Editorial

Dear Readers,
The latest issue of the International Journal of Research in Business Studies (IJRBS) is created to disseminate knowledge and provide information. This edition comes with 12 research papers from contemporary topics touching multiple disciplines. These papers are solicited via an open platform. The journal highlights include intensive issues which provide a dedicated and comprehensive look at the current research in particular areas of interest.
With the release of this issue, this journal will complete its 15th edition, which is a milestone in its consecutive publication and also, it has made a significant contribution to the field of academia. I appreciate the sincere efforts and diligent work made by editorial board members, and the authors' cooperation in refining the papers to make them fit for publication. It is our endeavor to make IJRBS more in rhythm with the norms of the domain.
With deep appreciation, we welcome your comments and ideas.

Arun Kumar
Editor-in-Chief
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Causative Factors of Concentration Risk in Deposit Taking Rural Banks: Evidence from Ghana

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Abstract

This study looks at the deposit concentration risk of rural banks in the Eastern Region of Ghana. Using a descriptive and exploratory research design, it examines the difficulties brought on by deposit risk as a result of large depositors' making unexpected and/or early withdrawals. According to the survey's findings and the F value calculated at a 5 percent level of significance, the majority of the rural banks chosen for the study had a high deposit concentration risk. Additionally, it has been found that deposit concentration risk affects how well the chosen rural banks operate. In other words, poor operational performance is likely to come from a high deposit concentration risk, whereas a low deposit concentration risk is likely to result in excellent operational performance because a low deposit concentration risk implies funding liquidity on the part of rural banks. Thus, the study found that the major causes of the deposit concentration risk experienced by the chosen rural banks were low-interest rates on investments, closely followed by a decline in customer confidence in rural banking. The impact of poor corporate governance, on the other hand, had the lowest ranking among the six factors creating deposit concentration risk.

Keywords

Deposit risk, Rural bank, Concentration risk, Interest rate, and Corporate governance.

1. Introduction

In 2017, the pre-tax return on shareholders' equity (ROE) of the rural banking industry was 22.11 percent (Apex Rural Bank, Apex Bank, 4th quarter 2017 Performance Review). This performance was significantly below the regulator's minimum benchmark of 30.0 percent. Also, only 29 rural community banks, out of a total of 141, were rated strong. A few observers have accused the industry's poor performance on a variety of factors, including structural bottlenecks (Hoang et al., 2017; Yu, 2013).

According to the (Committee of European Banking Supervisors, 2011), concentration risk is well-defined as an exposure (s) that can lead to serious losses that involve financial problems or changes in the risk profile of an institution. In a more literal sense, concentration risk can be defined as the risk associated with any individual exposure or group of exposures, such as depositing clients and borrowers, with the likelihood of producing sufficient losses to threaten the central operations of a financial institution. The issue of deposit concentration risk is not only limited to the rural banking sector in Ghana but also to the commercial banks in Ghana. For instance, customer deposits, according to the Bank of Africa (BOA) Group's 2015 annual report, went up by 14.1 percent from GHS 548.2 million in 2014 to GHS 625.6 million in 2015. Again, the overall customer's deposits as at December 2016 was GH 679,980,171 compared to GH 743,278,000 for the period June 30, 2017. This clearly indicates that deposits have been increasing over the years by a significant percentage. Nevertheless, the success story is destabilized by an invisible challenge, so to speak, as just about 9 percent of the depositors from Bank of Africa, Ghana accounted for 52 percent of total deposits of June 30, 2017. The scenario is almost the same in most financial institutions in Ghana, with rural banks not being an exception. Apex Bank's EMU Report (2010) reveals that although rural banks have been able to increase their customer base from 2,493,004 in 2006 to 3,386,674 in 2010, they have not documented large deposits from many depositors to equal the numbers. This suggests, therefore, that few depositors credit large sums of money relative to a large number of customers. It is therefore of great importance to investigate the situation of deposit concentration risk as it can negatively impact Ghana's rural banks' performance in the long run. This survey observes the effect of deposit concentration risk on the operational performance of some rural banks in the Eastern Region of Ghana. It looks at the challenges arising from deposit risk as a result of large depositors making sudden and/or early withdrawals and how to mitigate it by way of making recommendations. The large deposits could pose a threat to rural banks' capital base across all of their branches; thus, an early withdrawal may perhaps be anything earlier than the account owner's realization of an arranged maturity of a fixed-term investment or simply a withdrawal of credit just after making deposits (Boohene et al., 2018).

According to the Basel Committee on Banking Supervision (2008), deposit concentration risk is one type of liquidity risk usually faced by financial institutions where a small number of depositors can make huge withdrawals at any given time. To put it another way, it refers to the risk of likely cash outflows from a financial institution brought on by changes in depositor behavior. Its component parts include run risk, rollover risk, and early withdrawal or redemption risk. According to the Birla Institute of Scientific Research, the achievement of significantly high growth in deposits, advances, branches, etc. has clearly shown the high quality of entrepreneurship and management of these banks. This suggests the expansion in deposits plays a significant role in the stability of financial institutions.

2. Review of the Literature

2.1 Empirical Review

A key feature of the new regulations is that the required liquidity depends not only on the type and maturity of bank financing but also on the type of depositors that a bank serves; banks with closer ties to depositors may have less liquidity. Related deposits are presumed to be a more stable source of financing (BIS, 2013). In order to give a more thorough analysis of retail deposit withdrawals from troubled banks, Iyer et al. (2013); Davenport & McDill (2006) use client-level administrative data. Davenport and McDill (2006) document that the outcome of deposit insurance on withdrawals is mainly due to commercial accounts as opposed to retail deposit accounts. Iyer et al. (2013) show that, in addition to deposit insurance, customer information about the bank can affect the withdrawal of money from a troubled bank.

According to a geographic mapping of sub-prime and Alt-A loans in the Phoenix metropolitan area (Gwinner & Saunders, 2008), sub-prime loans are heavily concentrated in lower to middle-income groups of the population (or small business owners who don't relish disclosing all of their income), newly constructed houses (many of them are refinancing), and especially in urban areas, according to a report by Gwinner & Saunders (2008). This example highlights the significance of monitoring concentration risk in bank credit portfolios because it can result from links between asset classes across sectors, geographies, income levels, and population groups, in addition to exposures to a single creditor or asset class. The losses are greater when multiple borrowers default at once. Lopez (2004) empirically derived asset correlations for portfolios of US, Japanese, and European enterprises using the structural model's structure. His paper illustrates that for relatively large organizations, the correlation of activities is high.

According to his explanation, the reason for this report derives from the fact that high-quality companies are more likely to be influenced by common macroeconomic conditions. Concentration risk's emergence is closely correlated with banks' emphasis on corporate strategy. International experience suggests concentration risk has a direct impact on a bank's portfolio loss and hence core capital and solvency position. Managing concentration risk entails reducing the effects of idiosyncratic risk brought on by significant exposure to certain systematic risk brought on by dependency on losses across loans.

According to Bandyopadhyay (2010), the majority of Indian banks have generated and are now holding loan exposures that are a function of their geography and industry orientation.

2.2 Theoretical Review

Forms of Deposit Risk

An early withdrawal risk of time deposits is a risk that a depositor will withdraw his deposit from an account before the agreed maturity date. It could occur when the corresponding option has been declared in a deposit agreement or determined by local laws. When an advance withdrawal is made, the depositor usually incurs a commission or early withdrawal penalty.

Depositors who refuse to roll over their matured time deposits run the danger of losing their money. It is connected to debt refinancing and is frequently encountered by nations and businesses when their existing debt is ready for maturity and must be rolled over into new debt.

They would have to refinance their loan at a higher rate and pay more interest moving forward if interest rates rose negatively.

The run risk of non-maturity deposits is the chance that a depositor will withdraw funds at any moment from their accounts. Therefore, a "run" risk combines the traits of a rollover risk and an early withdrawal risk.

For example, it happens when depositors anticipate that a bank will fail, Diamond et al. (1983). In this sense, if a financial institution is unable to take in fresh deposits in place of withdrawn ones, these risks could cause its liquidity to decline or even disappear. Wherein, the impossibility of the financial institution to refinance by borrowing in order to repay existing deposits is called a refinancing risk. Early withdrawal risk affects turnover risk by reducing the cash flows that will be repaid in the future. The risks of early withdrawal and turnover depend on a delay at the end of the deposits. The higher the degree of maturity, the higher the risk of early withdrawal and the lower the risk of turnover, and vice versa. The primary financial determinants of early withdrawal and carryover risk are the interest rates of the financial institution and its competitors; the maturity and age of the deposit; the creditworthiness of the financial institution; and the amount of deposit insurance.

Exposures to deposit risk Chronological experience shows that deposit concentration risk has been one of the major causes of bank distress. This is true for both specific banks and the entire banking sector. Concentrations of deposit exposure can put any financial institution's profits and capital at risk from unanticipated withdrawals. The notable exposures to deposit risk include:

i. The amount of balances in time deposit accounts, excluding deposits that will be reimbursed at this date, represents the exposure to early withdrawal risk on a given date.
ii. The total cash flows from deposits that will mature at a certain date represent the exposure to rollover risk at that time.
iii. The total of the balances in non-maturity deposit accounts at a given date represents the exposure to run the risk at that time.

Liquidity risk Rejda (2008) defines liquidity risk as the possibility for an institution to incur a loss due to its inability to meet obligations upon maturity. The International Monetary Fund (IMF) also defines financial liquidity as "the ability of a solvent institution to make payments in a timely manner" (IMF, 2012). Others, like Holmstrom and Tirole (1998), also indicate that liquidity risk arises as a result of revenues and outlays not being synchronised.

Financial institutions have two fundamental purposes: to provide liquidity (funds) and to provide other financial services. However, the role of financial intermediation by various financial institutions, including banks, threatens their liquidity (Basel Committee, 2008). Until recently, banks could not afford to take risks due to the regulated environment. Nonetheless, banks are now exposed to the same competition and, therefore, are forced to face discrete types of financial and non-financial risks. That is, in our current world of globalization, considering the recent changes in the banking environment, banks have been more exposed to risks since they have tried to improve the performance of shareholders and, as such, have also been forced to support measures to manage these risks to minimize losses. (Casu et al., 2006). Rejda (2008) sees risk management as "a mechanism that identifies exposures with losses to an organization and chooses the most applicable and appropriate techniques for the treatment of such exposures." The author also states that since the term "risk" is a bit vague and can mean many things, many risk experts use the term "exposure to loss" to identify potential losses.

Liquidity in the banking sector is very important since a financial institution must maintain adequate liquidity or other liquid assets to meet customer withdrawal requests and loan applications. (Casu et al., 2006). The

International Monetary Fund (IMF) views or defines financing liquidity as an institution's capacity to make timely payments under contractual agreements while being solvent. (IMF, 2008, p. 11). As also reiterated by Drehmann and Nikolaou (2013), liquidity funding could be seen as the ability of banks to meet their obligations with immediacy, so by indication, funding liquidity risk is the possibility that a bank becomes unable to settle its obligations with immediacy within a certain time frame. When linked to banking, liquidity can be seen as the capacity of banks to meet withdrawal claims of customers, the absence of which can lead to a run on the bank. A "run on the bank" occurs when depositors of the bank try to pull back or withdraw their deposits because they fear that the bank will no longer be able to meet their withdrawal requirements in the future. Such a position or situation could actually lead to the failure of the bank, as the bank's liquidity problems can now pose a threat to the operations of financial institutions.

3. Research Methodology

The study was conducted using a descriptive and exploratory research design. A research questionnaire was used to obtain data from respondents from the deposit-taking selected banks. The sample size for the study was 138 respondents from 10 rural banks. Purposive sampling is involved in identifying and selecting individuals or groups of individuals that are knowledgeable about or experienced with a phenomenon of interest.

Table 1: Number of Rural Banks in Ghana (Region-wise)

Region	Concentration
Ashanti	27
Eastern	24
Brong Ahafo	21
Central	20
Western	14
Volta	14
Northern	5
Greater Accra	7
Upper East	5
Upper West	4
Total	141

***Source*:** ARB Apex Bank, 2017

4. Data Analysis and Discussion

Table 2: Descriptive Statistics Summary of Banks

Groups	Count	Sum	Average	Variance
R.Bank 1	14	25	1.785714	0.181319
R.Bank 2	13	25	1.785714	0.335165
R.Bank 3	14	29	2.071429	0.071422
R.Bank 4	14	20	1.428571	0.263736
R.Bank 5	14	27	1.928571	0.071429
R.Bank 6	13	21	1.615385	0.25641
R.Bank 7	14	20	1.428571	0.263736
R.Bank 8	14	26	1.857143	0.131868
R.Bank 9	14	25	1.785714	0.181319
R.Bank 10	14	24	1.714286	0.21978

Source: Field Data

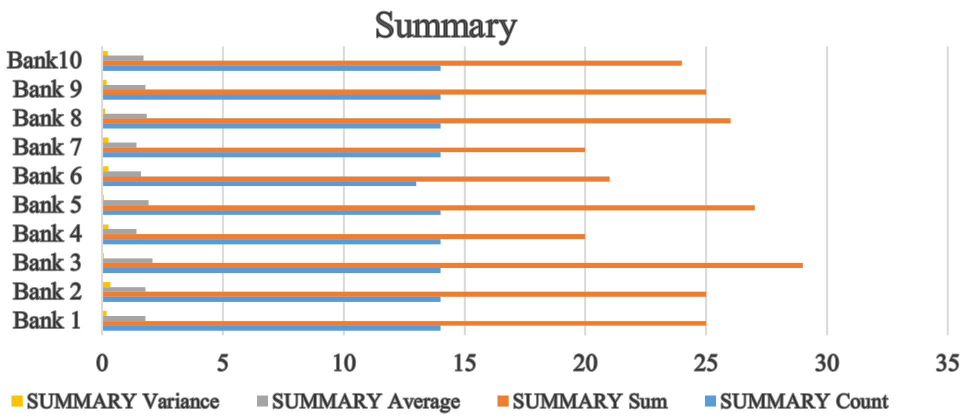

Figure 1: Summary

To determine the deposit concentration risk in selected Financial Institutions as per this study an analysis of variance was used to ascertain the findings. The results of the computed F value indicated high deposit concentration risk exits in the selected Financial Institutions. Thus, this is confirmed by the F value computed at 5 percent level of significance. Therefore, theoretically as per this study it is inferred that there is a high deposit concentration risk in most of the rural banks selected for the study.

Table 2: ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	5.242193	9	0.582466	2.954231	0.003182	1.953182
Within Groups	25.43407	129	0.197163			
Total	30.67626	138				

Source: Field Data 2019

Table 2 indicates the extent to which the evidence support the existence of a high deposit concentration risk in the ten selected rural banks under study. Thus, given a scale of 1 to 3 where 1 represents low deposit concentration risk, 2 represents moderate deposit concentration risk and 3 represents high concentration risk it came to light per the analysis that there is a high deposit concentration risk amongst the ten (10) selected rural banks with Bank 3 having the highest mean value of (2.071429) and the lowest variance of (0.071422). The high deposit concentration risk is further confirmed by the F value computed the significance of R2 at 5 percent level of significance. The model was found fit on significance (0.000) which is less than (0.05) level of significance. Therefore, theoretically as per this study it is inferred that there is a high deposit concentration risk in most of the rural banks selected for the study.

Table 3: Test Statistics

	Low interest rate on investment	**BoG recapitaliz-ation policy**	**Reduction in customer confidence in rural banking**	**Poor treasury management by directors**	**Poor saving attitude among rural dwellers**	**Ripple effect of ineffective corporate governance**
Chi-Square	152.145[a]	110.913[b]	195.551[b]	127.362[b]	297.797[b]	113.232[b]
Df	3	4	4	4	4	4
Asymp Sig.	.000	.000	.000	.000	.000	.000
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 34.5.						
b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 27.6.						

Table 3 shows the Chi-Square test statistic for the six variables ranked as factors causing deposit concentration risk in the rural banks as per this study. From the study, it was realized that the Chi-Square test statistic for all six factors was all significant at, X^2, p= 0.00; $p < 0.05$.

Table 4: Mean Rank of Factors Associated with Deposit Concentration Risk

Variables	Mean Rank
BoG recapitalization policy	3.52
Reduction in customer confidence in rural banking	3.72
Poor treasury management by directors	2.75
Poor saving attitude among rural dwellers	3.59
Ripple effect of ineffective corporate governance	2.57
Low interest rate on investment	4.85

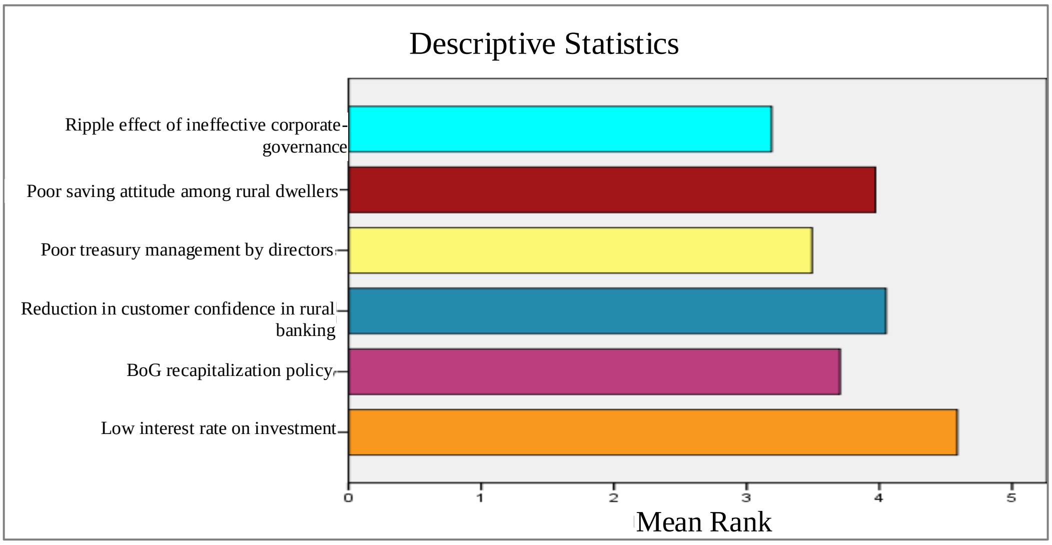

Table 4 ranks the perceived factors associated with deposit concentration risk in the selected rural banks. From the table, it's indicated that low interest rate on investment followed closely by reduction in customer confidence in rural banking are the main factors behind the deposit concentration risk experience in the selected rural banks. This is seen from their high mean value of (4.85) and (3.72) respectively. The least ranked among the six factors causing deposit concentration risk was ripple effect of ineffective corporate governance with corresponding mean value of 2.57.

