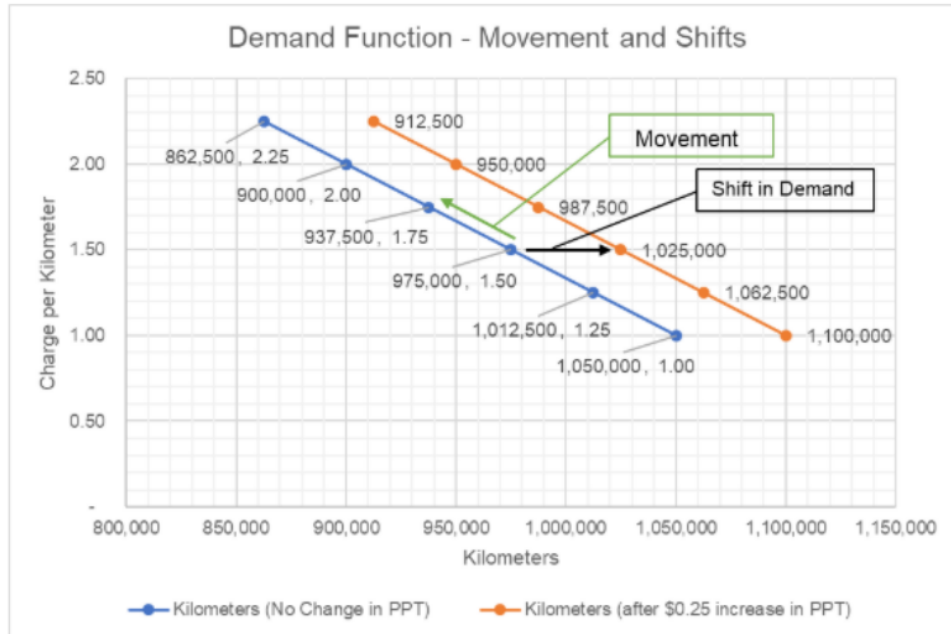
(Moscati, 2007)

In this case (figure 2.1) looking at the example of charge of sending a parcel the more the price the higher the less the demand. At the peak price of 2.25 demand is 862 500 and at price 1 the demand is 1 050 000. So with less price demand increase. Though as it may be so in theory the other factors are rarely held constant meaning Q=f(P,Y,Pr,T,Pe).

Demand is determined by a number of factors for example peoples incomes, consumer taste , prices of other goods and state policies.(Koutsoyiannis, 1979)

The theory of demand is concerned with only four determinants namely

- Price of commodity

  a person's demand for a product is subject directly to the price of the product. In the event that the product is perceived to be expensive the demand will be low.

- Price of substitute

  The demand is affected by prices of other goods such as substitute or complimentary goods.

- Peoples income

  The more disposable income people have then means they can purchase more of goods being offered.

- Consumer tastes,

  The tastes of consumers are not static and change consistently

- Expected future

  The expectation that future prices will be cheaper will decrease demand and the expectation that future will be expensive will increase demand

For the purposes of this study there has been literature from (Zhao et al., 2013) income was the most important determinant factor that affects green consumers consumer behaviour in China. Hence the demand of essential and non-essential products influenced by income that people are getting.

Hence

Qd (essential and non-essential)= f(Y)

Ceteris Paribus.

Importance of income to consumption.

There has been a lot of literature supporting income as a critical in as case of consumer behaviour towards green products it was seen that income was the most critical factor because it influenced attitude of buyer to buy green products. Those who had low income did not consider green products as essential rather as a luxury since they could find cheaper substitute. On the other hand those who were having more disposable income were doing more spending on green products. This gave rise to the view that low income earning individuals income was mostly spend on essential products while high income individuals where seen to spend more on essentials as well nonessentials. (Zhao et al., 2013). In another study of ecologically conscious consumers (Kinnear et al., 1968) took it upon themselves to list family income among 24 independent variables of their study. They used ANOVA on the 24 variables and on the bases of F statistic that the ANOVA gave they narrowed the variables to 10. Of those 10 income was there. In the final analysis they said of all the variables income gave very interesting results. Over and above they put across the thought that income was a positive though he does not give a distinction that (Zhao et al., 2013) gave of low income and higher income purchase behaviour. In a another research done by (Dominquez et al., 1977) it was seen that though social class was a good predictor to determine frequency of usage of leisure activity , it was income which was the best predictor of whether consumers would participated In leisure activities.

In a journal of political economy that writes on the founding study of income in consumer behaviour there was great insight on the role played by income as a determinant.

The income theory.

There was always fascination and fantasy on trying to understand the difference in consumption between rich people and poor people. The interest was there but there was not been any study done until 1790. The study was done in England by a clergyman called David Davis who sought to see how his parish people spent their income. Good reverent took it upon him-self to

collect budgets of congregants which were mainly agricultural families and non-agricultural families.(Stigler, 1954)

PERCENTAGE COMPOSITION OF BELGIAN WORKMEN'S
FAMILY BUDGETS, 1853

CATEGORY OF EXPENDITURE	FAMILY TYPE		
	I (On Relief)	II (Poor but Independent)	III (Comfortable)
Food	70.9	67.4	62.4
Clothing (including cleaning)	11.7	13.2	14.0
Housing	8.7	8.3	9.0
Heat and light	5.6	5.5	5.4
Tools and work supplies	0.6	1.2	2.3
Education, religion, etc.	0.4	1.1	1.2
Taxes	0.2	0.5	0.9
Health, recreation, insurance, etc.	1.7	2.8	4.3
Personal services	0.2	0.2	0.4
Total	100.0	100.0	100.0
Average income (francs)	565	797	1,198
Average expenditure (francs)	649	845	1,214
Minimum expenditure (francs)	370	440	541
Maximum expenditure (francs)	1,256	1,769	2,823

(Stigler, 1954)

From the picture above we see that the poor a family was the more they spent on food which is essential. The more wealthy one family became the more they spend on unessential products such as clothing.

This finding gave rise to a new law called (Law of consumption) which said that, the poorer the family the greater the proportions they spend of provision of food which is an essential product.(Stigler, 1954)

2.3 Impact of corona on consumer income.

The corona virus has had economies put under lock down and travel restriction in order to curb the spread of the corona virus. The travel restriction started on 23 January 2020 from Mainland China, Hubei Province Wuhan City.(Chinazzi et al., 2020).

The travel restrictions and the government regulated lock downs have hurt a lot of businesses and in turn triggered unprecedented layoffs and salary cuts. The aviation industry has been hit hard with this covid-19 crisis. In an article by Business insider dated 29th of April 2020 the United States of America weekly jobless claim of the week ending on the 23th of April was 4.4 million people lost their jobs in 1 week. This number would grow to 26 Million people who lost their employment since the pandemic started. This is the case of America alone in the month of March more than 10 million people filed for unemployment.

List of companies that have cut jobs due the corona virus pandemic

- SAS Scandinavian airline.

The airline announced that by March 15 2020 it laid off of 10 000 employees and this is 90% of their workforce due to the lack of revenues caused by lockdowns.

- Norwegian Airline

In a similar case the airline laid of 90% of its employees. The airline laid off 7 300 jobs and they suspended 85% of their flights.

- Air Canada

The company president Renee Smith Valade was quoted saying "difficult but necessary decision". This was soon after the company had laid of 5100 employees which made up 50% of their total work force.

