

# Pandemic Induced Innovations: A Comparison of Spanish Flu, HIV/AIDS and COVID-19

**Dr. Sabeeha Fatma**

Assistant Professor

Amity University, Uttar Pradesh

---

## ABSTRACT

---

COVID-19 has changed many things. To make life easier and combat the pandemic in a better way, many companies launched many products and services in last one year. Whether those products and changed lifestyle would continue or disappear when the pandemic is over needs to be studied. The current study is broadly based on articles appearing in newspapers, reports compiled by various consulting agencies, experts' views, and government reports. Triangulation methodology is used in the present study. If we compare the demand patterns of those products which were either introduced or gained popularity during the pandemic of Spanish Flu and HIV / AIDS the following pattern emerges:

1. Those innovations sustain which lead to ease of doing things in the long run
2. Those innovations which lead to drastic changes in traditional patterns of life often fizzle out with time.

The changed way of life may become a lifelong habit, or it may fade away as the pandemic is controlled. The demand for certain products introduced during pandemic may surge very high but dies out as soon as situation become quite controllable, thus proving it to be a knee-jerk reaction. Thus, decisions need to be taken with precision.

**Keywords:** Pandemic, COVID-19, Spanish Flu, HIV / AIDS, Consumer Behavior, Innovation

---

## Introduction

Product is a bundle of attributes that satisfies consumer's needs and wants (Lancaster,1966). During the times of pandemic new needs emerge giving rise to new types of products and services. For example, the recent Covid-19 pandemic has led to the need of covering face, maintaining social distancing, and disinfecting hands at regular intervals.

The demand for various equipment that may reduce the chances of infection rises tremendously during pandemic (Fairgrieve, Feldschreiber, Howells, & Pilgerstorfer, M., QC, 2020).

The changed way of life may become a lifelong habit, or it may fade away as the pandemic is controlled.

## Research Problem and Objectives

The COVID-19 pandemic broke out in December 2019 and by March 2020 almost the entire world was in its grip. The World Health Organization suggested some preventive measures, such as wearing mask, cleaning hands at regular intervals, maintaining social distancing and avoiding crowded places to minimize the chances of catching infection. These preventive measures gave way to some products and services, of which few were entirely new concept, and few were

modifications of already existing products. A study of various articles appearing in various newspapers, such as Business Standard, Economic Times and many others during the period of March 2020 to March 2021 indicate that many companies launched products and services that were inspired by the needs arising due to pandemic.

**The research objectives of the current study are:**

- i. To identify those products and services that were launched or that gained impetus during pandemic
- ii. To study the patterns of the changes in consumer behavior that emerged out of previous such pandemics (Spanish Flu, HIV/AIDS).
- iii. To understand the factors that lead to continuation or discontinuation of pandemic induced consumer preferences.

**Literature Review**

Spanish influenza in 1918 broke out suddenly, spread rapidly and then petered out in less than a couple of years. It had very limited macroeconomic effects in relative terms. The outbreak of infectious diseases in the past placed public health at the center of public policymaking (Bell and Lewis, 2005). On reviewing the various reports published during the period 2020-2021 it was found that the uncertainty associated with spread of epidemic and subsequent measures to contain it, made consumers more cautious of their spending. Edible products witnessed increased demand and demand for non-edible products like homecare, cosmetics and personal care products decreased. Few practices, like online shopping, that consumers adopted during pandemic may continue even beyond it ( Mehta, Saxena, Purohit, 2020). A similar pattern was observed when the household appliances introduced in the wake of Spanish Flu survived well beyond it. However, the sale of few

innovations, like, female condoms, introduced as a response to HIV epidemic could never pick up.

**Methodology**

The current study is broadly based on articles appearing in newspapers, reports compiled by various consulting agencies, experts' views, and government reports. Triangulation methodology is used in the present study.

On searching the most recent major pandemics, three pandemics were found to be common in almost all articles. They were:

- i. Spanish Flu
- ii. HIV/AIDS
- iii. COVID-19

**SPANISH FLU**

The 1918 Influenza pandemic is the most recent pandemic having similar pattern of spread and deaths as COVID-19 pandemic. Historical evidences states that the pandemic was responsible for around 20- 50 million deaths worldwide (Swetha, Eashwar, and Gopalakrishnan, 2019).