5. Conclusion

From the findings on the objectives of the study, it can be concluded that there is a high deposit concentration risk in most of the rural banks selected for the study as confirmed by the F value computed at 5 percent level of significance. Also, it is observed that deposit concentration risk is a contributor to the operational performance of the selected rural banks. That is a high deposit concentration risk is likely to lead to a low operational performance and a low deposit concentration risk is likely to lead to a high operational performance as low deposit concentration risk implies funding liquidity on the part of the rural banks. Thus, the study indicated that low interest rate on investment followed closely by reduction in customer confidence in rural banking are the main factors behind the deposit concentration risk experience in the selected rural banks. On the other hand, the least ranked among the six factors causing deposit concentration risk was a ripple effect of ineffective corporate governance.

6. Recommendation

The study proposes monitoring of deposits made by clients so as to counter pro deposit concentration risk situations. Also, large depositors should be oriented on the effects of sudden withdrawals so as to reduce risk liquidity risks. Again, to ensure continuous unswerving cash flow as a measure against deposit concentration risk, financial institutions should seek new business initiatives that can generate lasting stable revenues.

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Services Marketing Challenges for 2022 and Onwards — New Normal Dynamics

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Abstract

It is known across the world that Marketing of everything marketable has undergone drastic and dramatic changes with humanity trying to come to terms with Covid-19 pandemic and figuring out the ways and means to handle the new normal which itself gets redefined differently in different parts of the world since the beginning of 2020, fluctuating in 2021, with some hope in 2022, although it is not yet over. Every industry worth its name, fame, and geographical spread in any part of the world has directly or indirectly got affected significantly, if not permanently just as every customer or consumer has got equally affected. Human resources are the mainstay behind any industry worth its salt, and especially in the services sector, the role of human resources is paramount, howsoever automated all processes of services might have become or may become in the future. It is this very human resource associated with services marketing that got jolted due to Covid-19 induced protocols wherever he or she was performing his or her role as a marketer. Similarly, the consumers of all types of services also realized that consumption of the same services will always have an added dimension of precaution, safety, and health due to the human touch involved at many stages of the service experience. Although the Covid-19 downward slide continued in 2021, different variants of the virus kept on surfacing and instead of freeing the world, mutated and spread in the later part of 2021 in different parts of the world showing no signs of any retreat in 2022. It has resulted in everyone having a cautious life, but the fear factor across the world related to any infection which might come on account of touching, feeling, smelling, walking, etc. anywhere is literally overpowering. This services marketing challenge is the area that this paper tries to explore qualitatively pointing out the directions where service marketers have to focus due to perceived and real safety concerns of the users/consumers of services.

Keywords

Services, Marketing, Customers, Consumers, New normal, Physical touch, Online, Offline, and Booking.

1. Introduction

Services in general and their marketing, in particular, appear easy to handle but are very challenging. Moreover with new services making prominence since the beginning of the 21st century, a completely different dimension to the whole concept has emerged. Along with it has got added the post-Covid-19 precautionary elements to be taken care off by marketers involved with services as well as consumers using services where face-to-face interaction or involvement is not always avoidable.

2. Review of the Literature

The area of study is very recent and not many publications were expected in the same. However, certain publications suggest similar interventions could be located.

(Lee & Han, 2021) goes into providing insights and stimulating new thinking about the changing nature of services and marketing, service work and workers, and service experiences during and after the Covid-19 pandemic in 2020, particularly focusing on services marketing. The book serves as a useful resource for business practitioners and academics in the areas of service management and marketing responses during a pandemic. Each chapter deals with specific current issues within these industries due to Covid-19 and issues that will come up post-pandemic. As Covid-19 is expected to change the service practice and promote the utilization of novel methods, such as untact marketing, untact service, telecommuting, alternative work arrangements, job crafting, and new work skills, a range of examples and cases are provided to elaborate on applying these emerging new concepts within the service sector. Here the word 'untact' is Korean English word similar in meaning to 'non-contact'.

(Prakash, Prakash, Moidin, & Devadiga, 2021) explained this pandemic period as a lot of pain in the form of impacting the financial prosperity of marketers as well as general public who are consumers. Certain businesses have endured confronted misfortunes with some compelled to close down for time being or forever. This effect has made a domino impact on the salaried class as some of them have either lost their positions or are paid lesser or no compensation for time being. With this being the situation, the enormous detonation effect of affiliate marketing becomes an integral factor.

As per the book by (G., Lazar, Ramesh, & Joseph, 2010), Consumers are able to adapt to changed situations depending upon the impact of change. In the case of Covid-19 induced new normal, the change is phenomenal and it will be there for a long run. Schiffman Leon G., Wisenblit Joseph., Kumar S. Ramesh., Consumer Behavior, Indian Subsequent Adaptation of 11e, Pearson Education 2016 has further endorsed this point.

(Philip, Kevin, Abraham, & Mithileshwar, 2013) have articulated that Marketing Management fundamentals may remain unchanged but applications vary across geographies. It definitely makes the services marketing very much subjective and Covid-19 will be a big reason for services and their consumers to change for long times. In the 15th edition of the book has been endorsed further.

(R, C., & L., 2014) have mentioned that the services marketing become challenging in the international context and it requires an understanding of deep cultural variations to make it happen.

(E., A., & Keyoor, 2013) have explained very clearly through texts and cases that services also require holistic and composite marketing communications to make themselves clear and advertising alone will not do. It has got further strengthened in the latest 12th edition of the book by Belch George E., Belch Michael.

(S. & S., 2018) have highlighted that Indian organizations have improved themselves in their service orientation in 21st century. Moreover, this approach will come in handy to them in the post-Covid-19 world order.

3. Research Methodology

The author decided to go for data collection of young adults who are presumably aware of almost all the services and their related developments in the recent past. These were his MBA students of the Class of 2019-21 and the Class of 2020-22. A Google doc questionnaire was created and circulated among students to elicit responses to specific objective questions pertaining to the above topic. There is a clear logic for selecting these students as respondents by the author. They all are adults, have started working or will soon start working or running their enterprises, and will have their own money to spend on various services from time to time, besides having all the knowledge of how businesses are run and operated across the world and what life means in the new normal due to Covid-19. The administered questionnaire is given in the Annexure.

4. Discussion

The services affected, as perceived by the author are as follows:

4.1 Physical Retailing

Technological advancements in physical retailing notwithstanding, the role of real one-on-one interaction between the customer and store person does take place at times even though labels on the product/s explain everything. It is that human nature of inquiry which gets manifested in many customers in a store to ask things that they feel like asking. It is more pronounced in kirana stores, also called as mom and pop stores which are the nearest and most conveniently accessible oldest retail formats available to anyone and everyone. Moreover, some products require certain demonstrations at the store also, before the buying decision. In certain cases where garments are retailed, the whole process of store person guided trying of the garment through the trial room and then taking a decision is the norm with almost all customers. No customer wants to buy a garment without trial and then come back for an alteration, howsoever close the store is to him or her. It adds a new dimension to technology-based products like gadgets, mobile phones, tablets, laptops, etc. It also goes with consumer durables like kitchen appliances, dishwashers, washing machines, etc. The packaging and other support material provided with such technology products carry complete guiding material on its usage, but as every customer is not techno-savvy, questions and queries in real-time at the store cannot be completely ruled out. Even if the customer is techno-savvy, certain questions always come from him/her as technology keeps on changing. When the customer finally reaches the billing counter in any organized retail format, some basic human interaction does take place, although technology in billing and payments processing is very profound. These examples are not exhaustive but just indicative of the role of human interaction in physical retailing.

4.2 Restaurants

Everyone who frequents a restaurant of whatever offering and size realize the importance of human interaction. One can cite the example of home delivery by restaurants after the Covid-19 lockdown to avoid infections and the spread of the virus. Even at such times, minimal human interaction was required. Restaurants have also been using takeaways like a drive-through, wherein one can reach a window, place an order, pay in advance wait for a fixed time, move over to the next window, collect his/her food parcel and move out, all done without coming out of his/her car. This appears cool, but some human interaction cannot be avoided even in such formats. Again, at the time of payment, some human interaction is unavoidable. Even in full-service restaurants where one may find robots taking orders and serving food may be having some minimal human interaction from entering till leaving the restaurant. In such scenarios, the new normal due to Covid-19 will continue to pose challenges to all stakeholders running the restaurants including the customers.

4.3 Air Travel

Air Travel providers are ensuring all precautions in the wake of Covid-19 induced requirements ever since it got resumed in a phased manner after the lockdown on domestic as well as international flights. This is a sector, wherein one cannot completely avoid human interaction right from arriving at the departure airport till landing and coming out of the arrival airport. Whether it is entering the airport, luggage security check, getting a boarding pass (if not done online), luggage booking, personal security check, waiting for boarding, boarding, in-flight journey time, arriving, till one is out of the airport, at every stage, some or the other human interaction is unavoidable. It is a big operational and marketing challenge for aviation companies to ensure the safety of their own employees as well as travelers who have their own anxieties in this world defined by the new normal. All said and done, if the aircraft is packed to capacity, a social distancing between seated passengers is impossible, although all are masked and the middle passenger of the three in a row may be having a PPE (Personal Protection Equipment) kit depending upon the situation.

4.4 Rail Travel

In India, rail travel is the largest long-distance travel mode for all classes ever since it has begun inspite of other travel modes coming up from time to time and expanding since Indian independence in 1947. One can assume similar developments in other countries. Moreover, the concept of the whole family coming to the railway station up till the coach to see off the departing family members imparts a very different family touch to the whole train travelling experience. All this has got completely changed forever in the new normal defined by Covid-19. With controlled and restricted movements at the railway stations, and Standard Operating Procedures (SOPs) related to the health and safety of passengers as well as railway staff applicable across railway properties including stationed as well as moving trains, it is almost similar to the restricted activities at the airport. Even after all these changes in rail travel due to Covid-19, minimal human touch and interaction do take place at times. Majority of the train passengers are not doing anything online related to their travel even though the number of online transactions by a good number of passengers related to train travel has increased a lot. Apart from that, trains have always been the main long-distance travel mode for people belonging to middle class as well as the lower class in India. Within these classes, a big number travels without reservation, for short distances for daily work, and that too in general compartments. In these general compartments, Covid-19 protocols related to human interaction are very difficult to implement, if not impossible. Even in reserved class coaches across all classes of train travel, some human interaction between passengers, as well as passengers and attendants, railway checking staff, and other staff are unavoidable. Moreover, in long-distance journeys, consumption of food and refreshment, provided by the pantry car or carried by the passengers or purchased from intermittent railway stations require some minimal human interaction between people. Although, railways are run by Central Government in India and is having no competition as such, but still marketing activities from time to time with respect to their usage, presence as the oldest long-distance transportation, and last mile penetration across the country do take place and all this has got impacted from 2020 which will never be the same again.

4.5 Taxi Services

It is obvious to everyone across India that private taxi services for short as well as long-distances have boomed phenomenally since 2000 onwards and it has coincided well with a massive improvement in National and state highways besides other roads connecting cities and towns as well as roads within cities and towns. Now, in this sector, some minimal human interaction is required and even Covid-19 appropriate behavior is very challenging at times. Moreover, when due to the rush for tickets on flights or waiting lists on trains for long-distance journeys, people decide to proceed with private taxis, if the journey is unavoidable and time management is possible. All these factors have brought lots of small, medium, and large taxi service providers and their taxis on the roads 24×7, 365 days a year. Owners of such taxi services have to face and continue to face challenges in running their show as Covid-19 has not gone away completely although it is showing some signs of winding up by the end of 2022, about which no one is sure.

4.6 Movie Theatres

Movie Theatres, commonly called as Cinema Halls have undergone a transition from just a single-screen movie watching place into a complete outing destinations under one air-conditioned roof in almost all major cities of India. It is observed since the onset of 21st century that if one has to chill out for the whole day in the form of a picnic, many are opting for multiplexes, which house gaming zones, eateries, shops, beauty parlors, and many other services over and above at least 2 screen separate cinema halls with completely comfortable and reclining chairs and there too, the refreshments are available on order at the place of the viewing, and one need not come out till the movie gets over, except for the washroom. Urban Indians across metros, state capitals, and many tiers 2 cities have become used to this comfortable life even if it requires shelling out more money as compared to earlier times. This entire customer experience requires multiple human interactions at the time of visit, viewing the film, as well as having and consuming refreshments while viewing. Marketers of multiplexes suffered a lot during the Covid-19 surge in early 2020 during the lockdown as well as when unlock started from June 1, 2020, onwards as these were allowed to open vary lately and that too with restrictions of 50 percent occupancy, social distancing with sanitization restrictions in place, which brought down their revenues to almost half even though cost controls could not go beyond a point. Moreover, with almost negligible film releases during the entire 2020 very less releases in 2021, and the scenario not very promising in 2022 from the perspective of new Covid-19 variants emerging regularly has not removed fears among regular multiplex goers. Stable viewership did not go up the way it should have gone even in 2021 and the second half of 2022 did improve slightly with respect to footfalls, and new movie releases. The infections are happening less in numbers and people getting cured and recovering is also on the rise. In a renewed bid to fight this scare after the scary April-May 2021 phase, precautionary measures in the form of operational restrictions on various services including multiplex-based movie halls have relaxed but it is a constant challenge to multiplex players. Multiplex marketers are doing their best to cooperate with the authorities while running their businesses. However, everyone is hoping and praying that this pandemic becomes history.

4.7 Hospitals

In India, this field of specialized service remained more or less with the government in the form of government hospitals, clinics, and health centers till almost the early 1980s. In India, marketing of private hospital services or corporate hospitals has picked up significantly and the credit for the same to some extent goes to Apollo Hospitals. With its inception in Chennai in 1983 as the first Apollo Hospital, India decisively moved into private hospital or private healthcare as an industry in itself. Prior to that, private healthcare or private hospitals word literally did not exist or existed at the most in the form of a pathology lab, or a very small hospital owned by a doctor as an extension of his or her residence catering to some loyal patients of nearby towns or villages. In the 21st century, private healthcare in any form or format, right from a small pathology lab, or clinic, a small hospital, and going up to a big corporate hospital has become the order of the day and all such entities are constantly playing a big role in making India healthier and safer every day. In the worst case scenario during Covid-19 pandemic throughout 2020, 2021 as well as some periods 2022, these private health-care units and their teams of doctors, nurses, and para-medical staff through their 24x7 services including well-equipped mobile hospitals cum vans, played a stellar role in saving a lot of lives across India, which they always do. They did a stellar job during the worst case scenario in early 2021 and are doing the same in 2022, even at the cost of risk to their own health, and some 'health warriors' as they were and are respectfully known have even sacrificed their lives while saving others. Default marketing happened during the Covid-19 crisis across India when a helpless citizenry looking for survival and prompt healthcare was rushing to hospitals and clinics, and the demand for healthcare services overwhelmed the supply. Apart from that, calls received by Government emergency healthcare service providers through respective municipal and other bodies across the country were promptly responded round the clock in the form of patients being picked up from their residences and proceeding for treatment at the nearby health-care center. Complete set up of government and private emergency and healthcare providers were coordinated by a common agency for seamless and quick service to patients as timely help and treatment were found to be crucial in making people recover from the deadly Covid-19 virus. For the first time in the history of our country, gymnasiums, stadiums, and other public recreational areas were converted into temporary hospitals as there was a crisis that had no historical data and research to take guidance from. Inspite of all these stellar performances, due to demand far exceeding the supply of medical care, many lives were lost and those who recovered from Covid-19 got other ailments which proved fatal in many cases. This went on in 2020, and 2021, showing some hope for 2022. Human resources working under this area did not require to do any marketing of their services as it was unimaginable during that time and we all wish that in 2022, the situation comes under complete control. This service requires maximum human interaction and human touch is unavoidable. In order to make it work as well as to ensure the safety of all, PPE (Personal Protection Equipment) kits literally became a dress covering Corona warriors from head to toe while discharging their duty round the clock. It will remain like this for them till Covid-19 becomes history and nobody knows when it happens.

4.8 Hotels

In the head of Hotels, we may consider service organizations like restaurants, hotels without lodging as well as hotels with lodging facilities of all levels and sizes across the country. This industry took a big hit due to Covid-19 during the lockdown, after that lockdown, and kept on struggling in 2021 with various relaxations and restrictions from time to time, a scenario which has significantly improved in 2022. With the Omicron variant of Covid-19 reported for the first time from South Africa on November 24, 2021, and spreading across the world like a super contagion, a resurgence in infections and cases along with recoveries of patients, restrictions in the times of opening, running, and handling their customers is very difficult for all categories of hotels. Marketing has proved to be very challenging for them and the challenge is only growing with time. This is an industry which requires some or the other human interaction even if certain things like pre-booking interactions, bookings, payments, etc. can be done online. These were completely shut down during lockdown, and even when unlock happened, because of the strong human interaction factor in this service, opening them up happened cautiously. Even after opening up, people were not sure whether to go for bookings in them as part of travel or eating out the fear of infection has not gone completely since March 2020 from the human psyche. The success of this industry requires people to come out, visit hotel properties, use these for lodging and/or boarding purposes for a particular period and leave them. This very nature of hotels made these the target of most controlled and restricted operations ever since Covid-19 started to spread since March 2020 and these operations are still under various degrees of control and restrictions across the country depending upon the severity of infections. Each and every human resource in this industry as well as other human resources forming a part of the industry depending on hotels has had a very challenging task in promoting themselves since March 2020, and they still do not know where and how will it go. With the renewed attack of the Covid-19 in the form of different variants in 2021, the challenge of running hotels of all dimensions is bigger in 2022 and beyond. Hotels with decent boarding arrangements may be taken over by civil administration whenever the cases increase and converted into makeshift Covid-19 hospitals in order to meet the rush of new infectious cases, in case the situation warrants. Even completely vaccinated people are getting infected by new Covid-9 variants and no health authority is confidently claiming any good and hopeful future soon.

