



The Sustenance of Departmental Stores Amid the Covid Crisis – A Case Study of Patna

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Abstract: COVID 19 has shattered the lives of the people. It has challenged the health care system and has completely changed the meaning of survival beyond pandemic. It has caused fatal economic downturns.

Amidst the hue and cry of pandemic all around, and its related repercussions, we are here, presenting just the other perspective. On one side, where everyone was talking only about problems, we studied and found out the deterministic factors which caused the sustenance of the stores.

Our research aimed at finding the intrinsic factors which caused the sustenance of the departmental stores. Here we examined various such components and thereafter proved its authenticity and applicability.

Keywords: Challenged, Meaning of survival, Economic downturns, Repercussions, Deterministic factors, Sustenance.

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Introduction:

The pandemic and the problem: The beginning of 2020, staged the picture of a new world, which was paralyzed by a pandemic. According to Economic Times (2020), COVID-19 slump, followed by social distancing and a nationwide lockdown, has given a jolt to the departmental stores. These stores experienced major setbacks, no matter how established they were. They had to re-look the managerial and operational aspects of their businesses, including re-visitation of their business plan. It became challenging for most of the departmental stores to keep their financial wheels turning during the lockdown period, due to less revenue churn and the general uncertainty in the financial market.

Changing consumer habits: All consumer behavior has strong location and time dependencies. Behavior changes from one location to another

depending upon cultures, geographies, etc. For example: the requirement of a person living in a bigger city will differ from a person residing in a smaller city. The pandemic has made the dimension of consumer behavior more complex. Higher implementation of self-justification strategies, explain changes in consumer behavior, which led to increase in utilitarian shopping. A surge in stress levels, made consumers save more. This pushed the departmental stores to go beyond traditional methods to model their behavior.

Sustaining the crisis: On the contrary, the government of India and State governments' lockdown guidelines provided leverage to departmental stores, as they were selling 'essential goods' along with the non-essential ones. The location based advertisement methods adopted by these stores included affixing oneself on google maps, making business accounts on whatsapp, etc. Furthermore, departmental stores engaged with customers, taking extra care of the regular ones and providing them with fast and smooth services. They also became omni-channeled, having both online and offline presence.

The Foundation of the Research-James Dusenberry's Relative Income Hypothesis:

We have based our study on Dusenberry's relative income theory. Our study does not include, either very rich or very poor. It solely talks about the middle income earning group. The base of this theory is that, the utility one derives from consumption depends on what and how much one consumes relative to what and how much others consume. That is because people are concerned about their status relative to others.

In his "demonstration effect," Duesenberry states that the average propensity to save is affected by relative income, and not just by absolute income. Hence changes in the distribution of income will affect the rate at which people save. When monetary income of an individual falls, he/she tries to maintain their previously reached consumption, given their new reduced income. The people curtail their saving in order to maintain their consumption. This leads to a decrease in average propensity to save, with consumption being consistent. Boskin and Sheshinski pursue this concept and create a theoretical model to address optimal redistribution tax policy when welfare depends in part on relative income.

It was due to these collective forces, we can say that, the people continued their consumption, even when they had little income during COVID. They, due to the demonstration and Veblen effect, as stated above, consumed the same, which they were consuming before the crisis. Even though we saw that, they however increased their consumption of certain goods.

In the race of modernization, and in the name of enhancement of immunity, during COVID, people were trying out crazy things. Flax seeds tablets, to turmeric juices and extract have become popular. People these days have replaced their domestic work with gym culture, to increase their endurance and immunity. They prefer imported fruits like kiwi, over local seasonal fruits. It was during COVID, that we saw a gush of kiwi into the market. Now, it has become trendy and a status symbol. Further, adding to this list, corn flakes is nothing but chips of corn. But, people have replaced eating corn cob and have shifted to packed flaxes.

Thus, we consider these as being technically superior to our culture. We are highly influenced by the western culture because we find them superior to us and want to outdo them, leaving our culture behind. But, at the grass root level, there is no technical superiority, whatsoever.

At last, we would say that all of these above-mentioned factors have contributed to the sustenance of the departmental stores. In other words, the relative income hypothesis strengthens the theoretical case for income redistribution.