The year in which the outbreak occurred coincided with another calamity, which too was equally devastating. The first world war which started in 1914 was at its peak in 1918 and many historians believe that it added to the spread of Spanish Flu (Tsoucalas, Kousoulis and Sgantzos,2016). Some remarkable changes observed in consumer preferences after Spanish Flu are discussed below:

**1. Emergence of Public Health System:**

Healthcare at that time was not organized and left in the care of private medical practitioners and charitable or religious institutions. To fight against a pandemic and invent combative medical interventions was beyond the scope of private doctors or charitable and religious trusts.

The need for large scale government intervention was felt. This gave rise to public health systems. Thus, in the years following the Spanish Flu, the governments of many countries adopted the social system of medical and healthcare wherein free healthcare was made accessible to all. (Spinney, 2020).

## **2. Wider use of household appliances:**

A remarkable trend observed after pandemics was increase in the age of women at the time of marriage and consequently fall in fertility. This trend was attributed to entry of more women into the labor force as many men lost their lives in war and pandemic (Kitchens and Rodgers, 2020). Many households lost their earning males due to war and Spanish Flu, because of which women took jobs to support their families. As the participation of women in workforce increased the need for household appliances that could perform household chores and save time for females also grew (Goldin, 2006).

## **3. Changes in dressing style:**

As no medicine or vaccine was available, non-medical interventions were only protection against the contagious disease. One such intervention was wearing face masks in public (French, 2020).

With most of the people remaining confined to their homes, sales of formal and party dresses dropped ("Suit Season in Omaha Killed By Influenza", 1918). and those of blankets, comforters and winter underwear increased. The sales of ready-to-wear and children's wear were hard hit as many mothers were afraid to take their children to stores ("Epidemic An Aid To Some Lines, A Blow To Others" 1918).

## **4. Changes in shopping habits:**

The stores were shut in some cities while others offered limited hours and crowd capacity or encouraged phone orders. Merchants dis-

couraged exchanges and returns ("Proposed Ban On Return Goods To Check Influenza", 1918, "Ask for Phone Orders As Influenza Causes Drop In Trade", 1918.).

## **HIV/AIDS**

Acquired Immune Deficiency Syndrome (AIDS) was first recognized as a new disease in 1981 (CDC 1981; Greene 2007). A retrovirus, now termed (HIV-1), was subsequently identified as the causative agent (Barre-Sinoussi et al. 1983; Gallo et al. 1984; Popovic et al. 1984). The changes in the consumer behaviour that may be attributed to HIV- AIDS are discussed below:

### **1. Increase in sales of disposable syringes:**

HIV/AIDS pandemic gave a major boost to the sales of disposable syringes. Reports of possible transmission of bloodborne diseases through reuse of syringes became a major public health concern in the 1980s. Increased awareness of HIV/AIDS and reports of hepatitis B transmission spurred WHO to promote safe injections and encourage the development of safer devices (Battersby, Fielden, Neilson, 1999).

### **2. Increase in sales of male condoms:**

Another product which gained sales due to HIV/AIDS pandemic was male condoms. Data from a national probability sample of drug stores in US show that condom sales rose from 240 million annually in 1986 to 299 million in 1988. The greatest increase occurred in 1987 (Moran, Janes, Peterman, and Stone, 1990).

### **3. Introduction of female condoms**

However, another product introduced in response to HIV/AIDS, female condom, could not find many buyers. The protection provided by the female condom against pregnancy and sexually transmitted infections, including HIV, is approximately equal to that provided by the male condom. The female condom is currently the only HIV prevention method that women can initiate

and control. Although there were many advantages of female condoms, the sales of the product remained negligible (Helpdesk Report, Human Development Resource Centre, 2011).

The major hurdle in female condoms becoming popular was the attitude of the target market towards the problem. According to studies, young women were more worried about unwanted pregnancies than with acquiring STIs, which led them to, eventually, abandon the use of the condom and start using hormonal contraceptives. A study indicated that women do not feel comfortable having or carrying condoms, and when they need a condom at the time of intercourse, they admitted to leave this responsibility to the male partner (Moraes, Suto, Oliveira, Paiva, Ferreira, and Barreto, 2019).