4.9 Salons

Also known as parlors, beauty clinics, and may be some other names, these partial or full makeover points dot the markets of all the cities, big or small across the country. Marketing these were never a problem as loyal customers, male as well as females in the vicinity of their houses regularly visit them for some service or the other. These points have to just keep on providing decent haircuts, facials, waxing, etc. as required by the customer. That itself provided word-of-mouth advertising to these outlets which made and makes them grow continuously. However, Covid-19 pandemic affected them the most. In fact, during the lockdown, these outlets were completely shut, and even during the post-lockdown period, differently applicable restrictions from time to time have taken a big toll on them and still their operations are very curtailed as part of the restrictions. The fundamental working premise of these organizations requires a trained employee to provide the service to the visitor/customer requiring physical touch and feeling from the beginning to the end of the service to the satisfaction of the visitor/customer. Standard operating procedures (SOPs) related to Covid-19 appropriate behavior made almost all activities of salons very curtailed and salon marketers struggled at different points of time and are still struggling due to a constant fear of restrictions, with some hope in 2022 and further.

4.10 Spas

Although, this category of service providers could have been considered along with salons, in the last decade spas have become very diverse and have created an identity of their own that is distinct from that of salons. Various types of massages are offered in these spas catering to the rejuvenation of human bodies by distressing them and these massages are offered as packages of various forms and formats. Trained masseurs from within India, as well as from abroad, male and female, provide various massages as per the requirement of customers looking forward to different ways of distressing and rejuvenation. The very concept of physical touch of the customer/s body by the masseur for providing massage of any type makes this service very challenging in the times of Covid-19 and that is why this industry suffered and continues to suffer in the ongoing Covid-19 crisis across the world and even in India. Although in 2022, it has regained with massage parlor traffic increasing.

4.11 Education

This service which takes every human being from a child till he or she reaches adulthood and even after that in some cases has experienced major upheaval during Covid-19 crisis since the start of 2020 throughout 2021, with a lot of uncertainty in early 2022, but good recovery after that. Primary education, Secondary education, Higher-Secondary education as well as Higher education, all have got affected across the country since March 2020 in the form of online activities incorporating teaching, assignments, and internal as well as external examinations, and initially, it appeared uncertain when these all activities would come back to the real and original physical form which meant real education. Apart from that, this online education was inaccessible to a large majority of poor children as smart electronic devices in the form of smart phones, laptops, tablets, desktop computers with cameras, etc. cannot be accessed by this section of society. Among all the affected areas of human activity due to Covid-19, this was and is very serious as it concerns making our valuable human resources ready for taking big responsibilities for a more challenging future. Special concern is for the children who had to start their education from lower Kinder Garten (KG), but could not do so and had to begin with online classes. Every student of all levels has missed out a very important part of their campus life but the foundation of education at the KG level is the most unfortunate miss for a lot of children. Apart from this, online education since March 2020 was having a strong but bad potential of unwelcome diseases among students of all types as everyone knows the harm of sitting for at least five hours daily in front of an electronic device to learn, face evaluations, undergo examinations, get results, and even getting degrees awarded in online convocations It had been very frustrating from a psychological angle for both the teachers as well as students, as almost everything was happening in this field except physical and live interaction. In between, some or the other forms of offline did take place, but it got obstructed as and when infections started increasing and this disrupted the entire flow of education. However, things have improved considerably in the second half of 2022, with offline education everywhere and every stakeholder earnestly hopes that it remains like this.

5. Data Analysis

The responses collected on the basis of the Google doc based questionnaire are as follows:

Table 1: In the New Normal Defined by Covid-19 Pandemic, Following Services Got Affected (in terms of number of responses)

Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Blank	Total
Physical Retailing	6	7	8	116	34	0	171
Restaurants	8	6	28	85	44	0	171
Air Travel	4	14	32	67	53	1	171
Rail Travel	7	20	35	79	30	0	171
Taxi Services	3	22	40	73	32	1	171
Movie Theatres	4	8	12	60	87	0	171
Hospitals	27	40	35	42	27	0	171
Hotels	4	11	25	81	49	1	171
Salons	5	17	38	69	42	0	171
Spas	4	13	32	72	49	1	171
Education	9	15	26	62	59	0	171

Table 2: Affect on Marketing of Following Services (in terms of percentage)

Response Percentages	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Blank	Total
Physical Retailing	3.5%	4.1%	4.7%	67.8%	19.9%	0.0%	100.0%
Restaurants	4.7%	3.5%	16.4%	49.7%	25.7%	0.0%	100.0%
Air Travel	2.3%	8.2%	18.7%	39.2%	31.0%	0.6%	100.0%
Rail Travel	4.1%	11.7%	20.5%	46.2%	17.5%	0.0%	100.0%
Taxi Services	1.8%	12.9%	23.4%	42.7%	18.7%	0.6%	100.0%

Response Percentages	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Blank	Total
Movie Theatres	2.3%	4.7%	7.0%	35.1%	50.9%	0.0%	100.0%
Hospitals	15.8%	23.4%	20.5%	24.6%	15.8%	0.0%	100.0%
Hotels	2.3%	6.4%	14.6%	47.4%	28.7%	0.6%	100.0%
Salons	2.9%	9.9%	22.2%	40.4%	24.6%	0.0%	100.0%
Spas	2.3%	7.6%	18.7%	42.1%	28.7%	0.6%	100.0%
Education	5.3%	8.8%	15.2%	36.3%	34.5%	0.0%	100.0%

Table 3: Which of the Aspects of the Marketing of the Following are going to Change Due to Covid-19? (number of responses)

Responses	Core Service	Packaging	Delivery	Promo tion	All of the Above	2 of the Above (not specified)	3 of the above (not specified)	None of the Above	Blank	Total
Physical Retailing	12	7	18	11	80	27	13	2	1	171
Restaurants	29	11	19	6	57	26	19	3	1	171
Air Travel	59	4	11	13	43	22	12	7	0	171
Rail Travel	59	9	10	13	45	19	5	10	1	171
Taxi Services	55	1	16	13	37	24	8	15	2	171
Movie Theatres	55	4	11	17	52	16	7	9	0	171
Hospitals	47	2	6	9	42	26	7	32	0	171
Hotels	44	6	7	12	53	25	15	8	1	171
Salons	53	5	9	11	42	29	8	13	1	171
Spas	58	2	11	9	48	18	11	13	1	171
Education	39	6	15	13	54	20	10	14	0	171

Table 4: Which of the Aspects of the Marketing of the Following are Going to Change due to Covid-19? (in terms of Percentage)

	Core Service	Packaging	Delivery	Promotion	All of the Above	2 of the Above (not specified)	3 of the above (not specified)	None of the Above	Blank	Total
Physical Retailing	7.0%	4.1%	10.5%	6.4%	46.8%	15.8%	7.6%	1.2%	0.6%	100.0%
Restaurants	17%	6%	11%	4%	33%	15%	11%	2%	1%	100.0%
Air Travel	35%	2%	6%	8%	25%	13%	7%	4%	0%	100.0%
Rail Travel	35%	5%	6%	8%	26%	11%	3%	6%	1%	100.0%
Taxi Services	32%	1%	9%	8%	22%	14%	5%	9%	1%	100.0%
Movie Theatres	32%	2%	6%	10%	30%	9%	4%	5%	0%	100.0%
Hospitals	27%	1%	4%	5%	25%	15%	4%	19%	0%	100.0%
Hotels	26%	4%	4%	7%	31%	15%	9%	5%	1%	100.0%
Salons	31%	3%	5%	6%	25%	17%	5%	8%	1%	100.0%
Spas	34%	1%	6%	5%	28%	11%	6%	8%	1%	100.0%
Education	23%	4%	9%	8%	32%	12%	6%	8%	0%	100.0%

5. Findings

Certain services are going to face more challenges in their marketing efforts as compared to others. The inferences which can be drawn from the above simple percentage analysis are as follows:

1. Physical retailing as well as restaurants and hotels in physical format have maximum marketing challenges as compared to other services.
2. Air Travel, Rail Travel, Taxi Services, Salons, and Spas also have considerable challenges vis-à-vis marketing themselves for long times to come.
3. Movie theatres, hospitals, and education also have challenges in marketing, but not that stiff as compared to other services according to the study.
4. The percentage analysis hints that all aspects of marketing like Core Service, Packaging, Delivery, as well as Promotional aspects will never be the same again from the perspective of the consumers, and service providers need to track these regularly and apply insights generated from such studies while modifying and applying their marketing strategies on a continuous basis.

6. Limitations of the Study

1. It is qualitative hinting at possible trends which require further empirical research for clear conclusions.
2. The sample size is only of students, some of whom have recently started earning money and some will start the same after completion of their MBAs thereby not representing a generalized market profile.
3. The responses from the sample respondents could have been biased as is the case with every primary study.
4. All services are not considered in the study.
5. The literature considered for review is not exhaustive as it was not much available.

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8. Annexure

Questionnaire:

Express your objective opinion on the following statements

In the new normal defined by the Covid-19 pandemic, the marketing of the following services will certainly get affected

1. Physical Retailing
    a. Strongly disagree
    b. Disagree
    c. Can’t say anything
    d. Agree
    e. Strongly agree
2. Restaurants
    a. Strongly disagree
    b. Disagree
    c. Can’t say anything
    d. Agree
    e. Strongly agree
3. Air Travel
    a. Strongly disagree
    b. Disagree
    c. Can’t say anything
    d. Agree
    e. Strongly agree
4. Rail Travel
    a. Strongly disagree
    b. Disagree
    c. Can’t say anything
    d. Agree
    e. Strongly agree
5. Taxi Services
    a. Strongly disagree
    b. Disagree
    c. Can’t say anything

   d. Agree
   e. Strongly agree
6. Movie Theatres
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree
7. Hospitals
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree
8. Hotels
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree
9. Salons
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree
10. Spas
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree
11. Education
   a. Strongly disagree
   b. Disagree
   c. Can't say anything
   d. Agree
   e. Strongly agree

Which of the aspects of the Marketing of the following services are going to change due to Covid-19?

1. Physical Retailing
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
2. Restaurants
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
3. Air Travel
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
4. Rail Travel
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above

5. Taxi Services
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
6. Movie Theatres
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
7. Hospitals
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
8. Hotels
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above

9. Salons
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
10. Spas
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above
11. Education
    a. Core service
    b. Packaging
    c. Delivery
    d. Promotion
    e. All of the above
    f. 2 of the above(specify)
    g. 3 of the above(specify)
    h. None of the above.

An Assessment of Some Ethical Challenges to Employee Privacy and Consumer Privacy in the Business World

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Abstract

Privacy is essential to individuals as it gives them space to be themselves without judgement and discrimination. Employers collect information about employees, and ethical issues arise while handling their records, even though there are instances when it is justified. However, employers are responsible for maintaining employee privacy to ensure credibility and improve employee performance. The increased use of the Internet and the boom of big data analytics have raised concerns regarding employee privacy. Internet users, especially consumers, state that they value privacy but obtain much material gain in exchange for sharing personal information. We assess the contentious issues that arise in these areas to argue that protecting privacy is a moral imperative and requires ethical sensitivity and support of the legislation. For this purpose, we delve into ethical approaches and the principles of protecting online privacy. We come to the view that protecting privacy in the workplace requires a coordinated moral solution between many parties.

Keywords

Privacy, Employer-employee relationship, Employee privacy, Utilitarianism, Kantianism, Consumer privacy, and Big Data analysis.

1. Introduction

Privacy is a right to be left alone. It is essential for autonomy and the protection of human dignity. It serves as the foundation upon which many other human rights are built. Privacy enables us to create barriers and manage boundaries to protect ourselves from unwarranted interference in our lives, thus allowing us to have control over ourselves. Privacy helps us to establish boundaries to limit who has access to our minds, bodies, places and things, as well as our communications and information. As employees desire privacy, but the mere fact that they have this desire does not make it valid to have a right. Both employers and employees have reasons to share information in the workplace, but contentious issues arise in practical situations. There are challenges in maintaining a balance between employer's requirements and expectations and employee privacy. We suggest the application of moral arguments to overcome these challenges that can be classified into two categories to establish the value of privacy. One type of utilitarian argument appeals to consequences, and the second type is a Kantian argument that links privacy to being a person or having respect for persons. In continuation, we examine contentious issues regarding consumer privacy, mainly in the context of big data in the business world. Finally, we refer to specific principles of protecting online privacy to arrive at concluding remarks.

2. Privacy in the Workplace

Employers claim they are forced to monitor employees due to changing work nature (North, 1977, pp. 717-719). For example, the systems for executing financial transactions and transferring funds used by banks and securities firms have great potential for misuse and costly errors. As employers administer insurance plans and provide on-site health care, they are in a position to know about employees' medical conditions. Employers are increasingly concerned about the use of drugs by workers and the high cost of employee theft, including the stealing of trade secrets. Employers also claim to provide a safe workplace in which employees are free from the risk of being injured by intoxicated co-workers (Preston, 1998, pp. 12-18). Employers require tremendous amounts of important information for the hiring and placement of workers evaluating their performances. They also monitor "off-the-clock" activity to ensure their actions do not negatively influence them. Employee privacy concerns are regarding the information the employer may possess and how it is used. Whether the possession of such personal information is legitimate depends on the relationship between an employee and an employer. The core of this relationship is that employees are agents of their employer.

2.1 Justifying Monitoring of Employees

Employers argue that personal behaviour, even when it takes place away from work, can indirectly impact the ability of an employee to perform well on the job. They are concerned about the use of drugs by workers and randomly test for drug use to provide a safe workplace. Drug use occurrences away from the workplace during the employee's time still affects work performance and the workplace environment. Testing for drug use benefits not only the company but all employees.

The second argument is that what an employee does in her spare time can substantially increase the costs of doing business. The cost of providing insurance coverage has prompted some companies to take a more active role in monitoring the personal activities of their employees. Employee wellness programs are a popular tool for helping companies to reduce the cost of providing health insurance by encouraging employees to lead healthier lives.

2.2 Privacy of Employee Records

Some of the issues that arise are related to the kind of information that is collected, the use to which the information is put, the persons within a company who have access to the report, the disclosure of the information to persons outside the company to gain the information, the steps taken to ensure the accuracy and completeness of the information, the access that employees have to information about themselves.

It is essential to justify a purpose to determine the exact scope of the right of privacy in employment (OpenStax, 2018). Although there is room for disagreement, it is essential to judge whether any given purpose is legitimate for a business, whether a certain kind of information is necessary for a business, and whether the information is being used for the intended purpose (Federal Trade Commission, 2020). For example, employers share the content of personnel files with lending agencies, subsequent employers, and other inquiring persons without the employees' consent. Even when there is a legitimate purpose that would justify these outsiders having the information, it can be argued that an employer has no right to provide it because the employer is justified in collecting and using information only for purposes connected with the employer-employee relationship. Use of certain means may violate an employee's right to privacy, even when the information gathered is of a kind that an employer is fully justified in possessing. Examples of impermissible means are polygraph testing and informal interviews. A major consideration in evaluating the means used to gather information is whether less intrusive means are available. In general, less intrusive means are morally preferable to those that are more intrusive. Since the information collected is going to affect significant personnel decisions such as hiring and firing, it is only fair that the information is as accurate and complete as possible and that employees have access to their personnel files so that they can challenge the contents or at least seek to protect themselves from adverse treatment based on the information in them. This can be viewed from the utilitarian calculation of benefit and harm and from the Kantian spirit of treating employees as ends rather than means. They are autonomous, rational and dignified human beings and hence should not be harmed and manipulated.

3. Utilitarian Arguments for Valuing Privacy

Mill argues for the maximization of individuals' happiness simply because individuals are capable of rationally calculating the happiness of all human beings, especially the concerned individuals in a situation in an impartial and objective manner (Mill, 1993). On the contrary, "a great harm is done to individuals when inaccurate or incomplete information is collected by an employer is used as the basis for making important personnel decisions, for example, groundless accusations or record of arrest without conviction in their personnel records when employees are unable to examine their files (Boatright, et al, 2018, pp. 155-156)." Employees' lives get disrupted by groundless accusations in their personnel records. The harm is more likely to occur when employees cannot examine their files and challenge the information (or misinformation) in them (Ibid).

However, there is an unproven assumption in the argument that on a utilitarian calculation more harm than benefit will occur if such personnel practices are adopted. Still again on a utilitarian calculation, such personnel practices have to be examined whether on balance they produce more benefits for both employers and employees. This unproven assumption in the argument may be posing some challenges to the utilitarian defence of privacy. Still, on an advanced level of utilitarian argument, it is contended that some amount of privacy is necessary for getting the satisfaction of performing a job. In the case of monitoring and surveillance in the workplace, for example, this satisfaction gets declined. (Ibid.)

Interestingly, this utilitarian argument touches on the Kantian idea of a sense of dignity and self-worth of employees when it says privacy invasion sends a wrong signal to employees that they are not trusted and respected as human beings, which affects their sense of satisfaction. We look into the Kantian flavour of ethical arguments more directly.