The tourism industry also was not spare it was faced with serious revenue crisis. With the government restrictions on travel hotels have been ordered to

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shut down until such a time the corona virus will be handled. Marriot intention the hotel group giant on 17th of March started the process of furloughing employees. This is different from the normal job cuts rather it is the process of putting them on an unpaid leave that is indefinite. Until such a time the hotel group will have enough revenues they will come back but it's so much the same as layoffs. The CEO of Marriot and the company president Arne Sorenson announced pay cuts to the tune of 50% to senior executives for the rest of the year 2020. These were measures that are being taken to make sure the company survives.

In a similar case of the hotel industry Pepplebrook Hotel Trust that owns roughly 50 of Hotels that are in the United States of America on March 17 laid of half of its workforce. They laid off 4 000 employees mid-March and added 2 000 at 30st of March bringing the total laid off employees to 75% (6 000).

The Art performance industry

There is no exemption for the artist who perform to crows like circus performers. Cuiqu Du Soleil which is arts Circus Company which had to cancel its tour for the enforceable future. The company laid off 95% of its workforce of 4 679. They only left with 259 staffers whose only job is to help the organisation to sell future tickets. (BORDEN, 2020)

The case for India

The Indian economy is also the cliff with the lock down affecting a lot of companies forcing them to lay off their employees. According to the Indian National Sample Survey (NSS) and the Periodic labour survey (PLFS) on 31st March said that an excess of 136 million jobs of unskilled workers in the agricultural sector were at danger of being cut. This number include those that don't have contracts of employment, those that are part time labourers and the casual workers. In this crises their job security is at stake.

In the major cities as New Delhi when the lock down started there was a crisis of migrant workers. The numbers are approximately 120 million migrant workers who are employed on a day to day basis. They could not afford

paying rentals since they work for a daily wage so they were forced to walk hundreds of kilometres out of the cities. They could not access public transport also because the trains and busses were grounded in a bid to spread the corona virus.

The tourism and hospitality sector also has been hit hard by the corona with government communicating that the hotels will remain closed till the 15th of October.

India's OYO the stylish start-up has faced a lot of difficulties a few months before the corona virus hit. On 31st March 2019 OYO reported a loss of 335 million on 951 million revenue. With the corona virus hitting India the company financial problems worsened as it saw the company furloughing thousands of its workers as it saw revenues tank by 50%. Furthermore the CEO of OYO Rohit Kapoor on 20th of April 2020 confirmed that the company was cutting all salaries by 24% as the company continued to feel the revenues shrinking.(Anon, 2020a)

Jobless claims

These are weekly statistics that are reported by the United States of America Department of Labour. The department creates a master list of all people who come and register so as to collect benefits for unemployed people. There are divided into 2 categories:

- Initial job claims.

These are not cumulative meaning it's the record of those that have registered for the first time.

- Continuing Jobless claims.

These are released a bit letter than the initial claims because they are cumulative making the number very high.

The jobless claims data is a critical indicator of a healthy functioning economy. If the numbers are high the economy is not performing well.

Table 3.1

Time	2020 jobless claims	2019 Jobless claims
Jan week 1	219,750	220,750
Jan week 2	214,250	220,750
Jan week 3	214,750	218,250
Jan week 4	212,750	220,250
Feb week 1	210,000	222,750
Feb week 2	209,250	225,750
Feb week 3	208,000	228,000
Feb week 4	210,000	225,000
Feb week 5	214,000	222,500
Mar week 1	215,750	221,500
Mar week 2	232,500	221,750
Mar week 3	1,004,250	219,500
Mar week 4	2,666,750	217,250
Apr week 1	4,267,750	212,000
Apr week 2	5,506,500	208,000
Apr week 3	4,427,000	210,750
Apr week 4	3,800,000	215,500
May week 1	3,200,000	221,000

(US department of labour, 2020)

Job Loss in America: Seasonally Adjusted Initial Claims

(in millions)
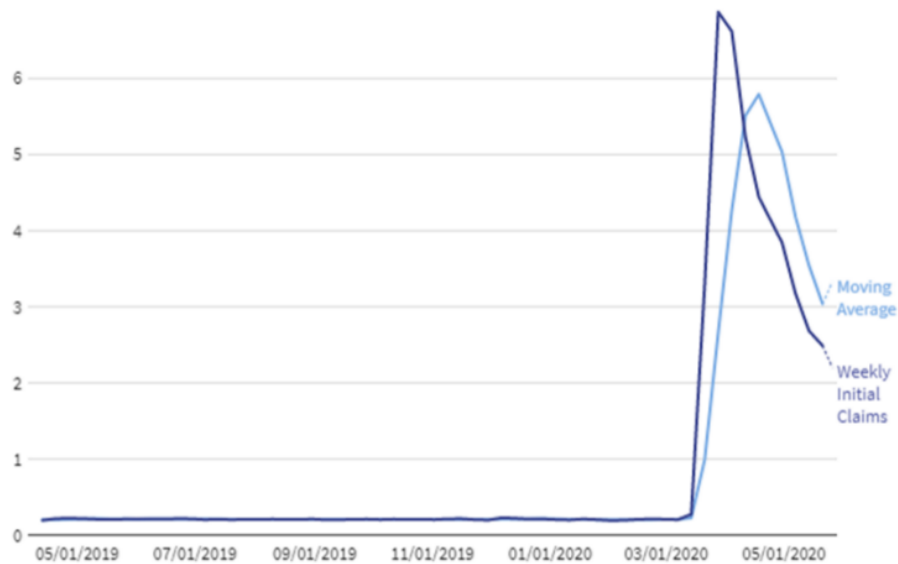
Source: U.S. Bureau of Labor Statistics

Investopedia

Due to the economic turmoil that has been caused by the unprecedented spread of corona virus globally. The jobless claims of 2019 did not make rise above one million each week but at the peak of covid-19 at second week of April was at an all-time high of 5,506,500 in one week. The continuing jobless claims at the last week of April stood at an historic all time high of 30 million since the beginning of covi-19. These numbers create fear in people and they are triggered into savings anticipating an economic recession hence can potentially lower demand.

2.2 telecommuting/ remote working.

Telecommuting has been a proposed theory since 1991 but its acceptance has never been agreeable. Companies always had the excuse that employees work better under supervision. There has been studies saying employees are inherently not responsible and do not like any responsibilities. Moreover they will avoid any accountability every chance they get. The Malcom theory X stated that employees require strong monitoring and use of punishment to make them do their work. Hence the taking up of this telecommuting was very slow by the corporate world.

Telecommuting can be said to be the substitution of doing your job at the corporate office to working at your home. This will remove the need to commuting among the workers. Before the threat of respiratory and highly infectious diseases back in the 1900s the problem that was being combatted by introducing this telecommuting concept. City planners and engineers were getting worried with rising level of pollution that was caused by use of fossil fuels as diesel and petrol. Issues like global warming were gaining so much importance as world leaders were talking more about this at the UN meetings. The other issue was traffic congestion with major cities like Boston, New York and New Delhi. There were no fast metro trains and bullet trains in the 1900s and with the growing automobile industry and rising middle class something had to be done to combat this.

Writing about the possible future of telecommuting in 1996 (Susan & Patricia, 1996) in an article called the future of telecommuting Susan and Patricia were spot on. They wrote that for the future to be possible there was need for a giant leap in technology. They suggested that there was need for faster smart phones and super faster computers and available internet connectivity. In research done on telecommuting in Europe in 1996 showed that only 1.25 million people had some type of telecommuting arrangement. This translated to only 0.8 of the employed labour force. Back then people made use of fax machines, landlines and typewriters. In 1996 less than 52% of total workforce had computers at their homes the challenge was that less than 5% of those connected to the internet. Hence the basic functions such as emailing and

data transferee were possible. And all the computers were not sophisticated enough to support video conferencing.