Reviews of Literature:

1. J.S. Dusenberry, Harvard, America stated in the relative income hypothesis that at the time of recession when income of all households fall, their consumption expenditure does not fall to that extent. This is the ratchet effect. People try to maintain their consumption at the highest level attained earlier.(1949)
2. Retailers Association of India (RAI),has asked the government to modify or extend Pradhan Mantri MUDRA Yojana Scheme to include financial support for digitalization of kiranas and small retailers.(20/08/21)

3. Razorpay, consumers have shifted to online portals for purchase of products, ranging from basic commodities to branded goods.(18/09/20)
4. A report of Forbes, USA, on how the stores sustained the crisis.(03/20)
5. Swiss Re Institute, there has been a higher love for local observed, a desire to shop local reflected in products brought and the shopping pattern of consumers, (supporting community stores).(10/12/20)
6. Organization for Economic Co- operation and Development (OECD), India, retail stores operate under difficult conditions, including labor supply shortages, major disruptions in supply chains, working conditions and sometimes large spike in demand for specific items.(16/06/20)
7. Uni-square concepts, talks about marketing strategies for departmental stores in COVID-19 pandemic. Consumers prefer sellers who connect with them and make them feel valued. They also prefer the departmental stores which work smoother and faster. (12/11/20)
8. Seema Mehra, Tanjul Saxena and Neetu Purohit, Sage Journals studies the new consumer behavior paradigm amid COVID-19 which indicates behavioral changes among consumers in the time of crisis with significant change in utility pattern. E.g. simplification of demand because of limited offers during the crisis.(2020).

Objectives:

- To study the importance of digital modes of payment in the sustenance of departmental stores.
- To assess the contribution of door to door delivery service.
- To study the income disparity between established and new stores.
- To study the impact of change in consumer behavior on departmental stores.

- To study the effect of population density on the sales of departmental stores.
- To find out the impact of government regulations on departmental stores.
- To find out the effectiveness of marking the presence of stores, online.

Research Methodology:

Area of study: Departmental stores in Kankarbagh, Gardanibagh and Danapur region. The store owners and consumers of departmental stores in these areas.

Tools and techniques of data collection: Interview through questionnaire with store owners and customers.

Data analysis: Primary data: questionnaire, personal interview, surveys and observations. Secondary data: internet, research papers, magazines and newspapers.

Method of data analysis:

Represented by:

- Tables
- Graphs
- Bar diagrams
- Pie chart

Time of Study:

We have limited the time of our research project during the 1st and 2nd wave of COVID-19.i.e. March 2020 to April 2021. As India saw two consecutive Corona virus blows, most sectors (like MSME) in the Indian Economy faced a knock-on effect.

The lockdowns had strict safety guidelines for sellers and consumers, which included time based policies for the departmental stores. Consequently, the stores could only sell products during a specified timeframe. The shortage of manpower caused a lag between supply chains and distribution mechanisms of FMCG (fast moving consumer goods) companies. On the other hand, the high rate of unemployment and fear of infection changed consumer behavior.

Thus, we chose the above mentioned period to assess how the departmental stores sustained through the pandemic.

Limitations of the Study:

Insufficiency in collection of primary data: We collected the primary data through an online questionnaire for consumers and offline for store owners. Since the information was self-reported by customers, we had no technique to confirm the correctness of the data presented. In case of store owners, the accuracy of data could have been hampered through miscommunication and the owners' desire to hide details about their respective stores.

Lack of previous data due to recent occurrence of the pandemic: Owing to the fact that the COVID-19 crisis is a unique and neoteric one, there has been very few or no research regarding its impact on departmental stores. Furthermore, the available papers provided information on a very large scale which was inapt for our study.

Risk of COVID-19: Due to the risk of COVID-19, the survey on consumers' part has to be held online. On the other hand, the offline survey of stores puts us at the risk of contracting corona.

Restraint of time: The research had to be completed within a specified time, wherein, we had to make a balance among college exams, co-curricular activities, classes and research projects. If given a larger time frame, we could have incarcerated a more comprehensive study.

Other factors constant: The research is based on the statistics provided by buyers and sellers. Where the factors such as, sellers' work ethic, time management, communication skills, marketing techniques, etc are given and constant. Therefore, the other factors which influence sales are unaccounted for, thus, contributing to a faulty study.

Hypothesis 1. COVID has pushed the masses towards contactless modes of payment

Table 1. The Transition of Society Towards Contactless Modes of Payment

<i>Mode of Transaction</i>	<i>Number of Customers (In %)</i>	<i>Number of Stores (In %)</i>
Contactless Transaction	64	70
Physical Transaction	36	30



Fig. 1. The above graph shows the transition of society towards non-contact modes of payment

From the above given data, it can be deduced that 64% of the customers used contactless transactions, while only 36% chose physical transactions. On the other end, 70% of the stores were accepting the online payments, leaving only 30% into the criteria of physical monetary exchange.