4. Kantian Arguments for Valuing Privacy

Kantians argue that invading a person's privacy violates the principle of respect for persons and prevents a person from making a rational choice as an autonomous being (Kant, 2012; Boatright, et al, 2018, pp. 157). It is morally objectionable to be observed unknowingly through a hidden camera or have personal information in a data bank; because a person loses control over how they appear to others. If people form incomplete or misleading impressions of a person that they cannot correct, then he is denied the possibility of autonomous or self-directed activity, which is a characteristic of being human. Hence, it is claimed that invasions of privacy diminish an essential condition of being human (Ibid, pp. 148-178).

Furthermore, privacy provides a rational context to love, friendship, and respect because these words speak about intimate relations, which are primarily based upon the intimate sharing of personal information. Similarly, trust as a relation of mutual expectation that people will behave in a certain manner cannot exist, for example, outstation work assignments or even travel expenses incurred during such an assignment, if there is monitoring or surveillance.

The issue of loss of privacy of employees may further be assessed in a larger domain of big data analysis, which affects not only employees but consumers of goods and services in general.

5. Big Data Analysis

Big data analysis refers to a process that merges large sets of consumer and other data with the help of information technology in an effort to make predictions, especially about human behaviour. Everyday activities such as shopping online, using a fitness app on a mobile device, or any activity on social media create information trails that are extremely valuable to marketing firms. With this information, companies have improved their ability to identify consumers, understand their needs, and anticipate their purchasing behaviour. Privacy experts scrutinize the ethical issues raised by the activities of the companies that specialize in data collection and analysis. Big data analytics has been growing due to the following two reasons:

First, the Internet provides a platform on which almost every individual decision can be recorded and archived. As the internet gets more comfortable to access, more data is collected. "The pace of the internet, accessibility of social media platforms, and its availability over portable digital devices has completely thinned the circulation period of any kind of information written or shared through audio, video or written modes could have a positive or negative contagious impact in a fraction of time." (Arun Kumar and Kiran Saroj, p. 106)

Second, an increased ability to analyse the growing amount of data provides a greater opportunity to discover behavioural patterns to make predictions about future wants and actions. It reflects a shift in the marketing matrix from the 4Ps namely product, price, promotion, and placement to 4Cs which include "consumer wants and needs, the cost to satisfy, convenience to buy, and communication (Ibid., pp. 106-107)." The reason is that the rise of complex and sophisticated algorithms with the use of machine learning and artificial intelligence has made this easier.

5.1 Ethical Issues with Big Data

The most common crime over the internet is identity theft. Identity theft can compromise everyday activities and undermine one's reputation, privately and professionally. Concerns over consumer privacy have been heightened in recent years not only by the increased use of the Internet and data analysis. The criticisms of big data analysis include the lack of transparency of data analysis, the business practices of data aggregators, and the loss of privacy by consumers (Tene, 2019). Three reasons may be put forward to clarify the ethical issues with big data:

Lack of Awareness: The collection and distribution of big data occur without much legal oversight. The technology used to mine existing data is used without the knowledge of Internet users. This lack of knowledge means that individuals cannot take steps to protect their personal information and prevent it from being collected or distributed. More importantly, consumers have little knowledge of how their personal information is analysed and used.

The Difficulty of Protection: Even if consumers were aware of the collection, analysis, and use of big data, they could not easily use this knowledge to protect their privacy. Data aggregators share and sell data among themselves and obtain information from ad networks with which they are affiliated. Ad networks, in turn, use data compiled by aggregators to target advertisements across websites and mobile devices. This constant free flow of data makes it difficult for users to protect themselves from all the aggregators.

Loss of Privacy: The aggregators collect discrete data from different parts of the internet and create a whole picture of an individual's identity, covering factors from every dimension of life. This could possibly be a false identity for other people to know. The whole identity of an individual reveals much more than the individual pieces from which it is made and thus constitutes a more significant invasion of privacy. "Indeed organizations that take advantage of the business benefits that big data promises, but fail to appropriately reconcile these concerns, risk repercussions that could cause serious detriment to their reputation, capabilities, and overall competitive advantage (Burkhardt et al, 2022)." We report five principles to address these ethical issues with big data (Boatright, et al, 2018, pp. 171-172).

6. Principles of Protecting Privacy

The principles of protecting privacy help to protect internet privacy even though certain issues arise in their interpretation and implementation (Boatright, et al, 2018, p. 172; Federal Trade Commission, 2020).

Notice/Awareness: The identity of the collecting party and the use of the information collected should be disclosed. The privacy policy should be prominently displayed and easily understood. They should provide details about the party with whom they share the data.

Choice/Consent: Provide a mechanism for choosing whether to allow information to be collected. One could choose to permit the collection of some information (e.g., name and address) but no other (e.g., medical information), or one could consent to some uses of information (e.g., to select banner ads) but not others (e.g., sharing data to a third party).

Access/Participation: Allow consumers access to the information collected about them and to verify the accuracy of the information.

Integrity/Security: Inform users of the steps taken to protect against the alteration, misappropriation, or destruction of data and of the action that will be taken in the event of a breach of security. Also, maintain information so that it is accurate and up-to-date.

Enforcement/Redress: Companies should follow responsible information practices and face the consequences if they fail to do so. One way to ensure enforcement and redress is by contracting with an organisation that monitors and certifies the information practices of websites.

These principles are of help to protect the cause of internet privacy if all parties mainly internet companies abide by the moral need to strictly interpret them and deploy the appropriate means to implement them (Ibid.). On various occasions, a self-centric interpretation of principles of protecting the privacy and the absence of socio-legal intervention require a value-oriented intervention on behalf of the internet user as a creator or a user. An internet user is also expected to own moral responsibility for his role in sharing information or communication through various channels. The internet does not spy on a user’s activity like a hidden camera, it can be considered a public arena, and the user voluntarily loses privacy to gain the benefits of using the internet.

7. Conclusion

People value privacy and ethical theories back the claim of the need for privacy protection. The problems faced by employees, consumers, and Internet users are similar, as are the solutions. More than 120 countries have data protection laws to prevent the misuse of information and to ensure privacy. The technologies that threaten privacy have also brought us many benefits. Finding the right means to protect privacy is a great challenge to businesses that must meet employee and consumer expectations as they use new technologies. More than many other ethical problems in business, protecting privacy requires a coordinated solution involving many parties. Until a solution is found, developing and implementing privacy policies will remain a challenge for businesses and society. It is possible to an extent to meet this challenge if all parties act in such a morally responsible manner that their claims of each other are truthful and compassionate. The purpose of the business, after all, is to serve the public by providing desired and desirable products and services and by not harming the community and its citizens (Solomon 2003: 361)."

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A Multi-Stakeholder Framework for Incorporating Corporate Sustainability and Sustainable Development Goals

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Abstract

The Sustainable Development Goals (SDGs) are a group of critical global issues identified by the United Nations. The problems posed by the SDGs affect every business. The SDGs are inextricably linked to the three pillars of business sustainability. The stakeholder method is used in this research article to build organic links between the triple bottom line (TBL) approach and the SDGs. India is dedicated to the United Nations SDGs. Attaining the SDGs by 2030 could be essential to the Indian public and private enterprises. The proposed SDG-TBL paradigm advances theoretical knowledge of the elements driving corporate adoption of the SDGs. The ramifications for scholars and practitioners are also discussed in this article.

Keywords

Sustainable Development Goals (SDGs), Triple Bottom Line (TBL), Stakeholder engagement, Corporate reporting, and Corporate sustainability.

1. Introduction

Modern companies function under a "multi-stakeholder ecosystem paradigm," in which the critical resources required for the long-term existence of corporations are dependent on the stakeholder world (Desai, 2018; Viglia et al., 2018). Firms must engage with many stakeholders to achieve sustainable development (Amaeshi & Crane, 2006). However, organizations frequently fail to establish long-term relationships with various stakeholders (Maak, 2007). As a result of this complicated scenario, companies face several intertwined sustainability difficulties, and such a hostile environment encourages enterprises to implement an adaptable strategy (Hörisch et al., 2014).

Corporate stakeholders' social and environmental aspirations have fostered the notion of sustainability in the literature (Cennamo et al., 2012; Herremans et al., 2016; Lim & Greenwood, 2017). According to Elkington (1999), corporate sustainability is the model for 21st century firms. The advent of the sustainability idea has compelled firms to reconsider their approach to performance measurement. Businesses must strive for whole system stability to remain viable in complicated mutual stakeholder systems (Sulkowski et al., 2018). Stakeholders' expectations of corporations have grown significantly in recent years. Because business operations take place on the outskirts of society and the environment, social and environmental factors must be considered. (Anbarasan & Sushil, 2018; Johnson et al., 2018; Kepore & Imbun, 2011). According to McLaren (2004), stakeholders evaluate a firm's success based on its social and environmental performance.

According to Elkington (1998), sustainability depends on three linked aspects: economic development, social equality, and environmental integrity. Organizations should give equal weight to all three elements (Venkatraman & Nayak, 2015). This viewpoint represents a paradigm change and encourages firms to move their attention away from the traditional bottom-line strategy and toward the triple-bottom-line (TBL) approach (Hardjono & van Marrewijk, 2001). TBL refers to the link between company sustainability's economic, social, and environmental aspects (Svensson et al., 2018).

2. Definition of Stakeholders from the Standpoint of Corporate Sustainability

A stakeholder is a social construct comprising various entities with the capacity to influence or be influenced by enterprises (Jakhar, 2017); it is "a general phrase that covers both people and groups" (Greco et al., 2015). From a relational approach, Sulkowski et al. (2018) highlighted stakeholders as critical parts of every firm. According to Noland and Phillips (2010), stakeholders are the building elements of an organization, and firms function in a space produced by a network of stakeholders.

For the last three decades, the stakeholder definition proposed by Freeman (1984) has been the most prevalent in literature: "any group or individual who may impact or is impacted by the attainment of the organization's objectives." Researchers have broadened the human-oriented concept of "stakeholder" to include a variety of "non-human actors" who might be disturbed or outraged by the conduct of businesses (Missonier & Loufrani-Fedida, 2014). Society and the environment have "value and repercussions" for enterprises and are hence necessary (Anbarasan & Sushil, 2018; Lane & Devin, 2018). The company is also a stakeholder in the socio-ecological system, with society and the environment as the primary stakeholders (Henriksson & Weidman Grunewald, 2020; Sulkowski et al., 2018).

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3. Sustainability Reporting Practice

Since the first environmental report was issued in the 1980s, the notion of sustainability reporting has evolved. However, legislative authorities, stakeholders, academicians, and organizations have recently given the concept more attention (Shad, Lai, Fatt, Kleme, & Bokhari, 2019). Corporate Responsibility Reporting (CRR), Environmental Reporting (ER), 4 Environmental, Social, and Governance (ESG) reporting, Sustainability Reporting, Corporate ESG Reporting, Integrated Reporting, or the Triple Bottom Line of people, profit, and planet are all terms used interchangeably to describe the concept (Elkington, 1999; Ioannou & Serafeim, 2017; Ng & Rezaee, 2012; Wei, 2020).

Sustainability reporting refers to a company's capacity to use the limited resources at its disposal effectively and efficiently over time by implementing waste-reduction measures and adhering to best corporate practices. Sustainability Reporting considers all three aspects of sustainability: economic, environmental, and social, while Sustainability Practice extends above reporting on such three parts (Rajesh, 2020). As a result, it provides a framework for creating value, maximizing profits, and meeting the unique requirements of various stakeholder groups (Lopez, Garcia, & Rodriguez, 2007).

It is critical to describe each part of the notion, which has three dimensions: economic, social, and governance (ESG). According to GRI (2002), the economic component is concerned with a company's influence on its stakeholders' economic circumstances and economic system at the regional, national, and worldwide scales. According to Shad et al. (2019), the economic dimension includes financial success, profit-making, gaining a competitive edge, and maintaining the corporation's entire economic worth. The environmental aspect addresses the quality of the environment, focusing on global climate change, pollutants, and depletion of the ozone layer, and discusses how an organization's actions influence living and non-living natural surroundings. According to Delai and Takahashi (2013), the environmental component goes beyond the ecosphere's well-being because the ecosystem preserves biodiversity, resulting in its ability to sustain all creatures and accept change to provide potential opportunities. Finally, the social component concerns how businesses influence the social framework in which they function. This influence is felt in safety and security, societal well-being, job opportunities, charity, and work setting (Aras, Tezcan, & Kutlu Furtuna, 2018). In some cases, social indicators may influence a company's intangibles, including its identity or trademark.

When businesses embrace sustainability reporting standards, they must balance firm business risk and stakeholder expectations. Assume they, too, want to do business in a socially responsible way. In that case, the organization will need to connect an integrated management structure which might assist in the transition of a range of technical notions into political and corporate practices which have a clear correlation to organizational effectiveness (Maleti, & Gomiek, 2018, as cited by Shad et al., 2019).

4. Sustainable Development Goals

In the year 2000, world leaders agreed to the United Nations Millennium Development Goals (MDGs), a development plan with a 2015 deadline. Despite significant global progress over the last fifteen years, several countries have failed to meet the MDGs' targets (Battersby, 2017; Satterthwaite, 2016). To address the unfinished agenda, the Millennium Development Goals (MDGs) were replaced in 2015 by the Sustainable Development Goals (SDGs) (Kumar et al., 2016). The 17 SDGs evolved from the MDGs and include additional global issues such as climate change, economic inequality, innovation, sustainable consumption, peace, and justice.193 member nations approved SDGs in September 2015 to form the world's most ambitious agenda. The SDG framework includes 17 goals and 169 targets in the areas of poverty, food, health, education, women, water, energy, economy, infrastructure, inequality, habitation, consumption, climate, marine ecosystems, peace institutions, and sustainable development (Carreira et al., 2017). It is a bold strategy that aims to make the world more inclusive and sustainable by 2030. (Borges et al., 2017). SDGs are frequently referred to as Global Goals because of their universal applicability and global scope. The ultimate focus of the SDGs is to redesign the global development model (Pradhan et al., 2017).

The SDGs have a deadline of 2030 and need immediate action (Nhamo & Mjimba, 2020). To address the difficulties faced by the SDGs, creative and innovative solutions are required. Through innovation, research, technology, funding, and job creation, businesses have the resources and capabilities to advance the SDGs. On the other hand, businesses desire a more substantial reason to engage in SDGs beyond mandated CSR expenditure (Scheyvens et al., 2016).

The UN SDG framework, like TBL, was developed with stakeholders in mind. The objectives are well-defined and time-bound, necessitating active engagement from all stakeholders (Anderson & Ratiu, 2019). Sustainable Development Goals are the most comprehensive framework for equitable growth (Borges et al., 2017). No business can flourish unless society succeeds, and companies must recognize that the SDGs present a chance for enterprises and communities to coexist and thrive (Pedersen, 2018).

5. Linking Corporate Sustainability to Sustainable Development Goals

Businesses' roles can be altered since their present decisions and deeds will affect how the world develops sustainably and how the next generation will live (Morioka et al., 2017). SDGs have specific, time-bound goals, and corporate sustainability is a notion that motivates firms to improve their performance in all three TBL aspects. For businesses, it might be illuminating to establish connections between the 17 SDGs and the three TBL concept pillars. With the use of a TBL-SDG framework, companies may be motivated to become involved and make a difference in the SDGs. Business organizations may receive all the internal and external incentives they need to contribute to the world's sustainable development by integrating TBL with SDGs. The fundamental objective of this study, using the TBL-SDG framework, is to rigorously incorporate the hidden social and environmental aspects of corporate sustainability into business.

To create economic, social, and environmental values from corporate sustainability, the company, society, and the environment are the three main parties involved (Anbarasan & Sushil, 2018). These three parties are central to the process of connecting TBL and SDGs through the development of the TBL-SDG framework. There is a connection between the three pillars of corporate sustainability (Purvis et al., 2019). Similarly, global goals build a complicated interlinkage network that is highly linked (Swain & Ranganathan, 2021; Tosun & Leininger, 2017). In line with Fonseca and Carvalho (2019), this study took into account each SDG separately and followed a rigorous process to create the TBL-SDG framework.

6. Society and SDGs

Social sustainability refers to an organization's capacity to safeguard society's well-being. Businesses frequently struggle to grasp the social component of the TBL framework. Companies take on various community-related projects in the context of their corporate social responsibility (CSR) activities. However, these CSR initiatives fail to demonstrate how business responsibility and action affect society. From the community's perspective, firms view adopting sustainability outside of CSR efforts as optional rather than required (Padin et al., 2016).

The problems impacting society are poverty, hunger, health, education, gender discrimination, water and sanitation, employment, inequality, peace, and justice. The following nine SDGs fall within the social category of the TBL approach:

SDG 1: No Poverty— End poverty in all its forms everywhere.

SDG 2: Zero Hunger— End hunger, achieve food security and improved nutrition, and advance sustainable agriculture.
SDG 3: Good Health and Well-being— Ensure healthy lives and promote the well-being of all ages.
SDG 4: Quality Education— Promote opportunities for all people to engage in lifelong learning and ensure inclusive and equitable quality education.
SDG 5: Gender Equality— Achieve gender equality and empower all women and girls.
SDG 6: Clean Water and Sanitation— Ensure that everyone has access to and can manage water and sanitation sustainably.
SDG 8: Decent Work and Economic Growth— Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
SDG 10: Reduce Inequalities— Reduce inequality within and among countries.
SDG 11: Sustainable Cities and Communities— Make cities and human settlements inclusive, safe, resilient, and sustainable.
SDG 12: Responsible Consumption and Production— Ensure sustainable consumption and production patterns.
SDG 16: Peace and Justice— Promote inclusive, peaceful societies for sustainable development, ensure everyone has access to justice, and create inclusive, effective, and accountable institutions at all levels.
As mentioned above, businesses working toward the SDGs can improve their contribution to the TBL approach to corporate sustainability from the community's standpoint.