Though the business world has been taking their time to adopt the telecommuting idea seriously the impact of corona virus has forced them to adopt it overnight. The other reason why businesses were avoiding the working from home set up was the question of who pays for the home set up and technology at home offices. The employees cannot be forced to pay for the equipment they will be using to do the employers work. The employer did not want to be billed for that cost since it was government problem to solve traffic congestion and environmental pollution. But with the new corona virus pandemic the employer's revenues are directly affected by employees working from home hence they are now willing to invest in the technology on behalf of their employees. This has caused some sales of the consumer electronics to increase as companies rushed to work with contractors across the globe to create a home office and equipping employees with some good technology to use for work.

In a tweet dated the 12th of March 2020 the vice president of twitter company Jennifer Christie made an official tweet informing all stakeholders of their stance that they will be making all their 5000 plus employees work from home. The social media giant which has its headquarters in San-Francisco California had made a first stride into the future. This move was made to comply with government directory that all people should work from home. The idea of remote working came into being with companies as twitter that are in the services that can be offered with employees working from their homes.

With this move companies could still make revenues and keep their employees on pay roll and not fire their contract workers. The other worry was that the employee's performance of employees would not perform very well when they are working at home. Twitter stepped in with helping their employees with the cost of hiring nanny or baby sitters while their parents where working to keep the social giant afloat.

The major impediment was that the employee's home had no technology that was able to support their basic work requirements. Employees would need laptops, desktops and new reliable electronic devices.

The company met the cost of making the transition from working from office to working from luxury of one's home. As more companies continues with the move to work from all their employees need to be connected via electronic devices and capable smart phones, tablets as well as laptops.

Twitter collaborated with contractors across the globe in working over a short space of time to bring the technology online as soon as possible.

On 24th of March 2020 Google India ordered its employees to work from home. The technology giant company that has offices in Bangalore. The country of India has not been spared by the epic villain covid-19. The businesses have been forced to close and implement work from home approach. The tech giant Google has not been spared too.

In the case of Google the change came abruptly after the company discovered one of employees tested positive for the corona virus. This prompted the company to order employees to immediately work from home. This did not stop with Google alone it prompted the ecommerce giant Amazon to implement the work from home approach in order to protect its employees from the covid 19. There has been a lot of this change across the globe and this has definitely affected sales of electronics.

Zoom is an American based company specifically based in California. Zoom main business model is to offer video conferencing services and online chatting services all this is based on cloud computing technology. Zoom was started in 2011 and went for IPO in 2013 and in 2017 the company reached 1 billion valuation. It is a good example to use to show the level of consumer behaviour change since it was so small it was not part of NASDAQ since corona started and only joined it April 30. It is the most used video conferencing service during this Covid-19 pandemic according to the wall street journal April edition. According (Rogers, 2020) the owner of zoom Eric Yuan (CEO) made 4 billion dollars in three months when the globe had been struggling with covid-19 pandemic.

ZOOM SHARE PRICE 2020
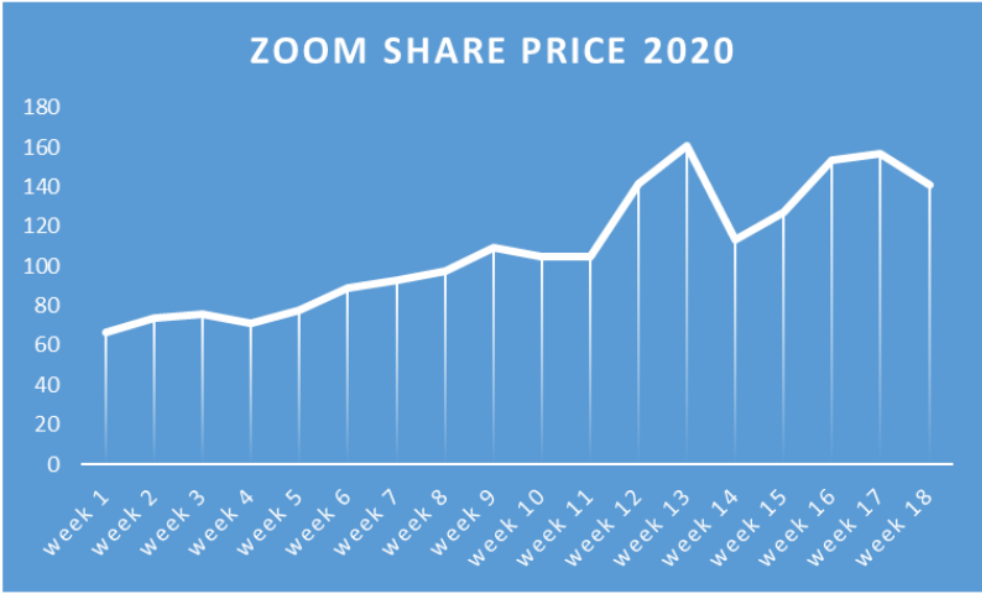
(own creation)

The stock price since the start of corona virus in 2020 it has almost double from 60 to +150 dollars a share. This shows that the number of users of video conferences increased very well

2.4 prices increased caused by covid-19

The idea of price as a determinant of what consumer demand was looked at it from a narrow perspective since the research focused mainly on income. According to the theory of demand price is also a major determinant of what consumer behaviour.(Moscati, 2007) . The theory goes on to assume that it not always the truth hence it points out to a Latin phrase (ceteris paribus) that says other factors held constant. With the covid-19 pandemic there has been price hikes in the sector we are concerned about the consumer electronics as well as general essential items as food

The prices of phones and other gadgets have increased since the covid 19 pandemic began. On the 16th of February a business analyst (Nikhil Chopra) in India predicted an increase in price of smartphones by 6-7% while the price of some high end phones may go to as high as 10 %. The shock in prices was supposed to be attributed to the disruption of supply chain and manufacturing in China.

The major companies in consumer electronics sector have seen their business opening factories in China because of its favourable business policies. The country has lenient labour restrictions as well as the cheaper labour force. Samsung Apple and Google have factories in china or they outsource key components manufacturing. Apple designs its products in the USA but the components are shipped from China. The numbers are very worrying in the case of Apple. About 90% of Apple parts are manufactured in China while the Chines market accounts for 18%   of its revenue. According to an article by The Verge, Tim Cook the CEO of Apple was hopping that Apple factories in China would be opened to start manufacturing as numbers of infections were lowering. (Peters, 2020)

According to an article by the Financial Times China exports tumbled by a staggering 17% from the period between January to February 2020. With the supply chain being affected badly it has delayed the launch of a lot product launches. A lot of critical components that needed to be shipped did not get shipped in time as workers were put in lockdown mode. This was all due to the government commitment to overcome the corona virus outbreak. The

chines exports decreased by 17.2% while at the same time the imports decreased by 4%.

With China Compromised it meant that the supply of the phones were in short supply and naturally according to the law of demand and supply the prices will increase.

The new prices of mobile phones in India stood at these figures at March 9th 2020.(Kapoor, 2020)

Table 3.2

Phone model	Old price	New Price
iPhone 11 Pro Max	111200	117100
iPhone 11 Pro	101200	106600
iPhone 11	64900	68300
Samsung Galaxy S20 Ultra	92999	97900
Galaxy S10 Lite	39999	42142
Galaxy Note 10 Lite	38999	41000
Realme X2	16999	17999
Realme 5i	8999	9999

(Kapoor, 2020)

Table 2.2 showed the old and new prices of mobile phones in India.