## COVID 19

The first human cases of COVID-19, the disease caused by the novel coronavirus causing COVID-19, were first reported by officials in Wuhan City, China, in December 2019. Approximately 215 countries and territories worldwide have been affected by the COVID-19 disease (Elflein, 2021).

As no medical remedy was available, World Health Organization recommended social distancing, covering of faces by mask, frequent washing of hands and avoiding public gatherings to prevent the spread of the disease (WHO, 2021). Many countries imposed lockdown, partially or fully to contain the spread of the virus. Few trends were observed due to the changed circumstances. Some of the prominent ones are discussed below:

### Online Education Portals

Although online education has been there for quite some time, 2020 would be regarded as the revolutionary year in the history of online education. With schools and colleges being closed due to Covid-19 imposed lockdown, many

parents and students were forced to embrace e-learning. Owing to the closure of schools to avoid the spread of COVID-19 resulted in a loss of regular study routine for students. This led to many students subscribing to online education portals. For example, BYJU'S, the world's largest Edtech company, headquartered in India, added over 6 million new students in March 2020, to its learning App. The numbers grew to over 7.5 million in April, 2020. Overall, 13.5 million new students were using the platform in the initial two months of the lockdown - March and April. According to a Redseer and Omidyar Network India report, online education offerings across Classes 1 to 12 were likely to increase 6.3 times by 2022 while post Class 12 market was set to grow 3.7 times (Ahmad, 2020). After school market-coaching and tuitions was also projected to undergo a sea change. Currently, India has about 70 million students who are paying for after-school learning of which is 20 million is likely to migrate to digital learning (Ahmad, 2020). E-learning which was so far directed towards students of metropolitan cities only have now started focussing on small towns as well as internet penetration and awareness has improved in such towns post Covid. In the upcoming times, Edtech may complement the school environment. However, a study by McKinsey showed that while the administration, evaluation, preparation, and feedback elements in delivery of education have the most potential for automation, other interactive activities are better delivered with face-to-face interface (Aaravind, 2020). Whether the students would continue with EdTech companies when schools reopen or get back to traditional ways of learning, remains a mystery. It was projected that as the schools would reopen, kids would have to accommodate the time spent on online portals according to their school timetables, which may lead to fall in time spent on EdTech platforms. But having experienced the convenience and benefits of learning apps, a complete drop-off may not be there. Although the KG-12 segment that

comprises of school going children from nursery to class 12th may shrink marginally after schools reopen, the students preparing for competitive examinations may continue as they find EdTech companies more cost effective, convenient, and productive. The projections were substantiated when the schools reopened in 2022, there was massive drop in enrolments of online education portals, which lead to mass lay-off in some companies while other adhered to hybrid mode of education (The Print, 2022). The industry was valued at \$750 million in 2020 and predicted to reach \$4 billion by 2025. Online learning platform BYJU'S became India's highest valued start-up with a \$16.5 billion valuation in June, 2022, Unacademy raised \$440 million in August, and UpGrad, Eruditus, Vedantu joined the unicorn club in September. However, the excitement saw a dent when Unacademy was reportedly forced to lay off about 1,000 employees to cut costs. BYJU'S, too, launched offline coaching classes for children however faced a different kind of problem when the employees of White Hat Jr (which it acquired in 2020) preferred to resign rather than to report physically to office. Thus, the rising star that edtech has been viewed as, seems to have lost its sheen.