7. Environment and SDGs

The ability of a company to protect and preserve the natural environment is referred to as its environmental sustainability. Cost-cutting techniques are frequently envisioned as businesses' primary tools for environmental conservation initiatives. Many enterprises have implemented environmental management systems (EMS) (Knowles et al., 1999). EMS is an excellent assessment of a company's environmental performance (Vanclay, 2010). Furthermore, a comprehensive approach is required to fully comprehend the ecological implications of the TBL idea (Sridhar & Jones, 2013).

Clean water, clean energy, sustainable cities, climate change, and sustainable marine and terrestrial resources are significant concerns from an environmental standpoint. The following six SDGs fall within the environmental category of the TBL approach:

SDG 6: Clean Water and Sanitation — Ensure everyone has access to clean water and sanitation and that these services are managed sustainably.
SDG 7: Affordable and Clean Energy— Ensure access to affordable, reliable, sustainable, and modern energy.
SDG 11: Sustainable Cities and Communities— Make cities and human settlements inclusive, safe, resilient, and sustainable.
SDG 13: Climate Action— Take urgent action to combat climate change and its impacts.
SDG 14: Life below Water— Conserve and sustainable use of the oceans, seas, and marine resources for sustainable development.
SDG 15: Life on Land— Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss.
Corporations may produce ecological value and contribute to the environmental viewpoint of the TBL approach to corporate sustainability by acting on SDG 6, SDG 7, and SDG 13 to SDG 15.

8. Firms and SDGs

The capacity of a corporation to endure, produce profits, and contribute to the economy is called economic sustainability (Roberts & Tribe, 2008). Gender discrimination, decent work and economic development for workers, workplace inequality, renewable energy, innovation, and resource sustainability are critical concerns for organizations. The six aims linked with the TBL approach's economic perspective are as follows:
SDG 5: Gender Equality— Achieve gender parity and give all women and girls greater power.
SDG 7: Affordable and Clean Energy— Ensure access to affordable, reliable, sustainable, and modern energy.
SDG 8: Decent Work and Economic Growth— Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
SDG 9: Industry, Innovation, and Infrastructure— Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
SDG 10: Reduce Inequalities— Reduce inequality within and among countries.
SDG 12: Responsible Consumption and Production— Ensure sustainable consumption and production patterns.
Businesses may help expand the TBL strategy's economic aspects by focusing on SDGs 8-12.

9. SDG-17 and Sustainability of TBL Components

All stakeholders, including corporations, must put forth extraordinary effort to achieve the lofty goals of the world (Anderson & Ratiu, 2019). Coordination among stakeholders is required to accomplish the 16 SDGs directly related to the three elements of TBL (economic, social, and environmental).

SDG 17: Partnerships for the Goals— Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Businesses can lead a shared value-creation process and improve their long-term sustainability by implementing SDG17 (Pedersen, 2018).

Figure 1 depicts the TBL-SDG framework that has been proposed. This comprehensive approach is built on organic links and uses the TBL idea to communicate the 16 SDGs to businesses. Furthermore, the suggested framework encourages cooperation among all stakeholders to create long-term value across all three aspects of the TBL method.

Source: Adapted from Fonseca & Carvalho, 2019

Figure 1: The TBL-SDGs Framework

10. India and SDGs

India's economy is one of the world's fastest expanding (Sankaran et al., 2020). On the other hand, India is dealing with several social, economic, and environmental problems, such as low per capita income, poverty, hunger, energy and water security, a sizable population, sanitation, subpar healthcare, diminishing natural resources, and climate change (Bansal et al., 2020). India has played an essential role in formulating the United Nations Sustainable Development Goals and has endorsed the 2030 Agenda for Sustainable Development (Aayog, 2017). India has committed to implementing the SDGs effectively. According to MoSPI (2015), India failed to meet its national objectives for the MDGs, and the SDGs are vital and critical in the Indian context. Meeting the SDG's objectives by 2030 would be essential for India's development trajectory.

The United Nations predicts that the SDGs would require USD 90 trillion in investment, with India requiring USD 2.5 trillion to meet its climate change objectives by 2030 (UNFCCC (United Nations Framework Convention on Climate Change), 2015). This substantial investment seeks the active engagement of companies in transforming barriers to sustainable development into opportunities and playing a critical role in attaining SDG objectives (Ghosh & Rajan, 2019; Mio et al., 2020; Scheyvens et al., 2016). Compared to MDGs, companies worldwide are more responsive to and engaged with SDGs through programs such as the UN Global Compact. Indian firms have increasingly implemented techniques to accomplish the SDGs (Mishra, 2021; Poddar et al., 2019). The SDGs' success depends on how quickly firms establish more creative and inclusive business models (Scheyvens et al., 2016).

11. Conclusion and Implications

The importance of SDG adoption, external certification of non-financial transparency, and SDG integration by enterprises cannot be overstated. The 17 SDGs are universal, interconnected, and integrated (Delgado-Ceballos et al., 2020). This study employed an isolated perspective of the SDGs to demonstrate the link between the SDGs and the TBL framework. The suggested TBL-SDG framework proves that TBL is naturally associated with SDGs, encouraging enterprises to actively contribute to the stakeholder world's sustainable development.

Implications for Practitioners and Researchers

Social, environmental, and economic sustainability all play a role in corporate sustainability. Businesses have begun to associate the TBL idea with sustainability. On the other hand, TBL has proven to be an uncomfortable notion for many firms, requiring more significant company duties beyond transactional partnerships. TBL is considered overly complex since it confronts managers with multilateral and interconnected social, environmental, and economic issues (Hahn et al., 2010). Businesses may use the suggested TBL-SDG framework to create, measure, and assess their goals across three TBL dimensions. The TBL idea may guide decision-making processes in the proposed TBL-SDG framework, while SDGs can define corporate objectives.

Along with the TBL perspective, the UN's SDGs agenda offers various critical viewpoints and can inspire businesses to participate in global goals. The SDGs are supported by 193 nations adopting national-level plans and policies to accomplish them. The government and the general public are important stakeholder groups that significantly impact a nation's commercial performance. These two stakeholder groups will prefer companies that match their primary business operations with their goals over enterprises that do not interact with the country's interests. Furthermore, the voluntary backing of a country's government and inhabitants might give some enterprises a competitive edge. According to Williams (2015), incorporating SDGs into essential business operations has long-term commercial implications. Businesses should integrate their critical processes with the SDGs to discover new growth possibilities and lower the risk associated with their profiles. Future research in this area is needed, and looking at different countries can help researchers understand how the SDGs are accepted.

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An Overview of Indian Agricultural Sector in Digital Age

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Abstract

Agricultural modernization might be a potential remedy for feeding a rapidly rising population. Big data is a crucial instrument for digitalizing the farming sector. Despite a protracted dispute over its relevance to agriculture, the goal of this research is to see how big data technologies may help with appropriate farming systems. The research paper employs a comprehensive overview of recent agricultural research and evidence to identify the best and most consistent practices that can assist farmers at the grassroots level in ramping up production, maintaining efficiency, and ultimately enhancing their financial situation to improve their standard of living. This research identifies several big data tools and approaches in agriculture that can be used to address present and future difficulties in the area. According to the assessment, the use of big data technology in farming is increasing, although still at a minimal concentration. It also looks at how agricultural productivity, crop preservation, livestock farming, aquaculture, post-harvest handling, and marketing strategy are all affected by technology. The report identifies many obstacles, including personal data, accessibility of information, accuracy, and flexibility, capital investments, inadequate knowledge, and perspective innovation. According to the report, widespread use of agricultural big data technology would necessitate policy interventions, public-private cooperation, data availability, capital financing, and area base investigation.

Keywords

Digital agriculture, Big data, Sustainable agriculture, Precision farming, Artificial Intelligence (AI), and Drone technologies.

1. Introduction

Digital agriculture is a type of agriculture that employs current technology to achieve long-term crop, fishery, and livestock growth. For the shift from traditional agriculture to contemporary agriculture, modern agricultural techniques use digital technologies. The move from classical to digital farming necessitates a massive quantity of data from practically every step of crop, fishery, and animal production. Digital agriculture has evolved into a thorough strategy that integrates data science, atmospheric technology, computer and software technology, structure science, GIS (Geographical Information System), GPS (Global Positioning System), remote sensing innovations, and simulated aerial photography to improve soil, climate, and ecologic assimilation with agriculture (Schuster.J.2017). Digital agriculture is a key to farm information and communications technologies and better agricultural production methods, especially in rural areas (Shi-Wei-2011). Increased population and family income levels contribute to increased demand for food and other agricultural goods, putting the country in a vulnerable position. Experts anticipate that as the world's population continues to climb, it will reach 9 billion people by 2050. To feed this larger, more urbanized, and richer population, the agricultural output must increase by 70 percent (Ayed and Hanana 2021). The only option to enhance targeted food production is to include contemporary sophisticated technology in every phase of agricultural production, such as artificial intelligence (AI) and drone technologies (DT) (Van and Woodard 2017). In the future, digital agriculture will help farmers meet their expanding food demands. Big data solutions are instruments for collecting a large number of data sets at a low cost, promoting additional perspective, sustainable, and economic agriculture. As a result, advances in information and technology are not limited to the service and knowledge industries as a component of a solution or for smart work. These technologies may also be used in agriculture to solve a variety of problems and to advance the smart agricultural situation in the country and throughout the world. Artificial Intelligence and Drone Technology are two developing digital era paradigms that are being debated. This research focuses on certain digital technologies that can assist farmers and other stakeholders in sustainably managing agricultural farms. As a result, the purpose of this research is to see if the application of big data for sustainable farm management through a digital agricultural strategy is feasible. The research will aid in the creation of policies and programs related to farmer capacity building for long-term agricultural development using innovations.

2. Objectives of the Study

The chief objective of this paper is to study the impact or influence of technological innovations on the agriculture sector, which is the "digital age of agriculture." This main objective is divided into three sub-objectives, which are as follows:

2.1 To know the importance and application of technology in agriculture.

2.2 To identify initiatives taken by union governments and various state governments to digitalize the agricultural sector.

2.3 To evaluate the response of rural agriculturists towards the digitalization of agriculture.

3. Research Methodology

This study is based on both primary and secondary data. The first two objectives are performed on secondary data, and by thorough academic evaluation of the literature. The study searches the literature for recently published research papers using keywords like "big data," "agriculture," "digital," "precision agriculture," "smart farming," "artificial intelligence," and "drone technology" in reputable databases like Web of Science, Scopus, Springer, Emerald, and Google Scholar. Journal articles, working papers, book chapters, magazine articles, and books linked to digital agriculture and tech innovations have been evaluated to determine the appropriateness of using technologies in agriculture and the initiatives of policymakers. The final objective, which is to evaluate the response of rural agriculturists towards the digitalization of agriculture, is performed on primary data. To collect the Primary data simple random sampling (probability sampling) method was used. And data was collected through interviews of Farmers with a set of a questionnaire carried out in the North Karnataka region. This is the Northern part of Karnataka State, India. This includes 13 districts, 110 taluk places, and 309 hobbies. From each hobbies, two farmers are interviewed for collecting the data. Totally 618 farmers responded.

4. Importance of Digitalization of Agriculture

Transportation, healthcare, finance, manufacturing, advertising, automobiles, and many other industries apply and use technology in their daily operations. In recent years, the agriculture sector has also been influenced by these innovations, and the concept of smart agriculture has emerged as a controversial topic. Every industry uses digital technologies for two goals. The first is to add value to the current infrastructure and enhance working conditions. The second step is to resolve any issues that arise. Technology was also employed in agriculture to boost farmer intelligence so that they could focus on new inventive ideas for better and higher-quality produce. Agriculture, on the other hand, is a natural phenomenon that must contend with several natural and climatic issues. Soil erosion, a greater reliance on artificial fertilizers, a reduction in soil richness, a reduction in groundwater supplies, and insect vulnerability are all factors. Reliance on unsustainable farming systems will only increase the likelihood of food scarcity and other associated difficulties as changing climate becomes more predictable and sensible. Controlling pests, monitoring soil and growing conditions, and organizing data for farmers, lowering effort, and enhancing the food supply chain are all made easier by digital improvements.

5. Applications of Technology in Agriculture (Digitalization of Agriculture)

This is how the agriculture sector is becoming digitalized, from automated pest and plant disease diagnostics to smart spraying and produce sorting. The adoption of technology in agriculture has improved crop productivity, quality, and labor conditions. The following are the applications of technologies for different purposes.

5.1 Observing Crops and Soil

To ensure optimum agricultural production, it's necessary to monitor a crop's condition and discover crop pests proactively. Stress caused by factors such as environmental variation, nutritional deficits, and weed, bug, and fungi infestations must be discovered early time for farmers to counteract. AI may be used to forecast planting recommendations, pest management, and input control, which can assist the agricultural community, earn more money, and maintain stability. Monitoring the phases of growth once the crops have been planted is also important for maximizing output effectiveness. Understanding the relationships between crop development and the environment is critical for making crop health modifications. Drones (UAVs) are used to collect airborne picture data and train computer vision models to use for smart crop and soil maintenance.

5.2 Detection of Insects and Plant Diseases

Using deep learning-based image identification technologies Plant diseases and pests are detected by artificial machines. This uses picture segmentation, classification, and detection algorithms. It's known as the "keep an eye" on plant health model. Computer vision systems are also used to detect insects.

5.3 Keeping an Eye on Livestock's Health

Animals are another important part of the agriculture industry, and they require a little more surveillance than plants. The cow's health and behavior are examined using an overhead camera and computer vision algorithms; the cattle are followed and monitored using remote sensors, and the farmers are notified in real-time if a problem is detected. Computer vision may also be used to count animals, diagnose sickness, recognize aberrant behavior, and monitor important events like childbirth. All of these tasks are carried out using drones and cameras (UAVs). The algorithms are designed to analyze footage and detect what animals are doing, such as drinking, eating, sleeping, or doing something unusual that might indicate sickness or behavioral issues. In the agricultural sector, "cattle eye" is a superb example of an AI-first animal tracking enterprise.

5.4 Smart Irrigation

In agriculture, soil and irrigation management are extremely important. Crop loss and quality degradation are caused by poor irrigation and soil management. As a result, a smart management system is required to boost production. The smart irrigation system is an Internet of Things (IoT)-based technology that can automate watering by assessing soil moisture and climatic conditions. Irrigation is one of the most labor-intensive farming activities that artificial intelligence can avoid since it is aware of previous weather patterns, soil conditions, and the type of crops to be cultivated. Automated irrigation systems make use of real-time machines that can maintain optimum soil conditions at all times to boost average yields. Not only does it alleviate farmers' misery, but it also has the potential to lower production costs. Given that agriculture consumes over 70 percent of the country's freshwater, AI awareness would have a significant influence on reducing water loss in agriculture.

5.5 Spraying with Intelligence

AI aids in the detection of agricultural problems as well as their prevention. UAVs fitted with computer vision AI can spray pesticides or fertilizer equally across a field automatically. Includes real-time target spraying area identification UAV sprayers can work with extreme accuracy, both in terms of spraying area and volume.

5.6 Aerial Photography and Survey

It should go without saying that computer vision has some fantastic possibilities for surveying land and monitoring crops and livestock. Farmers may use AI to evaluate imagery from drones and satellites to monitor crops and livestock. They can be warned promptly if something appears to be wrong without having to continually monitor the fields. Aerial imagery can also help improve pesticide spraying precision and efficiency. As previously said, guaranteeing that insecticides only travel where they're supposed to saves both money and the environment.

5.7 Sorting and Grading the Produces

Finally, even after the crops have been harvested, AI computer vision may assist farmers. Imaging algorithms can distinguish "good" produce from "bad" produce in the same way they can discover faults, illnesses, and pests as the plants develop. Computer vision can automate the sorting and grading process by evaluating fruit and vegetables for size, shape, color, and volume, with accuracy and speed much above that of a skilled expert.

5.8 Precision Farming

Precision farming is defined by the term "Right Place, Right Time, Right Product." This is a more precise and regulated process that takes the place of the labor-intensive and repetitive aspects of farming. Crop rotation, optimal planting and harvesting times, water management, fertilizer management, insect assaults, and other topics are covered.

6. Initiatives Taken by Union Governments and Various State Governments to Digitalize the Agricultural Sector

6.1 National Agriculture Market on the Internet (eNAM)

In India, eNAM is an online trading network for agricultural goods. Farmers, merchants, and purchasers can exchange commodities in the online market. The market facilitates improved market pricing and the easy selling of their products. Over 90 products, especially essential food grains, vegetables, and fruits, are already accessible for trade on its website.

6.2 Precision Farming using Artificial Intelligence

The government's policies think tank, NITI Ayog, collaborated with IBM to build a crop yield forecast model utilizing artificial intelligence (AI) to deliver real-time advice to peasants in ten aspiring regions across Assam, Bihar, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh.

6.3 Pradhan Mantri Fasal Bima Yojana (PMFBY)

PMFBY will assist farmers who have suffered crop loss or damage as a result of unforeseeable circumstances, as well as stabilize farmers' income to ensure their continued farming. The agriculture ministry has decided to use specialized agencies to conduct pilot studies to evaluate agricultural output at the village level using advanced innovations like artificial Intelligence, remote sensing images, and modeling tools to speed up claim settlement for farmers under the existing crop insurance scheme.

6.4 AGRI-UDAAN

AGRI-UDAAN is a food and agribusiness accelerator 3.0 run by a- IDEA, NAARM's Technology Business Incubator, and funded by the Department of Science and Technology of the Government of India. Through rigorous mentorship, industry connections, and investor pitching, the program aims to catalyze scale-up stage food and agribusiness start-ups. This effort is a six-month program that began in Hyderabad.

6.5 Karnataka's Government has Signed an Agreement with Microsoft

The Karnataka government has struck an agreement with Microsoft Corporation India Private Limited. The cooperation aims to provide small-scale farmers with AI-based alternatives that will help them raise their revenue through the use of cutting-edge cloud-based technology, machine learning, and sophisticated analytics. Microsoft, in collaboration with the Karnataka Agricultural Price Commission (KAPC), intends to use digital tools to create a multivariate agricultural commodity price forecasting model that takes into account parameters such as sowing area, production time, yielding time, weather datasets, and so on.