2.5 future uncertainty

The international monetary fund (IMF) is expecting a depression soon after the corona virus according to an interview with its director Kristilina Georgieva on 9 March 2020. The world economy fell in recession in March 2020. The IMF is expecting the future global economy to be a serious depression later in 2020. The depression is anticipated to be of epic proportions as the great depression of 1930 affecting plus 170 nations in its wake with negative per capita growth due to the covid-19 Pandemic. (Anon, 2020b)

There have been no news of any vaccine and with no end in sight consumers anticipate a fall in price of electronics as the global economy head for a depression.

The news are not showing any signs of getting better with president of the United States of America Donald Trump had revoked half a billion dollars in funding to the WHO world health organisation sighting its gross incompetence. The organisation is the leading authority to find a solution like a vaccine for the covid-19 virus.

This created a lot of uncertainty in the market leading to consumers into saving their income as they anticipate that prices of electronics will fall as soon as the covid-19 pandemic passes.

The great depression of 1930 lasted a decade to 1940. The output of the US economy shrank from 1.1 trillion to 817 billion. The major characteristic of the great depression was the high level of unemployment. We have covered that in the literate above that companies in 2020 due to covid-19 viral epidemic are laying of as much as 95% of their employees thus creating a ripe situation for a depression.

By 1929 even excluding the effect of the deflation on the economy the prices fell by 27%.(Rogers, 2020)

However on a case the author SG Cecchetti in 1989 said that though the period of 1930-1932 was characterised by deflation of about 30% the deflation was not anticipated. Meaning consumers did not anticipate the fall

in price. Thus anticipation of fall in prices was not the leading cause of price fall.(Cecchetti et al., 1989)

After looking at the broad literature on the subject these were null hypotheses assumed.

Hypothesis

H0: Covid-19 has no impact on consumer income.

H0: Covid-19 does not cause consumers to focus on food consumption.

H0: Covid-19 does not cause a shift consumer behaviour from essential to non-essential.

CHAPTER 3 RESEARCH METHODOLOGY

Introduction

Chapter 3 aims to expand on the research methods and tools which the student had at his disposal in order to attain the goal of this research and addressing the four research questions provided. In practice research is a road map of a strategy meant expand on how the researcher is going to handle and identifying the methods he is going to use in the study. Secondary series data and interviewing approach was made use of in this study. This 3rd chapter also narrates the research philosophy the researcher used to guide his research, research design, study population , sampling methods made use of , research instruments, data collection techniques, reliability and data validity as well as chapter 3 summary. Justification for use of the methods or techniques used was provided.

3.1 research justification and design

3.3.1 philosophy

This study at hand includes spans of positivistic research philosophy as the researcher sought to gather time series data on a global scale on consumer electronic demand objectivity. Also the use of phenomenology was thought a good idea when researcher gathered data that relate to human experience and in this study the targeted population had huge experience as regional sales representative in the day and era of the corona virus epidemic.

In summary the two philosophies namely positivism and phenomenology were made use of in this research. (Collins 2011) and (Ramanathan2008) made a point to the effect that the positivism approach depends on quantifiable observations that lead to deep statistical analysis.

3.1.2 triangulation justification

The student researcher chose to go with the mixed method approach in order to shed light on different viewpoints in the research. The researcher made use of both qualitative as well as quantitative data in studying Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.The researcher was motivated so much to adopt this approach because it moved from the narrow mindedness of thinking there is only one way of seeing the impact of corona virus on the consumer electronics market. This way of looking at research was backed by (White,2012) who echoed same sentiment that interrogating the problem from various points of view is a superb way of demonstrating the facts and conclusions drawn by the research. The approach of positivism was made use of in assessing Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020 on the base of impartial hard facts on the other hand phenomenology was adopted to help research when researcher chose quantitative time series data was acquired through various official government web sites and official company publications and use of a survey.

3.2 research design

The research at hand made use of a descriptive research design the Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.

According to (Muaz, 2013) and (Saunders, 2009) the concept of research design is defined an organised way to plan to study a scientific conundrum. In its own regard a research design is a road map of the methods the researcher makes use of to collect and analyse time series data and interviews were the two methods have been made use of in data collection.

According to (Kothari, 2011) in a vintage definition of descriptive survey he says it's a survey that investigates with great precision at the phenomena and then factually gives a picture of what the researcher is observing.

In this regard the researcher was concerned with level of accuracy of the data that was to be gathered and he objectivity of the design hence the choice to use descriptive design.

3.2.1 design justification

With the globe still in anguish over the covid-19 pandemic the need to have a deep understanding of its Impact of Covid-19 Pandemic on consumer behaviour of essentials and non-essential products (consumer electronics) in 1st and 2nd quarter of 2020.made the researcher choose the descriptive research design.

According to author (Kothar, 2011) and author (Saunders et al,2009) descriptive research design is a major help in painting a precise picture of events happening and phenomenon. The researcher's responsibility was to do a deep analysis of the impact of the corona virus on the consumer behaviour.

This type of design was suitable to quantify analyse facts and figures and analyse how the virus is impacting consumer behaviour.

3.2.2 data sources

This research is made up of a composite of 2 different data sources mainly secondary data and primary. According to (Gimsley, 2014) secondary data is defined as "information that has already been collected for a purpose other than the current research project but has some relevance and utility to the research". For this research the secondary data proved to have more use and value in measuring variables was stock prices of various stock indexes and share prices. The main advantage of secondary data was that it was available.

 The primary data needed was gained through a survey through a questionnaire. The use of both primary and secondary data made it possible for us to get more information to help with various conclusions that we had to find.

3.3 sampling (convenient)

The main reason for sampling according to (Ojawa, 2010) is to obtain a population presentation with an acceptable margin of error.

Due to the economic problem of scarcity resources were not available at the disposal of the researcher. The questionnaire had to disabused via social media since it was cheap.

The researcher could not gather as much data as possible since some websites that offer data require annual subscription and to collect much data through questionnaires proved expensive logistically.

The other websites that offer global statistics like instastats.com required a monthly subscription of USD 37 an equivalent of Rupees 2800. It became difficult and had to resort to using government and public information world biggest stock exchanges.

3.4 research tools

Interview is the research tool used by the researcher in this research were factoring the fact that it would be a descriptive survey. The questionnaire was used.

3.5 data collection procedure

The young student researcher figured out international organisations and government official websites that would provide reliable time series data that would be perfect to the study. For the survey the researcher had to developed a questionnaire via Google-form that was deployed via social media platforms

3.6 validity and reliability

3.6.1 reliability.

According to (Shuttleworth2009) reliability is defined as "something dependable and that will give the same outcome every time". Also (Jerry et al, 2012) defined it as" the replicability of the research under similar conditions elsewhere. For this study Wilcoxon Signed Ranks Test was used since the questionnaire had likert scale type of questions and a paired T test would not work.

3.6.2 validity.

It is defined as" the strength of the final results and whether they can be regarded as accurately describing the real world". (shuttleworth, 2019)

For our research the researcher used construct validity that is worried with the degree to which test measured construct.

According to (Bell, 2012) and (Hussey, 2008) "validity is concerned with ensuring question that are asked measures the variables that are intended. The use of questionnaire technique in this study assisted in strengthening the validity of this research. Simple wording and phrasing subjected to respondent made contents easy to understand". Through use of all terms to our respondents we managed to avoid ambiguity.

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3.7 data analysis

According to (Saunders et al, 2009) he defines it as "the analysis and presentation of data is useful to the researcher to prove the point he intended to prove". Data was presented through mostly line graphs, bar charts and tables this was made to make it easy to see and derive conclusion from it.