Where demonetization gave the first push to digital payments adoption in the country back in 2016, COVID-19 has given it further fillip in 2020. Even consumers comfortable with cash have started using digital payments for their regular needs, a much needed push to move India towards a less cash society. Concerns over transmission of the virus through the exchange of physical currency boosted online transactions.

Thus we can say that, our hypothesis, **COVID has pushed the masses towards contactless modes of payment is true.**

Hypothesis 1. Chi-Square Testing

TO PROVE - The pandemic has pushed the masses towards contactless modes of payment.

H0- The pandemic has pushed the masses towards contactless modes of payment.

H1- The pandemic has not pushed the masses towards contactless modes of payment.

Table 2. Chi-Square Test

Modes of payment	Observed frequency (O _i)	Expected frequency (E _i)	(O _i -E _i)	(O _i -E _i) ²	(O _i -E _i) ² / E _i
Physical payments	14	25	-11	121	4.84
Contactless payment	36	25	11	121	4.84

Assuming that H₀ is true, we have

$$\chi^2 = \sum (O_i - E_i)^2 / E_i$$

After calculation,

$$\chi^2 = 9.68$$

Degree of freedom = (n-1)

Here n= number of observations

$$d.o.f = (2-1)=1$$

Tabulated value of $\chi^2=10.827$ at degree of freedom =1 at 0.1 level of significance.

Since, χ^2 (calculated value)= 9.68 < χ^2 (tabulated value)=10.827,

H₀ is accepted

Therefore, the pandemic has pushed the masses towards contactless modes of payment.

Hypothesis 2. The stores present on online platforms, faced the crisis better

Table 3. The Effects of Online Presence on Stores In Kankarbagh, Gardanibagh and Danapur

Area of Study	Online Presence (In %)	Increasing Effect (In %)	No Effect (In %)
Kankarbagh	76.92	50	50
Gardanibagh	77.77	42.85	57.14
Danapur	42.85	50	50

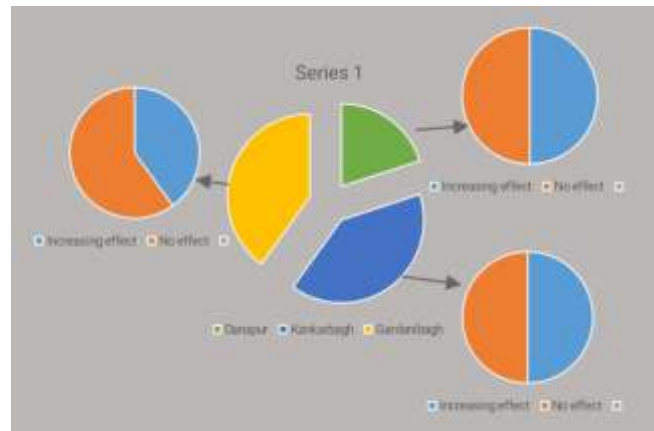


Fig. 2. The above figure shows the effects of online presence on stores of different areas

In our study, we found out that the location of the departmental stores also played a key role in determining the online presence of stores. In developing areas like Danapur, 42.85% of stores had a virtual presence, whereas only 50% of them confirmed that they benefited from it. Gardanibagh, being a more developed region, exhibited a higher volume of virtually present stores i.e. 77.77% out of which 57.14% revealed to have constant effects, while 42.85% experienced rising effects in sales. In a relatively developed area like Kankarbagh, 76.92% of stores registered on online platforms, where 50% reported a positive impact on their sales. Hence, the need for online stores was found comparatively more in the economically advanced regions, where sellers had the knowledge and incentive to go online. Whereas, developing areas lacked online stores and knowledge.

Therefore, we can conclude that, our hypothesis, the stores present on online platforms faced the crisis better, is false.