## Hygiene and Sanitation Products

With no medical intervention available, washing hands and disinfecting surfaces were the only shield against COVID-19 available to masses. 55 per cent of Indian consumers intend to buy more personal hygiene and safety products as a precautionary measure against COVID-19 (Rakshit, 2020). Foreseeing the fear and concern for hygiene and sanitation, many companies launched innovative products like Ultraviolet Light (UVC) based surface disinfectant solutions, portable disinfection unit which is designed for rapid sanitation of any surface, small pocket sized, finger free touch devices which can be used to sterilize surfaces while on the move and contactless door openers (India Infoline News

Service, 2020, The Times of India, 2020). However as the Covid wave subsided, the demand for hand sanitizer subsided too. Most of the companies that started production of hand sanitizers have either exited or reduced the production of hand sanitisers due to falling demand after the COVID second wave in 2021 (Sarkar and Mukherjee, 2022). Times of India, 2022). ([https:// timesofindia. indiatimes .com/ business/ india-business/ cos-reduce-sanitiser-mfg -as -demand -drops/ articleshow/ 90362137 .cms](https://timesofindia.indiatimes.com/business/india-business/cos-reduce-sanitiser-mfg-as-demand-drops/articleshow/90362137.cms)).

## Do It Yourself (DIY) Kits

Do-it-yourself (DIY) is the activity of designing and modifying any project oneself. The global industry for do-it-yourself (DIY) home improvement retailing has observed a notable growth, during the COVID-19 pandemic.

The beauty industry in India, projected to be worth \$20 billion by 2025, was one of the sectors whose path was redefined during the coronavirus pandemic. The lockdown led to salons shutting down, and even as they began reopening in phases, the situation remained cautious. Work from home and lack of social gatherings meant lesser business for the salons. Also, people remain wary regarding the safety of getting any beauty procedures done outside. From women resorting to YouTube tutorials to cut their hair to taking care of their own beauty needs, DIY kits were the flavour of the season. According to a recent McKinsey report, DIY hair colouring, nail care and care in other beauty categories grew remarkably during COVID-19.

Sports goods retailers such as Decathlon and marketplaces Flipkart, Amazon and Snapdeal have seen a surge in online sale of fitness equipment amid the COVID-19 lockdown. Equipment such as dumbbell kits, yoga mats and push-up bars sold tremendously online with closure of gyms and outdoor exercises pacing the consumers to set up home gyms.

People also indulged in cooking at home during the lockdown period. Some brands came up with DIY kits that contain a complete box of raw ingredients along with a recipe to prepare food at home (Abrar, 2020).

Many people rediscovered their forgotten hobbies and indulged themselves in it as the lockdown offered them time for it. Few developed new interest. These activities helped them in keeping boredom away and reducing stress. Therefore, many continued with them after lockdown. The DIY kits, therefore finds new markets for themselves (Dastgir, A., E., 2021).

### **Over the Top (OTT) Entertainment**

There was a massive increase in the viewership of over the top (OTT) channels during the Covid-19 pandemic. With the theatres and multiplexes closed during the lockdown and the restrictions of social distancing even after the lockdown was lifted pulled people towards online entertainment (Madnani, Fernandes and Madnani, 2020). Many movies were released on OTT channels during the pandemic (Pinto, 2020). With audience viewing movies in the comfort of their houses and at time convenient to them, many wondered whether the pandemic would lead to death of theatres and multiplexes. With hotels operating as staycations and take-aways coming to the rescue of restaurants and eateries, there was no alternative for theatres and multiplexes to continue their earnings. However, theatres and multiplexes have faced similar threats with the advent of television, home theatres and video cassette recorders as well. Although there has been temporary drop in sales of tickets due to these developments, the audience returned to theatres as small screen could not match the experience of the bigger one. The joy of watching movie with hundreds of other audiences is also an experience which cannot be replicated at home. However, if the present condition persist and more and more people become aware of OTT entertainment,

there can be change in consumer behaviour. Besides, the customer experience as a major reason for audience to come back to theatres, financial reasons too would be a major factor as the lion's share for production houses and entirely for distributors comes from selling films to multiplexes. Thus the big budget movies like those of James Bond series or End of Game series would loose their charm if watched only on OTT channels (Lall, 2020).

### **Conclusion**

If we compare the change in consumer behaviour patterns which were either induced or gained traction during the pandemic of Spanish Flu and HIV/AIDS the following pattern emerges and same may be predicted in case of COVID-19 as well:

Those innovations sustain which lead to ease of doing things in the long run:

The innovations which are easy to adapt and deliver high utility would sustain in the long run. For example, the home appliances introduced during the Spanish Flu pandemic became a way of life in later years. Similarly, the usage of disposable syringes became very common after the prevalence of HIV/AIDS not only because it was safer but also because it was more convenient. Female condoms on the other hand, could not garner much interest from the target customer because it was perceived to be cumbersome.