6.6 Maha Agri-tech Initiative

The Maharashtra Remote Sensing Application Centre (MRSAC) and the National Remote Sensing Centre (NRSC) employ satellite pictures and data analysis to evaluate the landmass and the characteristics of specific crops in selected talukas in the initial phase of the project. The second phase, on the other hand, comprises an assessment of the data acquired to create a unified foundation for agriculture modeling and a geographic database of soil nutrients, rainfall, and moisture stress to provide farmers with location-specific advice.

7. Evaluation of the Response of Rural Agriculturists towards Digitalization of Agriculture

North Karnataka is very famous for its agricultural activities. More than 30 Lakh farmers are involved in farming activities (Karnataka at Glance 2018). The majority of the farmers are small and marginal farmers. Only 8 to 10 percent of farmers are large-scale farm holders. Area climate and natural sources in this area are suitable for cultivation. In this study, farmers are interviewed about how they are changing themselves with modern technologies. To increase productivity and quality are they applying modern agriculture methods? Are they digitalizing their agriculture activities? To what extent farmers are using innovations in day-to-day agri activities? All these questions are answered and explained below with help of the primary data.

Table 1: Profile of the Farmers

Age of Respondent (in Years)	Count	Count N %
Up to 25	96	15.5%
26-30	159	25.7%
31-40	342	55.3%
41-50	21	3.4%
51-60	0	.0%
60 Above	0	.0%
Total	**618**	**100.0%**
Gender		
Male	599	96.9%
Female	19	3.1%
Third gender	0	.0%
Total	**618**	**100.0%**
Educational Qualification		
Below SSLC	439	71.0%
SSLC	143	23.1%
PUC / Equivalent	33	5.3%
under Graduation	3	0.5%
Graduation	0	0%
Professional Degree	0	0%
Total	**618**	**100.0%**
Type of Agriculture Land		
Irrigated	177	28.6%
Non-Irrigated	441	71.4%
Total	**618**	**100.0%**

Table 1, indicates that the majority of farmers are very experienced hands in farming. About 55.3 percent of farmers belong to the aged of 31 to 40, who are having more knowledge and interest in agriculture, 96.9 percent of people who are taking responsibility for agriculture in the family are male. The majority of the farmers are literate, 71 percent of farmers are done with their school education. Only 0.5 percent of graduates are involved in agriculture. In north Karnataka, irrigation is a major issue in agriculture, though having several rivers and dams only 28.6 percent of agri-land was irrigated, the remaining depends on rainwater for cultivating the agri-land.

Table 2: Generation of Family in Agri-profession

Type of Generation	1st Generation	2nd Generation	3rd Generation	4th Generation	**Total**
No. of Families	20	50	312	236	**618**

In table 2, the generation of the family in agri-profession shows the dedication and devotion to agriculture and how these families are stick-on to this particular profession for their livelihood; nearly 50 percent of families are agriculture-based families for more than 100 years, and 42 percent of families belong to 4th generation and this category of farmers know about the technological developments in agri-field and many farmers are interested in using such technologies.

Table 3: Source of Information to Access the Information about Agriculture

Sources	**No. of Responses**
Television	20
Radio	50
Newspaper	30
Mobile	400
Agri-agents	118

Agriculture mainly depends on accurate information it may be related to climate, rainfall, seeds, soil health, marketing fluctuations, etc. farmers in the rural area get to know information about agriculture through various media. Table 3 accessed various Media that 64.72 percent of farmers get all their information through their mobile phones. The present generation of farmers also belongs to the modern era of agriculture and is educated. In rural areas, 99 percent of farmers are having smartphones. Using mobile applications farmers are getting all the information related to agriculture.

Table 4: Farmers' Awareness, Usage, and Adoption Level of Digital Technologies in Agriculture Activities

Levels	**No. of Farmers**	**Percentage of Farmers**
Fully aware	30	4.8
Partially aware	40	6.4
Interested	50	8.09
Evaluating the concepts	5	0.8
In trial stage	10	1.6
Adoption	20	3.2

Levels	No. of Farmers	Percentage of Farmers
Discontinued	20	3.2
Not aware	143	23.13
Not interested	300	48.5
Total	**618**	**100**

In rural areas, farmers are cultivating agri-land in the traditional method for the last several decades. In this digital age, there is a shift from traditional methods to modern methods of agriculture, many innovations brought significant changes in the field of farming, to get quality and quantity out of agri-land the quality of the inputs must be high, and soil health, protection from diseases, etc., and post-harvesting activities i.e. marketing to get a good price for produces is very important, all these mechanisms are done by the technologies. Table 4 gives a piece of information about the rural farmers' awareness, usage, and adoption of technologies in their day-to-day activities to digitalize agriculture this makes farming activity very easy and effective. 4.8 percent of farmers in this survey are fully aware of the digitalization of agriculture; they know different types of innovations took place to uplift agriculture. Adoption of such digital innovations in agriculture is lower than awareness i.e. 3.2 percent. The same percentage of farmers discontinued the use of technology. Here the notable point is 48.15 percent of farmers are not yet all aware of innovations that took place in the field of agriculture. Still, in rural areas, the farmers need to be trained for the adoption of the technologies. It is necessary to give more attention to rural agriculture compared to structured farming, to make use of technologies in practice, through the digitalization of agriculture in rural may lead to another revolution in the farming sector.

8. Conclusion

Sustainable long-term agricultural growth is currently a top priority for feeding the world's rising population. The research focuses on the agricultural sector's readiness for technological advancement. At this point in technical advancement, digitalization can help transform conventional agriculture into contemporary digital agriculture from farm to fork. According to the report, widespread use of agricultural artificial technologies would necessitate government initiatives, public-private cooperation, data transparency, financial investment, and regional research. Though this study focuses on the non-technical aspects of technology application, it will aid policymakers, IT specialists, practitioners, political leaders, and researchers in developing and implementing policies to promote digital agriculture.

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"Click to Pick the Groceries You Need": A Study of Top Indian E-grocery Platforms and Consumer Preferences Before, During, and After the Pandemic

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Abstract

The paper's primary objectives are to examine how consumer preferences for e-grocery websites mainly Bigbasket, Grofers, Reliance Fresh/JioMart, and Amazon Pantry among others changed before, during, and after the pandemic, as well as the change in the mentioned websites' cash flows and market distribution during this time. It also analyses whether the findings indicate a promising future for such platforms. A questionnaire was constructed and distributed to the online grocery shoppers in Rohtak and Delhi through snowballing techniques and the obtained data were subjected to factor analysis using SPSS. Customers' demographic profiles, online grocery shopping attitudes, buying frequency, monthly expenditure, time spent, product choice, website preference combined and location-based, and future attitudes toward e-grocery shopping are all part of the study. As a result, these studies, taken together reveal the factors that influence consumers' choices for e-grocery platforms, as well as whether these platforms have an optimistic future.

Keywords

Online grocery shopping, Indian websites, Pandemic, Consumer preferences, Delhi, Rohtak, and Factor analysis.

1. Introduction

Grocery shopping is a fundamental part of daily life, and choosing the appropriate grocery is just as important as choosing the appropriate place to buy it. When it comes to grocery shopping in India, consumers have a variety of options, ranging from a local Kirana store in the neighbourhood to grocery stores in malls to large e-platforms. Although during the global pandemic, these alternatives were limited to a single option, with the existing and developing e-platforms for grocery shopping, consumers have an array of choices just a click away when it comes to addressing their grocery requirements. People are even more cognizant of online grocery shopping as a result than they were previously. Indian consumers have been offered numerous options to choose from when it comes to e-grocery shopping. "Major Indian online grocery retailers include Amazon India, BigBasket, Grofers, Jio Reliance, and Flipkart, along with emerging retailers such as More, DMart, Nature's Basket, Milk Basket, and Easy Day", (USDA Report, 2021). Some of these platforms were being used by Indian consumers long before the outbreak, and their use has grown throughout the pandemic. This was not the case in India before the pandemic as concluded by (Jayshree, 2017), "Grocery shopping will reach maturity and saturation in near future, but we can't see the rise of grocery e-commerce models for a country like India, for a demise of brick-and-mortar supermarkets, but reconfigure the role of the grocery store for the digital food." Initially, people were more concerned to identify online shopping websites for various products like clothes, make-up, electronics, etc., but the pandemic made them aware of other possibilities like grocery shopping by online means which were not much recognized by them earlier. As a result, "India's online grocery market grew by 80 percent to $2.66 billion in 2020, largely as a result of Covid-19 and the ensuing lockdown. It is predicted to grow exponentially over the following few years as a result of growing internet connectivity and escalating consumer demand for convenience, value, safety/hygiene, ease of payment, and a wide range of products." (USDA Report, 2021). As the three phases of the pandemic-before, during, and after-have shown a lot of alterations in the lives of customers, them being aware of and welcoming to online grocery websites now is a start that brings out the opportunity for both already established brands in the business to up their game and for new ones to enter a productive market.

2. Objectives of the Study

The objectives of this research are twofold:

2.1 To determine the cash flows, market distribution, and future scope of BigBasket, Grofers, Reliance Fresh/JioMart, and Amazon Pantry before, during, and after the pandemic.

2.2 To analyse the factors that influenced customers' decisions to visit the aforementioned websites before, during, and after the pandemic.

3. Problem Statement & Scope of Study

With the epidemic, online e-grocery websites have seen a significant productivity improvement. As there was a significant increase in the sales of e-grocery websites during the pandemic compared to before it, consumers' decision to use these websites after the pandemic is somewhat uncertain. These considerations raise the following inquiries: Will customers back out, or will they continue to fulfil their grocery requirements online? What considerations prompted people to choose a specific website for grocery shopping before, during, and after the pandemic? Which products were purchased the most during the three stages of the pandemic—before, during, and after? What do consumers expect from the online grocery industry in the future? What are the prospects for the e-grocery sector in the future? In light of the foregoing, it is critical to comprehend customer choices about e-grocery websites before, during, and after the pandemic, as well as to analyse the productivity of these websites throughout the same period. This is critical in determining whether the future of the e-grocery market is bright or bleak. As a result of the global pandemic, this study will examine several factors that influence consumers' preferences for online grocery shopping websites (BigBasket, Grofers, Reliance Fresh/JioMart, Amazon Pantry, and Others) in Delhi and Rohtak before, during, and after the pandemic. Furthermore, the study will analyse the cash flows and market distribution of the aforementioned as well as emerging e-grocery platforms to assess their financial position and growth before, during, and after the pandemic to estimate the websites' future situation and ascertain whether the existing and upcoming e-grocery websites future is prospering in this industry or not.

4. Review of the Literature

According to (Yadav, 2021), "It is evident that consumers as well as the e-retailers all faced setbacks in some or the other way. However, Covid-19 became the new norm, more and more people are no more hesitant in buying their groceries from their favourites e-retailers." The study analyses data from 150 respondents in Delhi NCR, to conclude that Bigbasket was the most preferred website during the pandemic. However, this may not be the case if the website does not reach consumers in other minor cities. (Grashuis, Skevas and Segovia 2020), did a survey of 900 grocery shoppers in the United States to study the preferences of grocery shopping during the Covid-19 Pandemic and concluded that an increase in cases and fear of the virus affect consumers' decision to shop in-stores? However, the study limits its findings based on the increasing, constant, and decreasing number of Covid-19 cases and does not involve additional factors that can influence buying grocery decisions.

(Kaur and Shukla, 2017), in their study analysed various factors that can influence the attitude of consumers to do online grocery shopping. The important implication of the study was that Indian grocery retailers need to ensure that websites developed for them should be useful and easy to use. According to

(Saleem, Khan, and others 2018), the 4 major primary factors to ascertain the attitude of consumers towards online grocery, shopping choices are perception, awareness, readiness, and willingness. Among these, they included other individual factors that influence buying groceries online and factors that make consumers avoid online grocery shopping. They concluded that the next step for online grocery shopping platforms is to understand how relevant their offerings are to the audience. (Li and Ohlson, 2017), concluded in their study to investigate the factors that influence shopping for groceries online v/s offline product quality, time-saving, and offers/discounts by websites to lower prices influence the consumers to buy online. Further, they added that dry groceries are likely to purchase more online compared to fresh groceries. (Hand, Riley, Harris, Rettie, and Singh, 2009), in their study comprehended the triggers that influence online grocery shopping and found that both the qualitative and quantitative data led to the importance of situational factors (having a baby or having health problems) being the main trigger for consumers to buy groceries online and reduced online shopping once the initial trigger disappeared or they experienced a problem with service. (Budhiraja and Mittal, 2016), concluded in their study that the main reason to buy groceries online included saving time and effort, quality of products, and the option of replacement. In addition to this, they concluded that the popularity of buying online groceries was mainly among the service profession and working women. (Rajesh, 2019), concluded in her study that, "Study shows that product descriptions, delivery, and replacement of products and product choice & availability online were the major factors for online shopping." (A.V. and Nagendra, 2016), in their study included various factors discovered that there is no substantial influence of return policy on consumer attitudes regarding online grocery shopping, and that website design has no favourable impact on people shopping for groceries online. Furthermore, they concluded that females between the ages of 39 and 45, undergraduates, and employed professionals constitute the majority of those who buy groceries online. (Kashyap, 2020) in her study to identify whether the consumers will continue shopping their groceries, online post-pandemic concluded that 95 percent of the respondents agreed to shop online favouring 2 factors accessibility and time efficiency and do not consider the option of return/exchange, price, and quality of products that important. (Chandani and Trivedi, 2021) their study about grocery shopping preferences in the post-covid world concluded that convenience seems to be the primary reason for a customer to opt for online shopping of groceries and physical inspection of products impacted this decision and led them to offline stores. The study also identified that sales of grocery sites like Grofers and BigBasket increased during the pandemic and aggregators like Zomato, Swiggy and JioMart joined the trend of delivering groceries. (Tyrväinen and Karjaluoto, 2022) in their study of e-grocery shopping and the impact of Covid-19 on consumers' intentions to buy groceries online reveals a rise in online grocery buying throughout the pandemic. However, all these studies do not identify the preferred e-grocery website by the consumers and whether the e-grocery market will bloom in the future.

5. Research Methodology

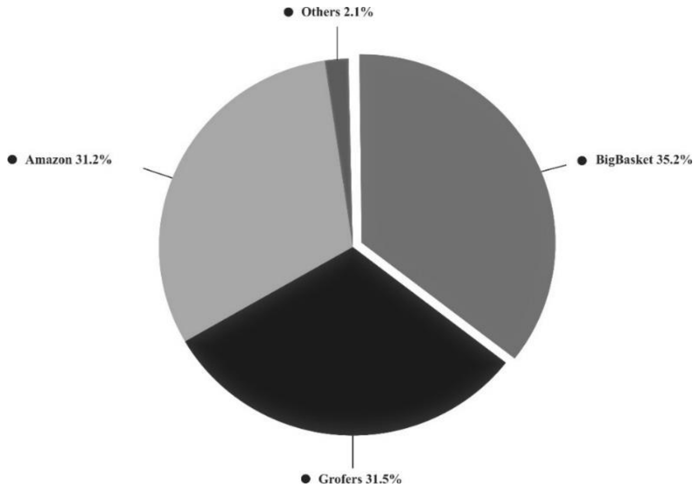
The study employs both qualitative and quantitative methods. Data on E-grocery website revenues, and market share during specific periods were gathered online. Data regarding consumer preferences were gathered by providing a questionnaire to online grocery shoppers in Delhi and Rohtak, combining convenience and snowball sampling. Multiple-choice questions were asked in the questionnaire to measure the fundamental information regarding their purchase pattern, preference for websites, and various grocery products before, during, and after the epidemic, and a 3-point Likert scale was used to measure the factors influencing consumers' choice of a certain grocery website. Within the timeframe, 103 respondents completed questionnaires, and their responses were analysed using SPSS software and interpreted in tables, and figures and Mean and Standard Deviations were used to determine significant differences in various individual factors in choosing a particular website and their future considerations about online grocery shopping.

6. E-grocery Websites Revenues, Market Share, and Future

Table 1: E-grocery Websites Revenue, Expenses, Losses, and Future Aims

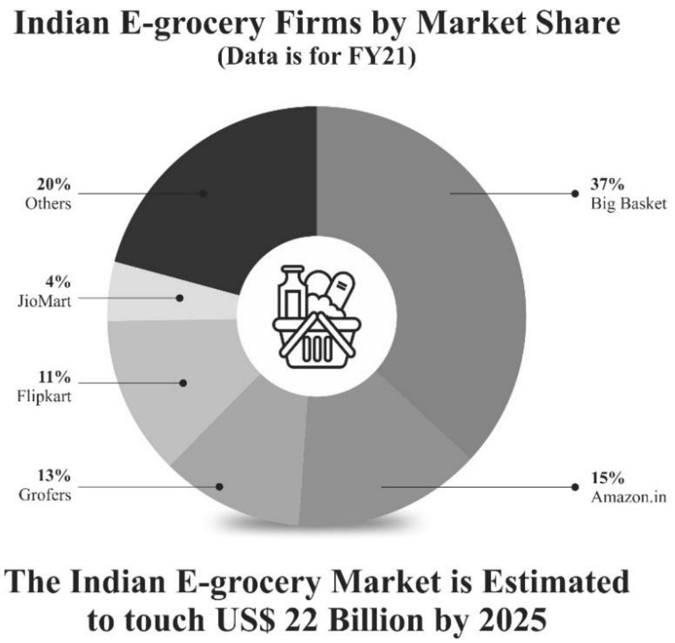
Particulars	Bigbasket	Grofers	Amazon Pantry	Reliance Fresh/Jio Mart
Sales	36% increase in sales from 2019-2020 (Bhalla, 2021).	84% increase in revenue from 2019-2020 (Bhalla, 2021).	414% increase in operating revenue from 2019-2020	• In 2014, a new website called "RelianceFreshDirect.com" was launched to deliver goods to customers' homes (Anand, 2014). • Following the global pandemic and shifting consumer demands, Reliance Retail launched JioMart in 2020. JioMart claimed to provide free
Expenses	31% increase from 2019-2020 (Bhalla, 2021).	53% increase from 2019-2020 (Bhalla, 2021).	281% increase in total expenses from 2019-2020	
Losses	INR 709.9 Cr. loss in 2020 from INR 562.6 Cr. in 2019 (Bhalla, 2021).	42% increase from 2019-2020 (Bhalla, 2021).	131% increase in total loss from 2019-2020	

Future/ Results	• Company increased by 80% in 2021 compared to 40-45% before pandemic (Bhalla, 2021). • TATA group has expressed interest in buying the company (Bhalla, 2021). • As a result, the company has not only begun but will also be moving forward in a positive direction.	• Grofers will now be operated as Blinkit with a new goal statement- instant commerce indistinguishable from magic. • Grofers grew in popularity as a result of the pandemic and recently was backed by Zomato. As a result, Grofers is stepping up its game and is poised to achieve some excellent goals in the future (Business Insider India, 2021).	• As the Retail unit does not give separate break-ups for grocery sales, the five-fold increase in the Operating revenue of Amazon's Food Retail unit in FY 2020 tells that the grocery business is likely to have grown at a similar pace (Vardhan and Tyagi, 2021). • Amazon pantry as a part of Amazon having business over 300 cities across India have gained popularity during the pandemic and ensures a bright future (Singh 2020).	home delivery, no minimum purchase, and rapid delivery in over 200 Indian cities (Shubham, 2021). • In FY 2022 Reliance Retail's consolidated sales was $1, 99,704 crores and its net profit was $7,055 crores (FORTUNEINDIA.COM, 2022).