The researcher made use various data analytic software's as Power BI, SPSS and R to analyse data. Some techniques that were used include Paired T tests, Correlation and Regression

3.9 summary

This summary of chapter 3 starts with describing the use of research philosophy and the one chosen for this project. It goes on to highlight the justifications why the philosophy was chosen. Also the selection of what sampling method was used and data collection instruments and its analysis as a road map.

Descriptive Statistics

Hypothesis

H0: Covid-19 has no impact on consumer income.

H0: Covid-19 does not cause consumers to focus on food consumption.

H0: Covid-19 does not cause a shift consumer behaviour from essential to non-essential.

Gender

183 responses
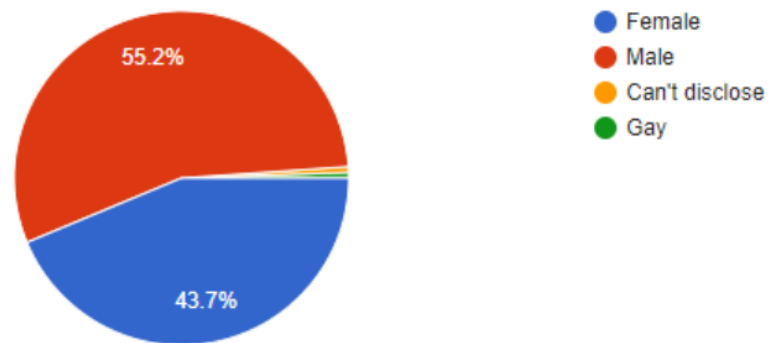
Gender

The study that was under taken showed 183 responses both male and female. 101 respondents were males making 55.2%, 80 respondents were females making 43.7%. 0.1 % were either gay or could not say, one of each.

Age

183 responses

Legend:
- 15-24 years
- 26-39 years
- 40-64 years
- 64+ years

Pie chart segments:
- 33.9%
- 51.9%
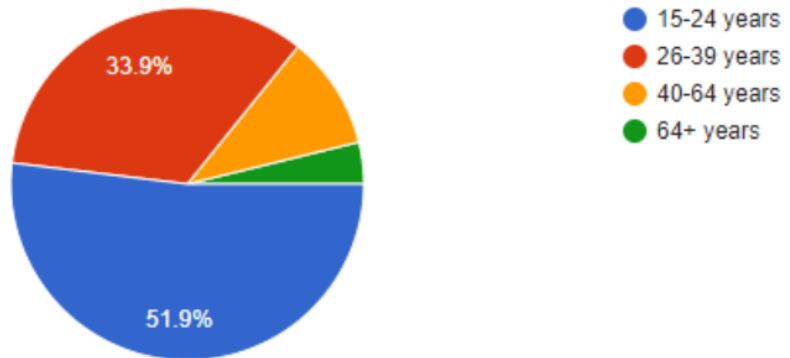
Age

The age categories that consumers were 15-20 years , 26-39 years , 40-64 years and 64+ years. The most responses were from the age group of 15 -24 years with 95 consumers falling in that category making 51.9%. 33.9% of came from the category 26-39 years with 62 respondents. 19 (10.4%) people fell under the category 40-64 years. Lastly the highest ranking age category of 64+ had the least respondents of 7 people making 3.8%.

Employment Type

183 responses
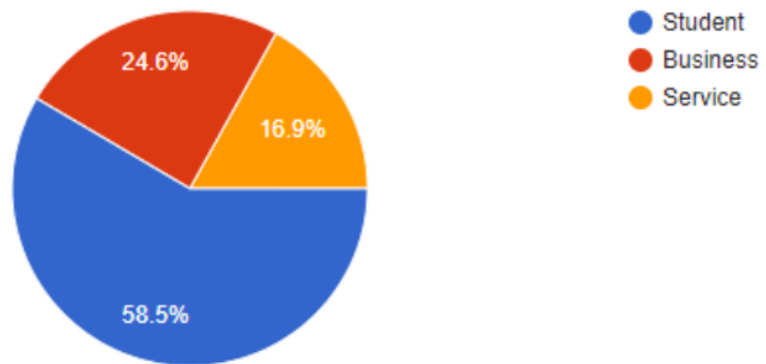
Employment type

The respondents were confined to 3 categories of employment namely student, business and services. The students turned to be the most respondents because the researcher is a student and there were the people that he had access to mostly they made 58.5% (107 respondents). 45 people were from business sector making 24.6%. Lastly 16.9% came from service sector with 31 respondents.

Has the Corona virus affected your income?

183 responses
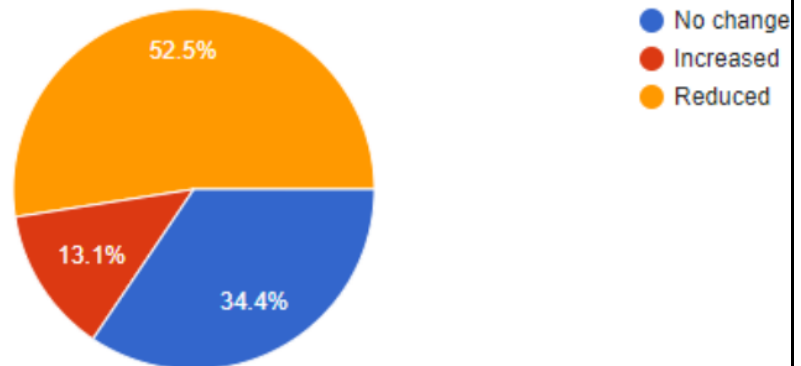
Has corona virus affected your income?

96 people out of 183 people making 52.5% of the survey reported that the corona pandemic had a caused harm to their income. 34.4 % of the population making 63 respondance said the pandemic did not cause any change to their income. 13.1% of 24 people who have reported that their income increased. This resonates well with the literature at hand saying that pandemic has caused people of most industries have lost their income due to corona.

With this results we refuse to accept null hypothesis which says that:

H0: Covid-19 has no impact on consumer income.

There is clear evidence that covid-19 pandemic affected the peoples income.

Because of Corona virus are you working from home?

183 responses

- I'm working from home.
- I'm an essential worker.
- I'm waiting to return to work

39.9%

10.9%

49.2%
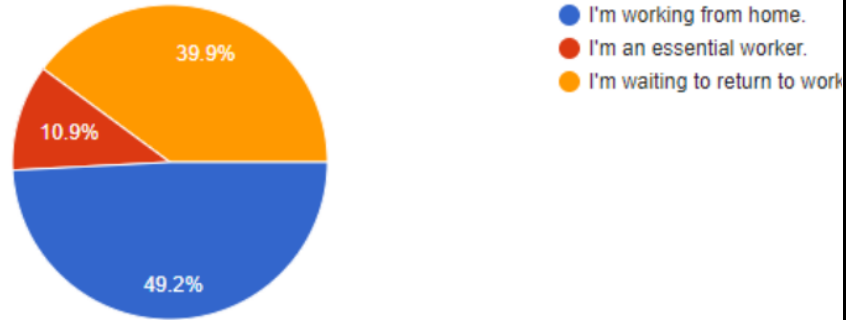
Because of corona pandemic where were you working from?