Table 4. Stores Present on Virtual Platforms- Area Wise Preview

Area of Study	Online Platform (In %)	Offline Platform (In %)
Kankarbagh	76.92	23.07
Gardanibagh	77.77	22.22
Danapur	42.85	57.14

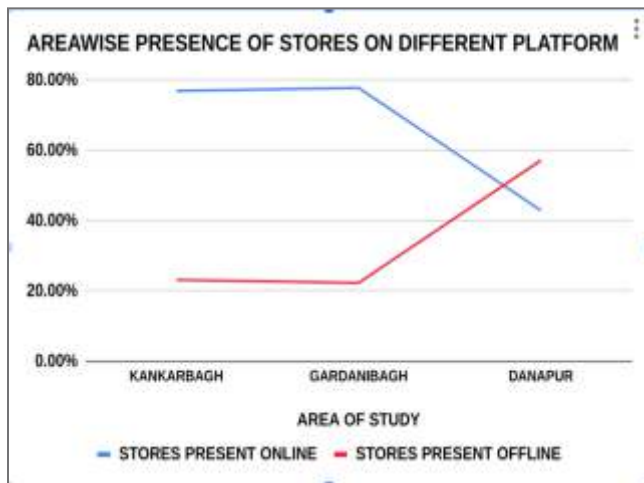


Fig. 3. The above graph represents presence of departmental stores on online platforms- area wise analysis

Hypothesis 3. Stores in denser areas were less affected

Table 5. Population Density of Different Areas Under Study

Area of Study	Population Density (Per Square Km)
Gardanibagh	16274
Kankarbagh	24485
Danapur	8901

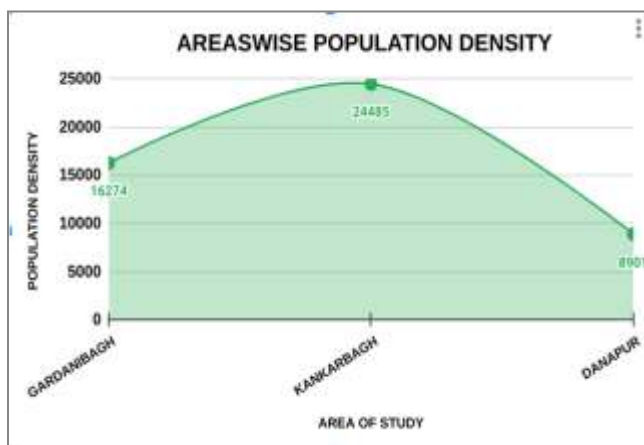


Fig. 4. The above graph illustrates the population density of different areas in Patna

Table 6. The Role of Population Density in Sustaining the Crisis

Area of Study	Positive Effect (In %)	Negative Effect (In %)
Gardanibagh	77.77	22.22
Kankarbagh	92.30	7.69
Danapur	46.42	53.57

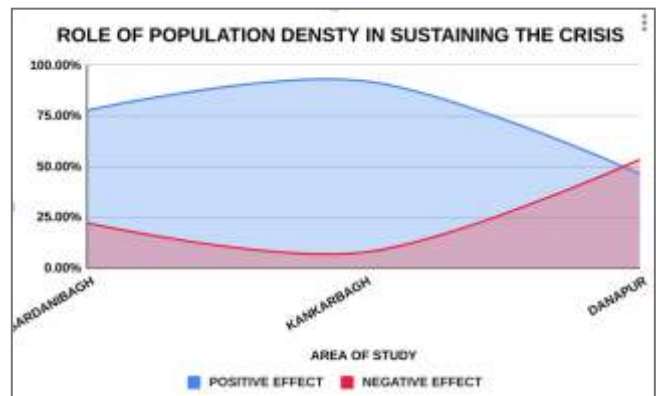


Fig. 5. The above graph explains the role played by population density in sustaining the crisis

As per our data, the performance of the stores in densely populated areas was much better than the sparsely populated area. In this hypothesis, we considered the relationship between density of the areas under study and the sustenance of stores in the respective areas. Kankarbagh with the highest population density, i.e. 22485 people/km² had 92.8% stores which sustained the crisis better. While Gardanibagh with comparatively less density, of about 16274 people/km² had 77.77% stores which sustained the crisis. On the contrary, the least dense area like Danapur, with 8901 people/km² had only 46.42% stores which had a better sustenance.

Hypothesis 3. Chi-Square Testing

TO PROVE- Stores in denser areas were less affected.