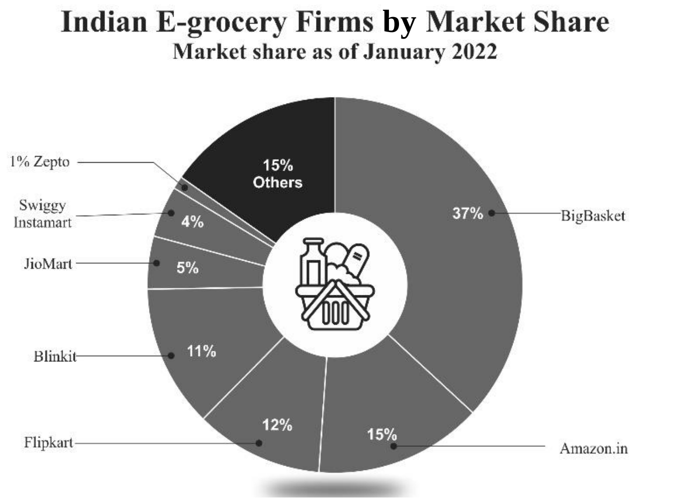
Source: Statista Research Department [21]

Figure 1: Market Share of E-grocery Platforms across India in 2019



Source: PGA Labs – the market research arm of Praxis Global Alliance [6]

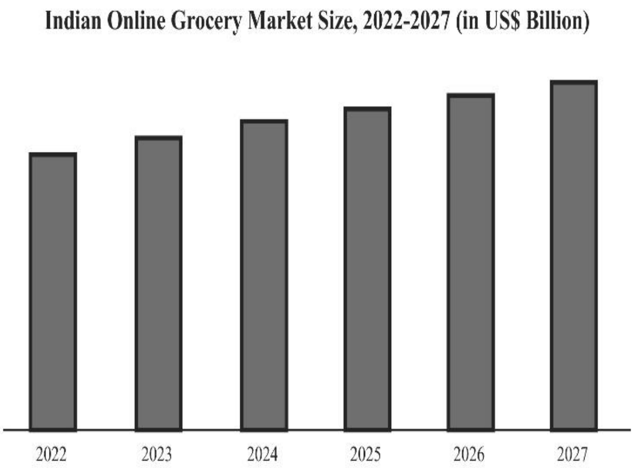
Figure 2: Market Share of E-grocery Platforms across India in 2021



Notes: Data is based on their gross merchandise value (GMV), 'Others' refer to players such as Milkbasket, Nature's Basket, Paytm Mall, and online platform for omnichannel stores such as Spas and DMart.

Source: PGS Labs Competitive Intelligence [14]

Figure 3: Market Share of E-grocery Platforms across India in 2022



Source: www.imarcgroup.com [9]

Figure 4: Future Market Size of E-grocery Platforms

7. Market Share Analysis and Future Scope

Figure 1 illustrates the distribution of e-grocery platforms in 2019, before the pandemic, with Bigbasket leading the way, followed by Grofers, Amazon, and Others. Figure 2 illustrates the market share of e-grocery platforms in 2021 when the epidemic was in full swing. Bigbasket was still in first place, followed by Amazon and Grofers. Additionally, several new players, such as Flipkart and JioMart, were added to the market share. Figure 3 shows the market share of e-grocery platforms in 2022 after the pandemic has passed. BigBasket continues to be the most popular, followed by Amazon and Flipkart, Blinkit (the new name for Grofers), JioMart, Swiggy Instamart, Zepto, and many Others. Figure 4 depicts the e-grocery market's future from 2022 to 2027.

According to secondary statistics for e-grocery platforms acquired from numerous internet sources, established companies have a bright future since, despite losses, sales have increased, and new players joining the field are also vying for customers. As a result, the e-grocery industry appears to be rapidly expanding to ensure a bright future.

8. Demographic Data Analysis and Interpretation

Table 2: Demographic Profile on Online Grocery Shopping

Demographic Variables		N	%
Age Group	15-24	27	26
	25-34	46	45
	35-44	23	22
	45-54	4	4
	55 & above	3	3
	Total	**103**	**100**
Resident of	Delhi	52	51
	Rohtak	51	49
	Total	**103**	**100**
No. of family members	1	2	2
	2	3	3
	3	21	20
	4 or more	77	75
	Total	**103**	**100**
No. of working members	1	40	39
	2	35	34
	3	18	17
	4 or more	10	10
	Total	**103**	**100**

Demographic Variables		N	%
Family income (Monthly)	Less than 50,000	22	21
	50,000-1,00,000	36	35
	More than 1,00,000	45	44
	Total	**103**	**100**

***Note:** Only those who purchased groceries online responded to the survey, Income is presented in Rupee, Percentage is rounded to the nearest tenth.*

Table 2 displays the demographic characteristics of 103 online grocery shoppers from Delhi and Rohtak. According to the percentage values, respondents in the age group 25-34 are the most likely to buy online groceries 45 percent Table 2 next displays the number of respondents' family members. Out of 103, the findings show that the majority of respondents have 4 or more family members. Table 2 also indicates how many members of the respondent's family work. The case for this variable is exactly contrary to the case for the number of family members, with the highest percentage of working members in the family being 1 (39 percent). And table 2 shows the monthly family income of the respondents. The result shows that 44 percent of the respondents have more than 1, 00,000 monthly family incomes.

9. Online Grocery Shopping Attitude

Frequency of Purchase

Figure 5 presents the frequency with which people bought groceries online before, during, and after the pandemic. In three stages, the findings demonstrate that, while purchasing groceries in 30 days was highest before the epidemic, it fell afterward, and consumers purchased groceries more quickly during and after the pandemic, which is in 15 days.

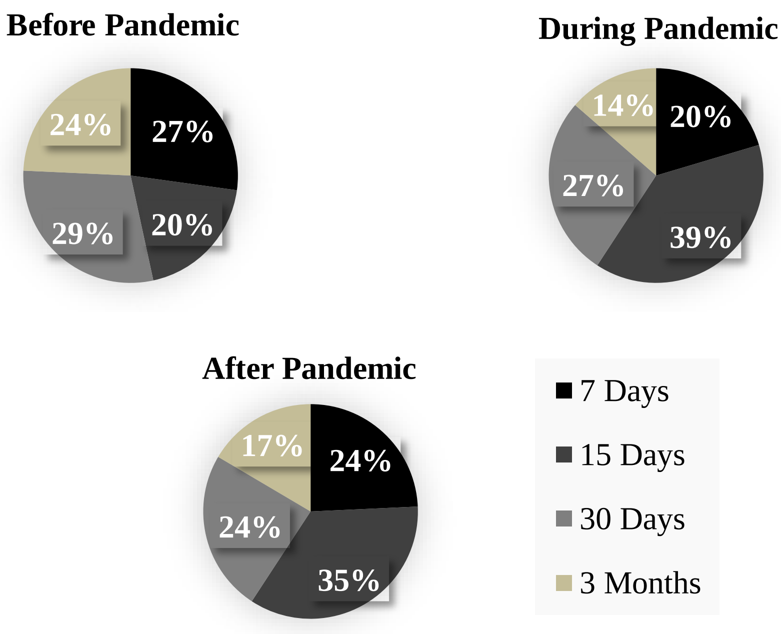


Figure 5: Frequency of Consumers Purchasing Grocery Items Online
Notes: *Percentage rounded to the nearest tenth.*

10. Monthly Expenditure

Figure 6 presents the monthly expenditure by consumers for online grocery shopping before, during, and after the pandemic. In three stages, the findings show that while spending less than 5,000 was highest before the pandemic, it decreased during the pandemic, whereas other consumer spending climbed throughout the outbreak. Although spending more than 15,000 dollars increased in all cases, the rise was minor. As a result, consumers took the lead, paying 5,000 to 10,000 during and after the pandemic.

11. Time Spent

Figure 7 presents the time spent by consumers buying groceries online before, during, and after the epidemic. In three stages, according to the findings, it can be concluded that even though 1-2 hours saw a good amount of rising from the beginning and spending less than 1 hour saw a great decrease during the pandemic, increasing very little after, it was the most desired period by consumers during all three phases of the pandemic.

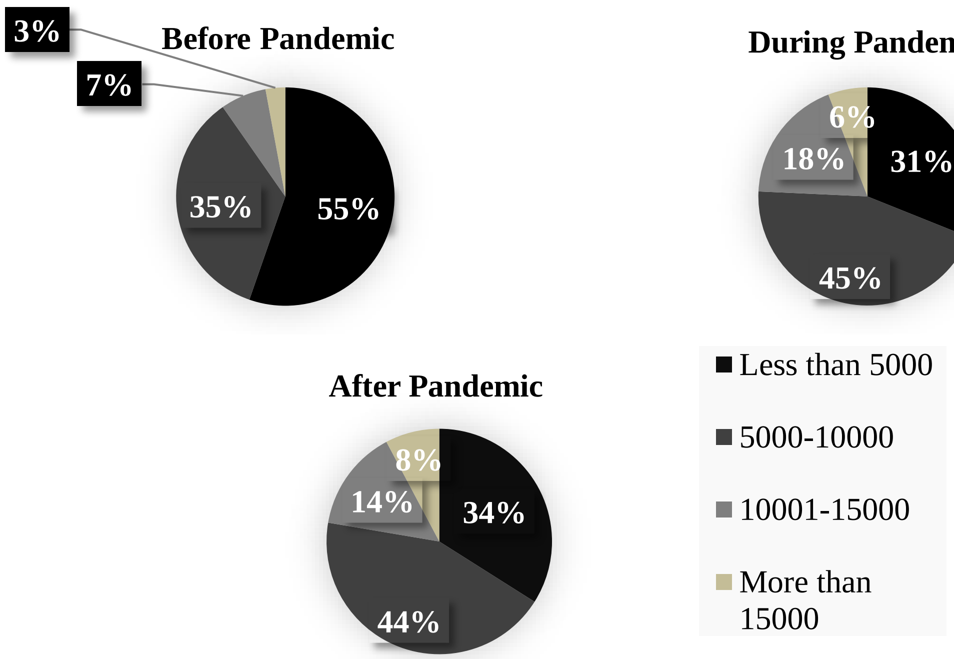


Figure 6: Monthly Expenditure by Consumers for Online Grocery Shopping

Notes: *Figures are in thousands and the Percentage is rounded to the nearest tenth.*

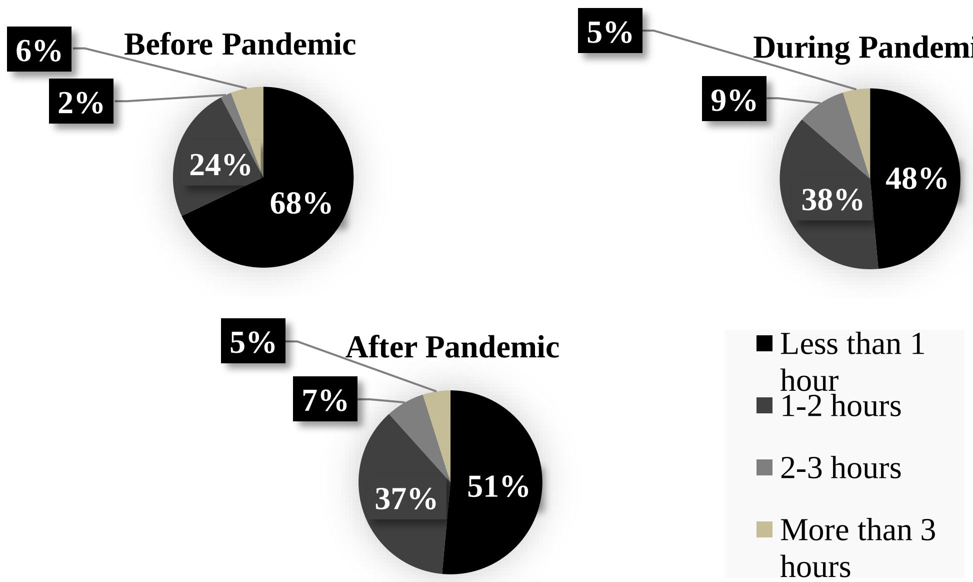


Figure 7: Time Spent by Consumers for Online Grocery Shopping

Note: *Percentage rounded to the nearest tenth.*

12. Choice of Grocery Products Online

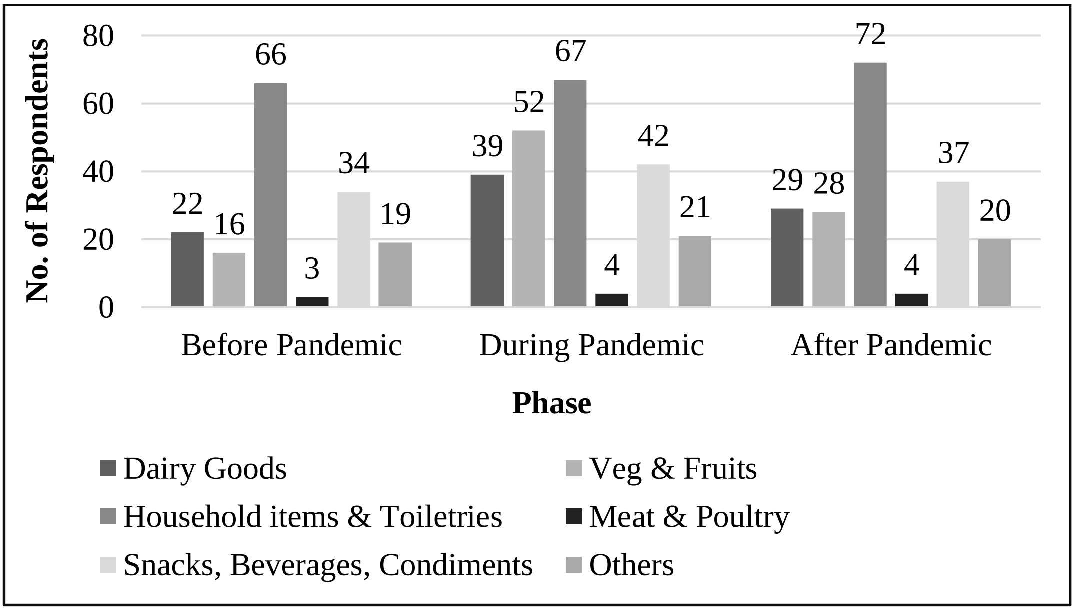


Figure 8:- Choice of Products by Consumer in Online Grocery Shopping
***Note:** Multiple Responses Allowed*

Figure 8 illustrates the frequency with which buyers purchased various grocery products online before, during, and after the epidemic. In each of the three stages of the pandemic, respondents were asked to select their preferred product category. Dairy products, Vegetables and Fruits, Household items and Toiletries, Meat and Poultry, Snacks, Beverages and Condiments, and Others were among the products presented to the respondents. It is observed that:

- During the epidemic, people were more interested in buying all types of products than they were before the pandemic.
- Although demand for dairy products, vegetables and fruits, snacks, beverages and condiments, and others increased during the epidemic, it fell subsequently. However, it was still higher than it had been prior to the pandemic.
- Consumers' preferences for buying household items and toiletries have continued to rise.
- Meat and poultry saw a modest uptick during the pandemic but thereafter remained unchanged.

13. Most Preferred Website for Grocery Shopping

Combined Analysis

Figure 9 illustrates the most preferred website by consumers for their grocery needs among Amazon Pantry, BigBasket, Grofers, Reliance Fresh/JioMart, and Others before, during, and after the pandemic. In the three stages of the pandemic, the results reveal that Reliance Fresh was the most popular before the epidemic, then dropped to second place after Grofers during the outbreak, and then rose to first place again after the pandemic.