The results of the question gave results that 49.2% which was 90 people out of 183 were working from home. This was well resonating with the theory in literature that telecommuting has increased as companies such as twitter who employ 5000 plus people were working from home also and also amazon. The zoom company has shares that have increase valuation by over 400% as it joined NASDAQ stock index. 39.9% which were 73 individuals were waiting to return to work. Only 20 people making 10.9% of current respondance were essential workers had to workers who would work through the pandemic for the good of the people.

before corona

Before Corona I planned to buy
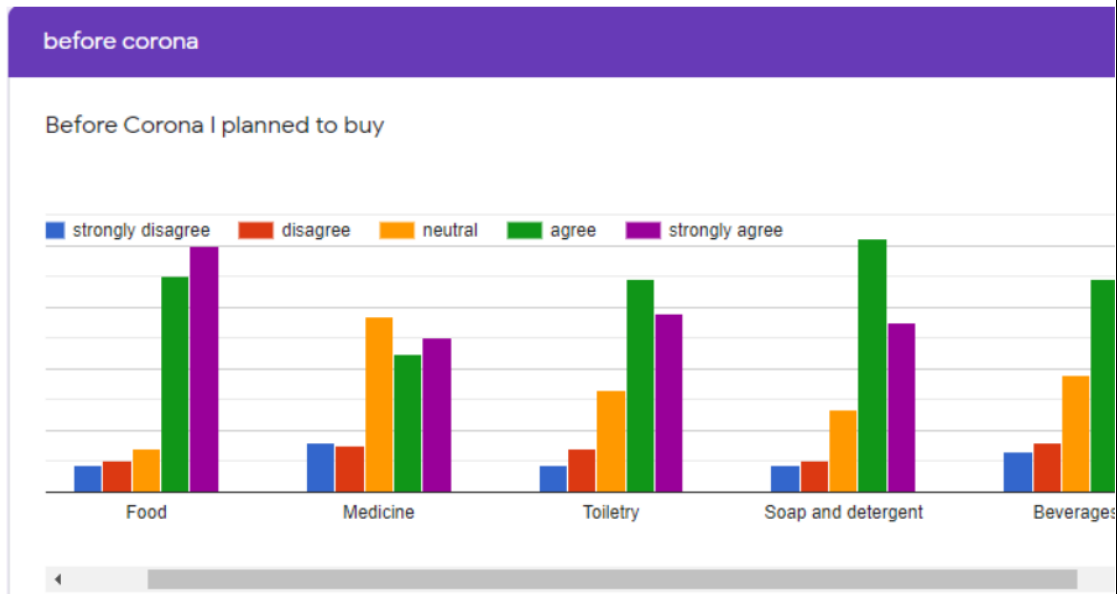
Before corona essential goods consumption.

Before corona it is evident from the 80 consumer indicated that food was one of their major consumption priority before corona virus started, followed by soap and detergents. Toiletry and beverages received about the same amount of respondance yet medicine was not the priority with most individuals opting to be neutral to purchasing it.

One thing is very clear though that food was a major essential product that was being consumed above everything else.

Before Corona I planned to buy
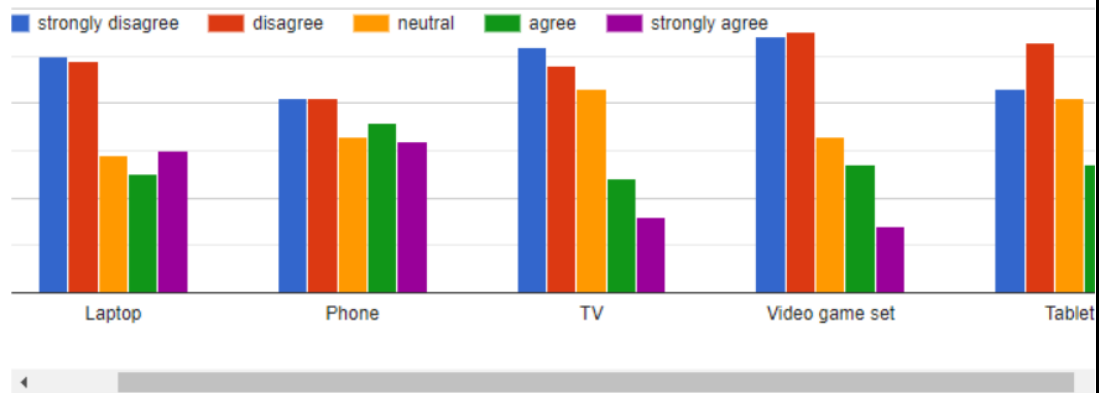
Before corona virus Nonessential (consumer electronics) consumption.

Generally the sentiment was that consumers had no strong thoughts to buy electronic products especially video game sets. There was however interesting scene that showed that about 30 and 32 respondence where strongly willing to buy laptop and phone respectively. The other electronics showed no appeal to consumers.

after corona started

After corona started this is what i'm planning to buy.
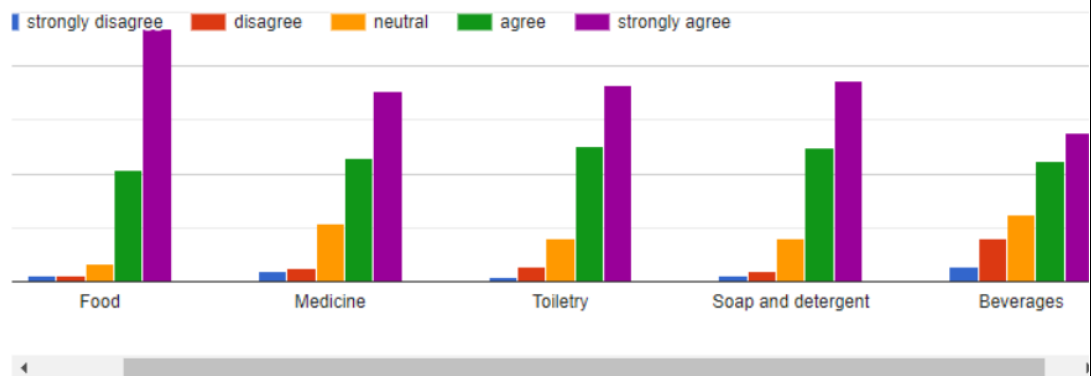
Consumption of essential products after the corona virus.

It is very interesting that 117 people were recorded as strongly agreeing to buying food because of corona virus outbreak. Let it be known that before the corona outbreak only 80 people showed strongly agree to food purchase and after the corona virus there were additional 37 people were added. This goes to confirm the theory of income that was covered in the literature review that states that if consumer income is reduced or affected negatively by any situation the consumption on food will increase. The consumption of food before corona pandemic was 80 and after corona it rose to 117 which confirms the theory of income by David's in the 1700s. Also medicine demand increased as well as soap and detergent.

This confirmed out theory that the consumption of essential products increase in the work of covid-19 pandemic. Hence we fail to accept null hypothesis.

H0: Covid-19 does not cause consumers to focus on food consumption.

After corona started this is what i'm planning to buy.
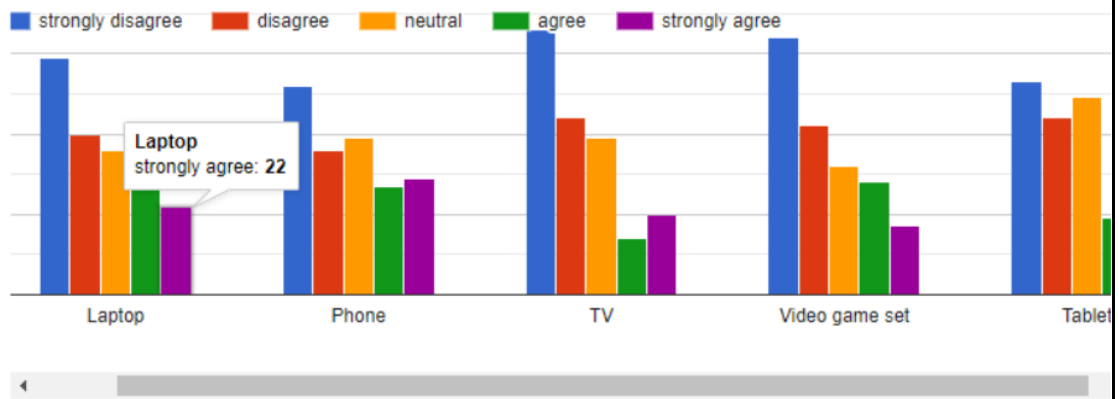
Consumption of electronics after corona outbreak

The consumption of electronics looking at the five products that were used to represent the industry namely laptop, phone, TV, video game set and Tablet were all down. With highest level of rejection being shown to Laptop, TV and Video game set with 60, 68 and 66 respectively saying they strongly disagree to the idea of buying these products.