H0- Stores in denser areas were less affected

H1- Stores in denser areas were not less affected

Table 7. Chi-Square Test

Area of study	Observed frequency (O _i)	Expected frequency (E _i)	(O _i -E _i)	(O _i -E _i) ²	(O _i -E _i) ² / E _i
Kankarbagh	12	16.66	4.66	21.71	1.30
Gardanibagh	7	16.66	9.66	93.31	5.60
Danapur	13	16.66	3.66	13.39	0.80

Assuming that H₀ is true, we have

$$X^2 = \sum (O_i - E_i)^2 / E_i$$

After Calculation,

$$X^2 = 7.7$$

Degree of freedom = (n-1)

Here n = number of observation

$$d.o.f = (3-1) = 2$$

Tabulated value of $X^2 = 7.82$ at degree of freedom = 2 at 2% level of significance.

Since $X^2(\text{calculated value}) = 7.7 < X^2(\text{tabulated value}) = 7.82$,

So, we accept the null hypothesis.

Therefore we can deduce that, our hypothesis, **stores in denser areas were less affected is true.**

Hypothesis 4. Government as a regulatory body proved to be a boon for departmental stores

Table 8. The Impact of Government Regulations on Consumers and Store Owners

Impact of Government Regulations	Number of Stores (In %)	Number of Customers (In %)
Benefitted	66	72.60
Not Benefitted	34	27.40

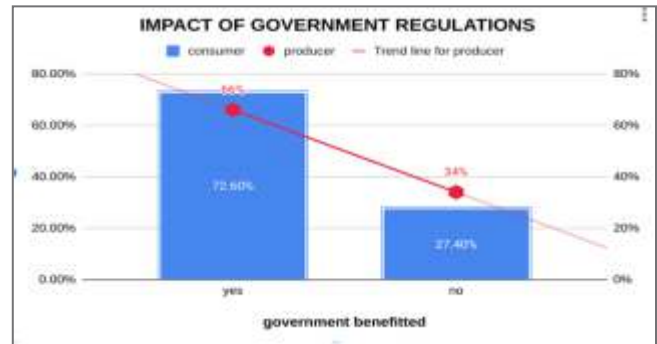


Fig. 7. The above bar graph represents the effect of government regulations on consumers and store owners

Under this hypothesis, we analyzed the importance of government as a governing and regulating body. For this we have consolidated several government policies that were enacted throughout the Covid period. In the first table, we can see that 66% of the stores under study, which is more than half, benefited from government regulations. On the other hand, 72.60% of the surveyed customers reported the same.

Table 9. Impact of Government Regulations on Departmental Stores- Area Wise Study

Area of Study	Number of Stores Benefitted (In %)
Gardanibagh	88.88
Kankarbagh	53.84
Danapur	46.42

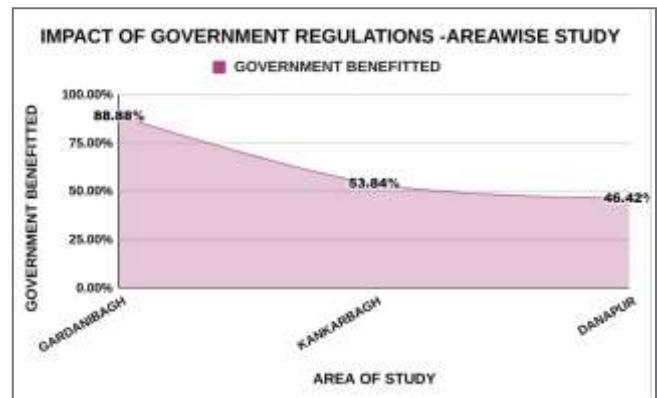


Fig. 8. The above drawn graph presents the percentage of stores in Gardanibagh, Kankarbagh and Danapur that profited from government regulations

In our area wise study, 88.88% stores of Gardanibagh, 53.84% stores of kankarbagh and 46.42% stores of Danapur, reported their benefit from the government regulation. Therefore, we can wind up saying that, most of the stores as well as the customers were profited from governmental regulations.

Hypothesis 4. Chi-Square Testing

TO PROVE- Government as a regulatory body proved to be a boon for departmental stores.

H0 -Government as a regulatory body proved to be a boon for departmental stores.

H1- Government as a regulatory body proved not to be a boon for departmental stores.