Those innovations which lead to drastic changes in traditional patterns of life often fizzle out with time:

Even the innovations which may be easy to use and deliver a lot of relative advantages may not be able to sustain demand in the long run because it brings a radical change in the traditional way of life and social norms. For example, wearing mask is a very effective practice to keep away infectious diseases and it does not cost much. However, it

never became a general habit, though there has been outbreaks of diseases like, SARS, HongKong Flu, Avian Flu, etc even after the Spanish Flu. Similarly, female condoms could not find many admirers because it was against the prevalent social order where the females are supposed to be subvert in sexual matters. Even the home appliances introduced during the Spanish Flu were big hit because it made it easier for females to conform to their traditional duties towards home and children.

## References

- Abrar, P.(May 12, 2020), “Rebel Foods woos consumers with temperature check of staff, healthy food”, Business Standard.
- Ahmad,S.(December 31, 2020), “Covid-19 impact: Hybrid model to be the next chapter in edtech sector” Business Standard.
- Aravind, S., (November 28, 2020), “ A symbiotic relationship” The Hindu.
- Barré-Sinoussi F, Chermann JC, Rey F, Nugeyre MT, Chamaret S, Gruest J, Dauguet C, Axler-Blin C, Vézinet-Brun F, Rouzioux C, Rozenbaum W, Montagnier L. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science*. 1983 May 20;220(4599):868-71. doi: 10.1126/science.6189183. PMID: 6189183.
- Battersby A, Feilden R, Nelson C. Sterilizable syringes: excessive risk or cost-effective option? *Bull World Health Organ*. 1999;77(10):812-9. PMID: 10593029; PMCID: PMC2557749.
- Bell, Clive and Lewis, Maureen, Economic Implications of Epidemics Old and New (February 2005). Available at SSRN: <https://ssrn.com/abstract=997387> or <http://dx.doi.org/10.2139/ssrn.997387>
- CDC 1981 Glengarry, A., J., M.(5 Sep, 2018) “ A cruel irony: Pandemic strikes”, The Glengarry News
- Dastgir, A., E. (March,17,2021), “ How the pandemic changed lives: In a horrific year of loss, some unexpected joys” , USA Today.
- Elflein, J.(March 29, 2021), “ COVID-19 deaths worldwide as of March 29, 2021, by country” Published by <https://www.statista.com/statistics/1093256/novel-coronavirus-2019ncov-deaths-worldwide-by-country/>
- Fairgrieve, D., Feldschreiber, P., Howells, G., & Pilgerstorfer, M., QC (2020). Products in a Pandemic: Liability for Medical Products and the Fight against COVID-19. *European Journal of Risk Regulation*, 1–39. <https://doi.org/10.1017/err.2020.54>
- Fortune Business Insight, 2020.Impact of covid-19 on Global Hand-sanitizer Market Size, Share Industry Analysis and Regional Forecast, 2019-2026(Report ID: FBI102719). <https://www.fortunebusinessinsights.com/impact-of-covid-19-on-hand-sanitizer-market-102719>
- French, P.(April 5, 2020), “ In the 1918 flu pandemic, not wearing a mask was illegal in some parts of America. What changed?”, CNN
- Gallo RC, Salahuddin SZ, Popovic M, Shearer GM, Kaplan M, Haynes BF, Palker TJ, Redfield R, Oleske J, Safai B, et al. Frequent detection and isolation of cytopathic retroviruses (HTLV-III) from patients with AIDS and at risk for AIDS. *Science*. 1984 May 4;224(4648):500-3. doi: 10.1126/science.6200936. PMID: 6200936.
- Goldin, C. (2006). The Quiet Revolution That Transformed Women's Employment, Education, and Family. *The American Economic Review*, 96(2), 1-21. Retrieved April 5, 2021, from <http://www.jstor.org/stable/30034606>
- Greene, W.C. (2007), “A history of AIDS: looking back to see ahead”, *Eur J Immunol*. 37 Suppl 1:S94-102. doi: 10.1002/eji.200737441. Erratum in: *Eur J Immunol*. 2008 Jan; 38(1): 309. PMID: 17972351.
- <https://redseer.com/reports/edtech-in-india-an-omidyar-network-india-redseer-report-2019-20/>