This proved wrong the null hypotheses which said that:

H0: Covid-19 does not cause a shift consumer behaviour from essential to non-essential.

We fail to accept it.

Because the consumption of electronics has decreased drastically from

4.1 wilcoxon signed ranks test

Ranks

		N	Mean Rank	Sum of Ranks
After corona started this is what i'm planning to buy. [Food] - Before Corona I planned to buy [Food]	Negative Ranks	7[a]	27.79	194.50
	Positive Ranks	58[b]	33.63	1950.50
	Ties	117[c]		
	Total	182		
After corona started this is what i'm planning to buy. [Medicine] - Before Corona I planned to buy [Medicine]	Negative Ranks	16[d]	33.59	537.50
	Positive Ranks	78[e]	50.35	3927.50
	Ties	88[f]		
	Total	182		
After corona started this is what i'm planning to buy. [Toiletry] - Before Corona I planned to buy [Toiletry]	Negative Ranks	10[g]	30.00	300.00
	Positive Ranks	66[h]	39.79	2626.00
	Ties	106[i]		
	Total	182		
After corona started this is what i'm planning to buy. [Soap and detergent] - Before Corona I planned to buy [Soap and detergent]	Negative Ranks	13[j]	37.12	482.50
	Positive Ranks	67[k]	41.16	2757.50
	Ties	102[l]		
	Total	182		
After corona started this is what i'm planning to buy. [Beverages] - Before Corona I planned to buy [Beverages]	Negative Ranks	29[m]	40.21	1166.00
	Positive Ranks	55[n]	43.71	2404.00
	Ties	98[o]		
	Total	182		

52

a. After corona started this is what i'm planning to buy. [Food] < Before Corona I planned to buy [Food]

b. After corona started this is what i'm planning to buy. [Food] > Before Corona I planned to buy [Food]

c. After corona started this is what i'm planning to buy. [Food] = Before Corona I planned to buy [Food]

d. After corona started this is what i'm planning to buy. [Medicine] < Before Corona I planned to buy [Medicine]

e. After corona started this is what i'm planning to buy. [Medicine] > Before Corona I planned to buy [Medicine]

f. After corona started this is what i'm planning to buy. [Medicine] = Before Corona I planned to buy [Medicine]

g. After corona started this is what i'm planning to buy. [Toiletry] < Before Corona I planned to buy [Toiletry]

h. After corona started this is what i'm planning to buy. [Toiletry] > Before Corona I planned to buy [Toiletry]

i. After corona started this is what i'm planning to buy. [Toiletry] = Before Corona I planned to buy [Toiletry]

j. After corona started this is what i'm planning to buy. [Soap and detergent] < Before Corona I planned to buy [Soap and detergent]

k. After corona started this is what i'm planning to buy. [Soap and detergent] > Before Corona I planned to buy [Soap and detergent]

l. After corona started this is what i'm planning to buy. [Soap and detergent] = Before Corona I planned to buy [Soap and detergent]

m. After corona started this is what i'm planning to buy. [Beverages] < Before Corona I planned to buy [Beverages]

n. After corona started this is what i'm planning to buy. [Beverages] > Before Corona I planned to buy [Beverages]

o. After corona started this is what i'm planning to buy. [Beverages] = Before Corona I planned to buy [Beverages]

Test Statistics^a

	After corona started this is what i'm planning to buy. [Food] - Before Corona I planned to buy [Food]	After corona started this is what i'm planning to buy. [Medicine] - Before Corona I planned to buy [Medicine]	After corona started this is what i'm planning to buy. [Toiletry] - Before Corona I planned to buy [Toiletry]	After corona started this is what i'm planning to buy. [Soap and detergent] - Before Corona I planned to buy [Soap and detergent]	After corona started this is what i'm planning to buy. [Beverages] - Before Corona I planned to buy [Beverages]
Z	-6.011[b]	-6.549[b]	-6.403[b]	-5.766[b]	-2.904[b]
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.004

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

We then ran Wilcoxon Signed Ranks Test because it the only test that can be used on two similar data sets of ordinal data. We could not use a paired T test because out data set was violating the pre requisite of a paired T-test that data should not be ordinal. This data was obtained via a likert scale since it is one of the very best method to capture consumer behaviour as it does not confine them to either yes or no dichotomous scenario.

Using a significance level of 0.05

We fail to accept the null hypothesis:

H0: Covid-19 does not cause a shift consumer behaviour from essential to non-essential.

We reject null hypotheses because there is significant evidence all 5 P-values were 0 below 0.05.

This showed consumers shifted from consuming more essentials especially food.

5 CHAPTER DISCUSSION

There has been very interesting discoveries in the results of the study. The first interesting result was that there was serious decline in consumer income as the pandemic hit consumers which was not a surprise even looking at the literature. The literature showed that the US unemployment claims had risen to above 30 million in the last few weeks. So the pandemic took its toll on the economy which in turn affected consumer's income.

The fall income caused the change in consumer behaviour of this was supported by the Wilcoxon Signed Ranks Test with a p value of 00 in all five variables that were measuring the essential products. This was resonating well with the theory income of the 1700s. the income theory was development way before the demand and supply theories of the 1800 were developed it says that as income is reduced consumers consume more food and the richer they become they began to spend on non-essentials such as clothing. One has to keep in mind that was in the 1700 consumer electronics were not there and now the industry is worth more than 100 billion. As a researcher the results of the study showed a shift in increase. In consumers consuming more essential products at the expense of the consumer electronics.

However the study captured the results in the middle of the pandemic and it will go on for some time. Logic dictates that its impact may not remain static since governments will be deploying various tactics to keep the economy functioning at all costs. There is need to do more studies after a period of time as a year to see if the effect is changing or not.

CHAPTER 6 RECOMMENDATIONS

Creating a work from home platform

In the wake of the corona-virus the world of business has suffered from shutdowns. These viruses are increasing their frequency and severity. Stated in 1918 with the influence virus then the SARS epidemic virus of 2003 that started in China and now the Covid-19 pandemic. Hence the world of business has to take steps and have contingence set up to work in isolation.

Most of the companies were caught off guard and had to be forced to stop production of their goods in order to comply with government requirements of lockdown.

There is need for automation at work places so that a few individuals can work at a time. Companies need to increase the level of automation in factories and create work that can be done through telecommuting (working from)

Stocking suppliers

The supply chain is usually affected worst by the pandemic hence in the 1st news of a potential viral infection. Companies need to stock supplies of their natural resources so as to avoid the issue supply chain problems. Apples products are manufactured 90% their parts in China and the lock down affected their supply chain. At the first sight of the virus they should have stocked on spares as to ease the impact of the virus.

Shifting to online stores

The general brick and motor stores that supply the consumer electronics such as TVs and essential products such as food outnumber the online stores. The pandemics as covid-19 call for more online shops. It is more prudent for each store to have an online presence as the future unfolds people need to be able to come and buy. All shops that don't have an online presence during the period of covid-19 are suffering financial losses.