Table 10. Chi-Square Test

Government benefited	Observed frequency (O _i)	Expected frequency (E _i)	(O _i -E _i)	(O _i -E _i) ²	(O _i -E _i) ² / E _i
Yes	28	25	3	9	0.36
No	22	25	-3	9	0.36

Assuming that H0 is true, we have

$$\chi^2 = \sum (O_i - E_i)^2 / E_i$$

After Calculation,

$$\chi^2 = 0.72$$

$$\text{Degree of freedom} = (n-1)$$

Here n= number of observation

$$\text{d.o.f} = (2-1) = 1$$

Tabulated value of $\chi^2 = 1.32$ at degree of freedom =1 at 25% level of significance.

Since $\chi^2(\text{calculated value}) = 0.72 < \chi^2(\text{tabulated value}) = 1.32$,

So, we accept the null hypothesis.

Thus, the hypothesis, **government as the regulatory body proved to be a boon for departmental stores is true.**

Findings of the Study:

1. The location of departmental stores and their incomes had a direct relationship. The stores situated in densely populated areas reported higher sales throughout the crisis.
2. The advantages of online marketing strategies were limited to a few stores only. Consumers preferred local and known stores over e-stores to cater to their day to day needs. Thus, there was little to no impact of departmental stores' virtual presence on their overall income.
3. The profits earned by departmental stores remained unaffected by their year of establishment. Newly built stores declared higher earnings in some areas, while older stores gained more in other areas. Therefore, factors like shopkeepers' skill, availability of products, population density, etc came into play while determining the success of stores.
4. More than half of the stores benefited from the government's time based policies as it reduced their working hours without much decline in sales.
5. With a sharp rise in unemployment throughout the economy, people's consumption contracted to essentials. Furthermore, a hike in demand for disinfectants, herbal medications, and other such products was seen due to a fear of COVID-19. Consequently, departmental stores increased their hoardings for necessities, disinfectants, etc and limited their stocks for other items.
6. The stores equipped to take payments through contactless modes were preferred by consumers. Store owners suggested that their businesses ran smoother with digital modes of payment.
7. Home delivery service was a sigh of relief for most customers. Moreover, it was a great opportunity for departmental stores to engage with more consumers and expand their reach beyond just the physical stores.

Suggestions:

More inclusive government regulations:

- The lockdowns implemented by the government in 2020 and 2021 had some stringent policies. Luckily, departmental stores were permitted to run their business while following some safety guidelines and time restrictions.
- Furthermore, the departmental stores were permitted to be open for fixed periods of time during the day, generally 3-4 hours. They had to cut down to 50% working staff but were asked to pay all the hired employees. These policies created a distress between workers and employers. The store owners were unable to provide for all workers, thus, they received delayed salaries or no salaries at all.
- Therefore, the regulations formulated by the government could have included a contingency plan for such a scenario.

A firm check on corruption and local authorities:

- The concentration of power in the hands of local authorities generated a loophole in the system for corruption. Policemen were seen beating owners of departmental stores or taking huge bribes from them in the name of maintaining law and order.
- Therefore, a structure of keeping a check on the actions of these authorities could have helped the society tremendously.

An online common platform for registration of departmental stores:

- Every section of the economy, departmental stores became a lifeline for individuals. Yet 48% of them reported heavy losses, while 22% recorded no effects of the pandemic on their income.
- Registration on a common online platform should have been made compulsory for all departmental stores to save them from incurring any losses. Further, this would have

made the buying and selling process safer and smoother.

Remuneration to shutdowns:

- Even though most departmental stores survived two major strikes of the Corona virus pandemic, a few of them had to shut down. The store owners who chose to shut their stores down opted for lesser paying jobs like vegetable vendors, rickshaw pullers, etc.
- Government schemes to provide remuneration to these shutdowns could have ceased individuals from falling into the web of unemployment and poverty.

Efficient supply chain:

- There was ample demand for products during the lockdowns, but due to restrictions in movement and lack of man-power, demand and supply equilibrium was broken. Shortage of inventories due to lower productivity or temporary shutdowns in the manufacturing sector was seen on the supply side.
- The authorities could have included a plan of action to deter such situations.

Conclusion:

- Our research helped us to observe various factors which led to the sustenance of departmental stores, through the global pandemic. Many factors like fear of infections, large scale unemployment, uncertain future, etc became hurdles in this path.
- In due course of our research we found out that COVID-19 has pushed the stores towards non-contact modes of payment. While, primary data collected through store owners suggested that online presence did not render any impact on their sales.
- Moving ahead, we saw a strong and direct relationship between population density and sales of stores. Adding to the list, government regulations also proved to be a boon for departmental stores.

- Thus, we spotted both positive as well as negative effects of the crisis.

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