- <https://www.aidsmap.com/news/oct-2016/new-hiv-prevention-products-will-need-marketing-and-effective-health-services-reach>
- [http://timesofindia.indiatimes.com/articleshow/90362137.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articleshow/90362137.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
- Kitchens and Rodgers, 2020 Swetha, G., V., M., Eashwar, A. and Gopalakrishnan, S. (2019) "Epidemics and Pandemics in India throughout History: A Review Article", *Indian Journal of Public Health Research & Development*, 10. 1570. 10.5958/0976-5506.2019.02328.3.
- Lall, P. (August 12, 2020), "PVR Cinemas eyes the bigger picture, raises Rs 300 cr to tide over crisis", *Business Standard*
- Lancaster, Kelvin J. (1966), "A New Approach to Consumer Theory," *Journal of Political Economy*, 74,2, pp: 132-157, The University of Chicago Press
- Madnani, D., Fernandes, S. and Madnani, N. (2020), "Analysing the impact of COVID-19 on over-the-top media platforms in India", *International Journal of Pervasive Computing and Communications*, Vol. 16 No. 5, pp. 457-475. <https://doi.org/10.1108/IJPCC-07-2020-0083>
- Mehta, S., Saxena, T. and Purohit, N. (2020), "The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient?", *Journal of Health Management*, Volume 22, Issue 2, pp: 291-301
- Moraes, A., S., Suto, C., S., Oliveira, E., M., Paiva, M., S., Ferreira, C., S., B., and Barreto, M., A., S., A. (2019), "A look at female condoms from public school students", *Rev Gaúcha Enferm*, Vol.40:e20180277. doi: <https://doi.org/10.1590/1983-1447.2019.20180277>
- Moran, J., S., Janes, H., R., Peterman, T., A., Stone, K., M., (1990), "Increase in condom sales following AIDS education and publicity, United State", *American Journal of Public Health*, Vol.80(5), pp: 607-608. doi:10.2105/ajph.80.5.607
- Patton, MQ. (1999). "Enhancing the quality and credibility of qualitative analysis." *HSR: Health Services Research*. 34 (5) Part II. pp. 1189-1208 retrieved from [https://www.academia.edu/38910714/A\\_New\\_Approach\\_to\\_Consumer\\_Theory](https://www.academia.edu/38910714/A_New_Approach_to_Consumer_Theory) on 9.3.21.
- Pinto, V., S. (December 6, 2020 Covid-19 is reshaping daily habits for the better", *Business Standard*, pg. 2.
- Pinto, V., S. (June 16, 2020), "Race for digital-first film releases heats up on OTTs after Gulabo Sitabo", *Business Standard*
- Popovic M, Sarngadharan MG, Read E, Gallo RC. Detection, isolation, and continuous production of cytopathic retroviruses (HTLV-III) from patients with AIDS and pre-AIDS. *Science*. 1984 May 4;224(4648):497-500. doi: 10.1126/science.6200935. PMID: 6200935.
- Rakshit, A. (2020), "Covid-19 impact: Demand for personal hygiene, homecare products set to rise 2020" *India Infoline News Service*
- Sarkar, J., and Mukherjee, R. (March, 22, 2022), "Companies reduce sanitiser manufacturing as demand drops", *Times of India*.
- Spinney, L. (2020), "The World Changed Its Approach to Health After the 1918 Flu. Will It After The COVID-19 Outbreak?" <https://time.com/5797629/health-1918-flu-epidemic/>
- Swetha, Eashwar, and Gopalakrishnan, 2019 Pebody, R. (24 October 2016), "New HIV prevention products will need marketing and effective health services to reach the people who need them."
- Tsoucalas, G., Kousoulis, A., Sgantzios, M. (2016), "The 1918 Spanish Flu Pandemic, the Origins of the H1N1-virus Strain, a Glance in History", *European Journal of Clinical and Biomedical Sciences (EJCBS)* 2(4): 23-28.