Consumer income falls.

With the pandemic the findings showed that +52% of the consumers lost their income due to the pandemic. The average consumer will have a fall in their income. As managers they need to boost sales through price competitions and offering discounts. The average consumer will try to buy or consuming a product if they presume it to be low price. This is according to the theory of demand. It says that the consumer Demand will increase as price fall.

Shifting to essential products

The research classifies the corona virus pandemic as a strategic inflection point where consumer's behaviour change. It marks the start of huge profits for some business that are termed as essentials and losses to those that are non-essentials. All businesses need to take part in the essential services that help consumers get though the pandemic that is how they survive. The average business need to reinvent itself to cater for essential services it helps with their financial survival. The study shows that there is inverse relationship between consumption of essential products and consumption of consumer electronics. There is need for business to shift to essentials to boost their sales and those that are in electronics need to lower prices to boost sales.

CHAPTER 7 LIMITATIONS

The 1st limitation of the study

Choosing variables

The study focused on 5 variables of each of the two industries essentials and non-essentials focusing on consumer electronics. Describing what is essentials and not essential is not an easy task and usually differs from country to country and situation to situation to situation. For example in a situation of a pandemic N95 masks become essential product but in a flood crisis it will not be.

Indian government has a legislature that determines what is actually essential and not essential (essential commodities Act 1995). Usually the government usually adds and remove products on the essential product list there depending situations. To counter this problem the researcher zeroed in on 5 products

For essential goods five products were selected to act as variables namely:

- Food
- Medicine
- Toiletry
- Soap and detergent
- Beverages

For electronics five products were selected to act as variables namely:

- Phone
- Laptop
- Tablet
- Video game set
- Tv

For future research it would be better to focus on a single product than focusing on 5 to allow for real depth of study and scrutiny.

Secondly

The researcher results from the study were largely from student's respondance with 58.9% being students, 24.3% being in business and 16.8% being in the service sector. This was because there were no funds that were put dedicated for the research. The research had to give the questionnaire to

the people that are of the same age nearly same occupation and so on 52.4% were of the age group 15-24 years whilst 33.5% were of the age group of 26-39 years. Age group of 40-64 was the 3rd largest with 10.3% and the 64+ years were only 3.8%. The results showed lack of proportioned response age wise. In this case generalisation of the results to represent a diverse society will not be proper.

In future it would be good to dedicate a small amount of funds to use research tools as survey monkey to disburse the questionnaire to people of all age groups, all walks of life in order to get a response that can be generalised.

Finding literature

The subject of impact of covid-19 on consumer behaviour was very complicated since it the first time the world is facing this tragedy.

The closest literature was from impact of SARS virus of 2003 on air travel but not much study has been done on the impact of a viral pandemic on consumer behaviour. With aim of adding to the body of knowledge this study was well positioned. The challenge came from building literature review from non-existence literature. The literature used was from world organs such as World Health Organisation and other private organisations required monthly subscriptions of +USD 50 which was not possible to get since the researcher was a student. Data on how the consumer electronics has been performing has been impossible to get as companies like Samsung and Apple don't publish the number of units sold as that knowledge is proprietary.

CHAPTER 8 CONCLUSION

The respiratory diseases are on a steady increase over the past 200 years with influenza of 1918, SARS epidemic of 2003 and the Corona pandemic of 2019-2020. In words of Intel's co-founder and CEO Andy grove who said [34] strategic inflection point is an event that changes the way consumers behave. Corona Virus pandemic is one of those, the way consumers behave changed no one knows if it will ever go back to how it was as sometimes change is always the constant.

On 19 December 2019 in Main Land China in the City of Wuhan the world recorded its first corona virus case. The viral infection was a respiratory affecting disease which had resemblance to the SARS of epidemic of 2003.

The study focused on three points

- How the covid-19 pandemic has affected consumer income.
- Income in consumer behaviour.
- Trying to ascertain if there has been a shift in consumer behaviour from non-essential products mainly focusing on consumer electronics to essentials.

The pandemic affected many countries and many industries for example one of the worst affected was the Airline industry which saw almost all the airlines recording losses and waiting on the mercy of government bailouts. For example the SAS Scandinavian airline announced on March 15 2020 it had laid off of 10 000 employees and this is 90% of their workforce due to the lack of revenues caused by lockdowns. Norwegian Airline In a similar case the airline laid of 90% of its employees. The airline laid off 7 300 jobs and they suspended 85% of their flights. This pilled to consumers losing their income. The results from the study showed that 52.5% of respondance lost their income to corona virus, 34.4% said their income did not change and 13.1% said income increased.

The paper made use of the 1790 income theory by David Davis that stated that poor families spend more of food than wealthier people. It also states that the richer one become they spend on food yes but more on non-essential products as clothing. It is important to note that back in the 1700s when this theory was proposed by a church clergyman on family budgets collected among his congregants who were largely peasant farmers the clothing industry was regarded as non-essential. Now due to changing times technology has evolved into an industry worth above 800 billion dollars. The research tried to see the impact of the corona virus on consumer behaviour of essentials versus the non-essentials namely consumer electronics.

To expand on theory of what affects demand of a product the research made use of the theory of demand.

Demand of consumer electronics was subject to these:

- Peoples income
- The state of mind and future expectation of prices and shortages.
- The change in consumer taste as a way of working from home due to the pandemic.
- The price.

The results proved that the income theory is true the covid-19 pandemic caused a major impact on consumer behaviour of essentials and nonessential (consumer electronics). Also it showed that consumers started to spend more on food when 52.5% of them had reported that the pandemic had caused a fall in their income. Consumption of electronics fell but not with a huge margin while essentials consumption increased.

The study was necessary in adding knowledge to the area of consumer behaviour in a viral pandemic. The study also can help managers to steer their businesses in the new crisis of respiratory infections.

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Appendix A

Impact of corona virus on consumer behavior of essential products VS nonessential products (Consumer electronics).

Please take a few minutes to complete this small questionnaire . The information gathered will be used for academic purposes only

Gender *

◯ Female

◯ Male

◯ Other...

Age *

◯ 15-24 years

◯ 26-39 years

◯ 40-64 years

◯ 64+ years

Employment Type *

○ Student

○ Business

○ Service

Has the Corona virus affected your income? *

○ No change

○ Increased

○ Reduced

Because of Corona virus are you working from home? *

○ I'm working from home.

○ I'm an essential worker.

○ I'm waiting to return to work.

Before Corona I planned to buy *

	strongly disagr...	disagree	neutral	agree	strongly agree
Food	○	○	○	○	○
Medicine	○	○	○	○	○
Toiletry	○	○	○	○	○
Soap and deter...	○	○	○	○	○
Beverages	○	○	○	○	○

Before Corona I planned to buy *

	strongly disagr...	disagree	neutral	agree	strongly agree
Laptop	○	○	○	○	○
Phone	○	○	○	○	○
TV	○	○	○	○	○
Video game set	○	○	○	○	○
Tablet	○	○	○	○	○

After corona started this is what i'm planning to buy. *

	strongly disagr...	disagree	neutral	agree	strongly agree
Food	○	○	○	○	○
Medicine	○	○	○	○	○
Toiletry	○	○	○	○	○
Soap and deter...	○	○	○	○	○
Beverages	○	○	○	○	○

After corona started this is what i'm planning to buy. *

	strongly disagr...	disagree	neutral	agree	strongly agree
Laptop	○	○	○	○	○
Phone	○	○	○	○	○
TV	○	○	○	○	○
Video game set	○	○	○	○	○
Tablet	○	○	○	○	○

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