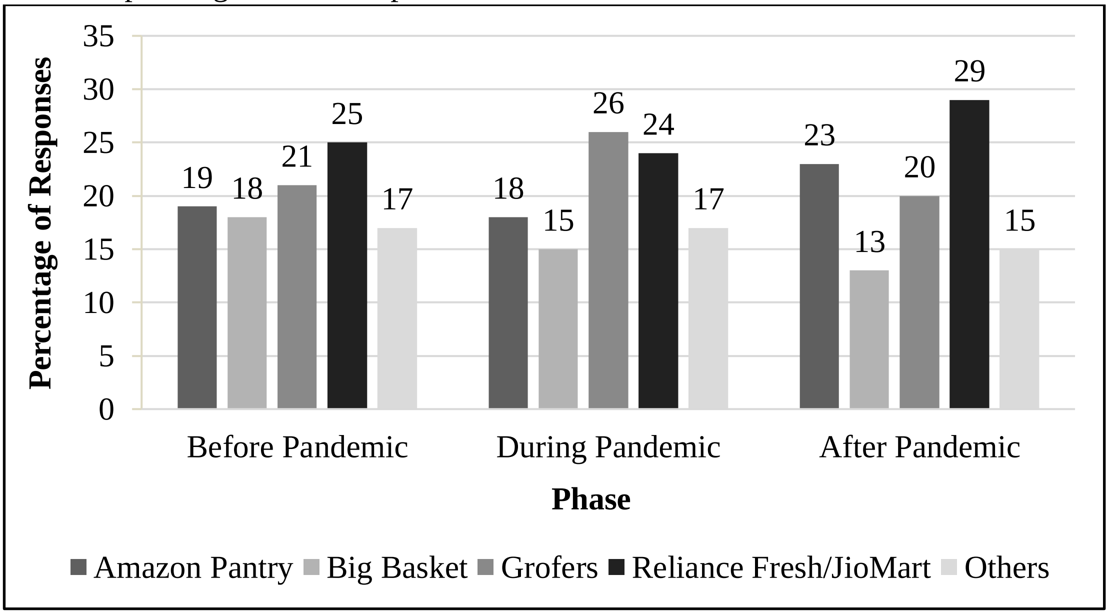


Figure 9: Most Preferred Website by Consumers for Online Grocery Shopping

Notes: *The Percentage is taken of the total responses, that is, 103. Percentage is rounded to the nearest tenth*.

Location Based Analysis

Figures 10 and 11 illustrate respondents' preferences for e-grocery websites in Delhi and Rohtak, separately.

- Residents of Rohtak favoured Amazon Pantry, Reliance Fresh/ JioMart, and Others over Delhi in all scenarios.
- In all circumstances, Delhi residents preferred BigBasket and Grofers to Rohtak residents.

The findings show that when preferences for website choice are analysed based on location, distinct outcomes are obtained. As a result, while buying groceries online, the customer's location is a crucial factor in the choice of a website.

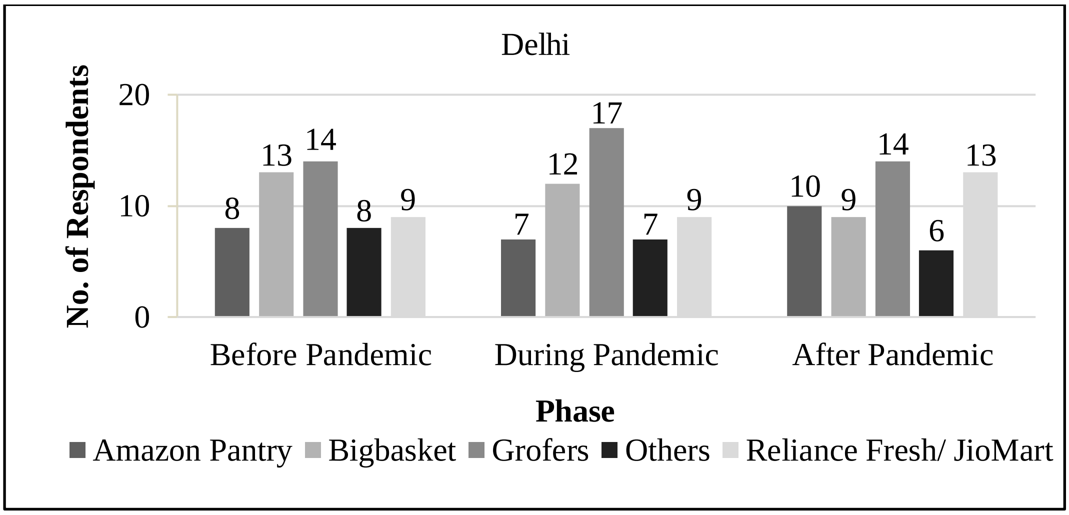


Figure 10: Most Preferred Website by Consumers for Online Grocery Shopping in Delhi

Notes: *The Number of respondents of Delhi are 52 in total.*

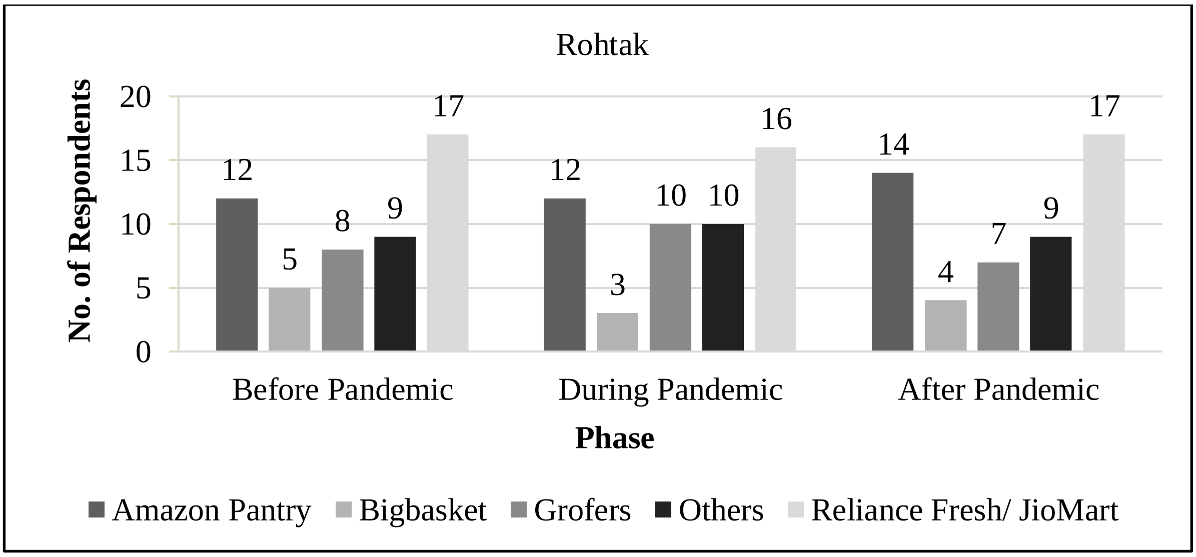


Figure 11: Most Preferred Website by Consumers for Online Grocery Shopping in Rohtak

Notes: *The Number of respondents of Rohtak are 51 in total.*

14. Mean and Standard Deviation of Individual Factors

Table 3: Mean and Standard Deviation of Individual Factors for Choosing a Particular Website

Measurement Factors	Mean	S.D.
User-friendly website	2.55	.573
Variety of products availability	2.49	.575
Pictorial representation of products	2.45	.59
Easy to find products	2.59	.532
Easy ordering process	2.67	.512
Quality of products	2.8	.428
Refund option	2.78	.463
Return of wrongly delivered items	2.78	.441
Safety of personal & payment credentials	2.8	.428
Delivery available to my location	2.8	.428
Out-of-stock products availability as soon as possible	2.76	.431
Free delivery	2.67	.512
Discounts/Offers	2.59	.532
Same-day delivery availability	2.43	.604
Customer-care services	2.76	.474
Tracking of placed orders	2.68	.546
Availability of mobile applications	2.68	.546
The popularity of website	2.38	.673
Positive reviews of website	2.6	.548

**Likert Scale 1 = Not Important, 2 = Neutral, 3 = Very Important*

Table 3 displays the Mean and S.D. of individual factors for selecting an online grocery shopping website. After analysing the data, it was discovered that customers place the most importance on three factors: product quality, security of personal and payment credentials, and delivery to their location (Mean=2.8, S.D.=.428). Aside from that, customers appear to be concerned about incorrectly delivered things being returned (Mean=2.78, S.D.=.441), refund options (Mean=2.78, S.D.=.463), customer-care services (Mean=2.76, S.D.=.474), and out-of-stock products being available as soon as possible (Mean=2.76, S.D.=.431).

Order tracking and availability of mobile applications (Mean=2.68, S.D.=.546), Easy ordering procedure and free delivery (Mean=2.67, S.D.=.512), positive website reviews (Mean=2.6, S.D.=.548) were some issues that consumers were concerned about. Consumers believe the criteria listed above to be considered when choosing a grocery shopping online. Other than that, variables such as easy-to identify necessary items and Discounts/Offers (Mean=2.59, S.D.=.532), user-friendly website (Mean=2.55, S.D.=.573), and product variety (Mean=2.49, S.D.=.575) appear to be fairly essential in customers picking a grocery website to satisfy their grocery demands.

Consumers do not appear to appreciate factors such as product presentation (Mean=2.45, S.D.=.59), same-day delivery availability (Mean=2.43, S.D.=.604), and website popularity (Mean=2.38, S.D.=.673) when shopping for groceries online.

15. Mean and Standard Deviation of Consumer Attitude in Future

Table 4: Consumer Attitude towards Online Grocery Shopping in Future

Preference	Mean	S.D
Prefer to buy grocery items online	2.26	.7
Prefer to change my website on the recommendation of others	2.15	.706
Prefer to try existing websites popular than my choice of a website if in reach	2.42	.603
Prefer to try new websites introduced for online grocery shopping if in reach	2.4	.662

**Likert Scale 1 = Least Likely, 2 = Neutral, 3 = Most Likely*

Table 4 shows the Mean and S.D. of customer preferences for online grocery shopping in the near future. Consumers are more likely to attempt to buy from existing websites that are more popular than their current preference if they are within reach (Mean=2.42, S.D.=.603). The majority of respondents (Mean=2.4, S.D.=.662) would test new grocery websites to fulfil their grocery needs if they were within their reach and would prefer to buy groceries online in the future (Mean=2.26, S.D.=.7). The majority of respondents are undecided about changing their website choice based on recommendations from others (Mean=2.15, S.D.=.706). Given customer preferences in the future and their willingness to try new platforms if delivery is available to their location, existing and new e-grocery platforms appear to have a promising future.

16. Conclusion and Discussion

Consumers in India have changed their preferences as the world changes, starting with local Kirana stores and progressing to e-grocery websites. Pandemic have played a significant role in recent times, which is why this study's findings are based on three phases viz. before, during, and after the pandemic. First, an examination of e-grocery websites revealed that BigBasket, which had suffered a loss prior to the pandemic, had a positive impact on its sales during the pandemic. Grofers, which had suffered a loss prior to the pandemic, had gained in sales and popularity during the pandemic. Amazon Pantry, which is part of Amazon Retail, made minor profits and can be considered a competitor to other popular brands, and Reliance Retail can be considered as having observed changing preferences and acting accordingly, as seen by Reliance Fresh being online well before the pandemic and the introduction of JioMart with large claims during the outbreak. Understanding the functions of the aforementioned e-grocery platforms in the e-grocery sector independently, it can be inferred that with the growing need for e-platforms, both existing and future entrants will be a part of a booming sector. This is supported by data gathered on the market distribution of these e-grocery platforms, which shows how much the e-grocery sector has developed between 2019 and 2022 and promises to do more.

Secondly, an examination of demographic data revealed that the most attentive age group to shop for groceries online is 25-34, the majority of respondents have four or more family members, majority of working members are one, and the average monthly income of the family members are more than 1, 00,000. This concludes that the number of family members has the least influence on online grocery shopping selections when compared to working members and monthly income. The study's findings on consumers' grocery shopping attitudes show that when comparing before, during, and after pandemic periods, the frequency of buying groceries decreased from 30 days to 15 days, and the majority of consumers preferred to pay 5,000-10,000 while spending less than 1 hour for buying grocery products online across all three periods. The study also found that during and after the pandemic, there was a considerable increase in consumer purchasing behaviour for products such as dairy goods, vegetables and fruits, snacks, beverages, and condiments as compared to before the epidemic. Throughout the three periods, products such as home items and toiletries, as well as meat and poultry, showed a modest increase. According to the survey, Reliance Fresh/JioMart was the most favoured website before and after the epidemic, however during the pandemic, Grofers gained the lead, while other e-grocery platforms evaluated in the study were in tight competition. The outcomes of the second examination of Delhi and Rohtak respondents for their favourite websites were different, indicating that location plays a significant impact on e-grocery platform preference. When researching the specific criteria that influence website selection, the top three were product quality, security of personal and payment credentials, and delivery to selected locations. Finally, the future attitudes of customers toward online grocery shopping were researched, and it was discovered that they are more inclined to test current popular websites other than their preferred ones, as well as new websites introduced in the sector if they are within their reach. All of the paper's results, including research on customer preferences for online grocery shopping websites and e-grocery platforms present situation analysis, indicating that the e-grocery industry will be thriving in the future for both existing and upcoming e-grocery platforms.

17. Future Scope

Consideration of only two cities for consumer responses with a sample size of 103 stands as one of the major limitations of this study. The inclusion of more cities and respondents may differ from the most preferred website by the consumers as location plays a vital role. Also, the factors included in studying the choice of websites are limited, as there can be many other factors that are not included in the study because consumers’ preferences and tastes are always changing. The study analyses the overall significance of the three phases- before, during, and after the pandemic and not a detailed study of each period. Considering all limitations, future studies can extend the sample size to more cities and include more individual factors to determine why people opt for a particular website to fulfil their grocery needs.

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Nurturing Climate Financing and Socially Responsible Investment for Building Resilient Infrastructures in India

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Abstract

It is very high time to act now without making any further delay in developing resilience infrastructure to secure a safe, healthy, and prosperous environment on planet earth for our generation next as extreme changes are taking place due to climate change. Since disasters are not natural but the hazard is, so we have to counter only natural hazards and our own people's behaviour on climate change. Innovative Disaster Risk Reduction (DRR) techniques are to be adopted for reducing the reoccurring damages caused by the natural hazards like cyclones, droughts, earthquakes, and floods by developing resilience infrastructure for its prevention and proper mitigation. DRR is one of the fast emerging concept and practices followed by today's world under the aegis of UNDRR for reducing the risk of disasters through sincere efforts by analysing and reducing the causal factors being responsible for disasters. Reducing our exposure to natural hazards and reducing the vulnerability of surrounding people and loss of their property, judicious management of land and the environment, and recuperating our preparedness and deploying multi-hazard early warning systems for adverse events are a few examples of DRR methodologies. As disasters often follow natural hazards and their severity depends on how many knock a natural hazard has on the society and on the environment itself. The scale of the blow of disaster in turn depends on the choices we make for our lives and for our environment. These choices relates to how we grow our food, where and how we build our houses, what kind of government we have, whether good governance principles are in place and how our financial system works and even what we teach in our schools? Every decision and action makes us more vulnerable to disasters or makes us more susceptible to them. Thus Climate Financing and Socially Responsible Investments must now be promoted to develop the long-term infrastructures and investment planning based on the robust Environmental Social and Governance Analysis (ESG). In order to achieve the Sustainable Development Goals and attain Environmental Sustainability (ES), the risk-informed finances and investments are needed for countering the increasing uncertainty in the present external environment aroused as a result of ignoring the consequences of Climate Change.

Keywords

Climate change, Climate financing, Environmental protection responsibility, Environmental Social & Governance (ESG) analysis, Environmental sustainability, and Resilient infrastructures.

1. Preface

The indications of climate change are quite prominently visible and often felt now-a-days, one can visualize the effect of climate change in the recent heavy down-pour in the cities of Bangalore, Hyderabad, Mumbai, Pune, Gurugram, and Bhopal, recent heavy floods in Assam, Bihar, and State of MP, cloud burst, avalanches, and landslides in the Uttarakhand and Jammu Kashmir regions etc. Other globally visible prominent Climate Change Indications for examples are melting of glaciers, avalanches, average 3-5 degree temp rise, flash flood, heavy downpour, cloud burst, landslides, tsunamis, cyclone, wild forest fire, coastal floods, melting of glacier ice, green-house gas effects, droughts, earth quacks, frequent lightning strikes, pandemic, dust storms, heavy thunders and wind storms, extinction of certain eves and species, profuse deforestation, wild-life de-habitation, heavy air pollution, coastal erosion, tide locking, storminess and wind damage, severe heat, cold fog, frequent hurricane hazels, tornadoes, rise in sea levels, depletion of ozone layers, extinction of giant reptiles, tiny sparrows and planet's beautiful butterflies to name a few. Let us not forget that there are many conspicuous signs we shall not ignore which gave us very clear warnings and indications that we must prepare ourselves for countering the effect of climate change and start taking risk-informed business decisions by promoting climate financing and socially responsible investments for building resilience infrastructures in India for saving our generation next from the future hellhole of natural disasters arising as a result of climate change.

2. Objective of the Study

In spite of seeing conspicuous warning signs in the past against the unnoticed natural events, we were not able to estimate the risk of disasters in its real sense though there were visible signs and warnings which were not properly exposed. However, the modern disaster risk reduction (DRR) techniques facilitate us to foresee the dangerous situation in advance and direct us to take all adequate safety measures in anticipation and in a more disciplined way through the latest scientific detection and warning systems in the early stages of disasters for saving the precious life and habitats. Therefore the main objective of this research study paper is to spread awareness to build the Climate Resilience (CR) Societies by sharing the basic knowledge among private and corporate sectors for developing the risk proof value chains with full government support, and to encourage the Climate Financing (CF) for private sectors and to promote Socially Responsible Investments (SRI) for initiating Corporate Social and Environmental Protection Responsible (CSEPR) Activities in the corporate as well as in government sectors to develop the resilient infrastructure for reducing the risk of disasters and to ensure that the disaster-prone livelihoods were not exposed to risk in their day to day working life. Thus a meticulous Environmental Social and Governance Analysis (ESG) on all the mysterious aspects of Climate Change is currently needed to build the climate resilient societies among all affected inhabitants with the help of full government support and through private sector alliance, where people can live and work together fearlessly from the present era of working and living dangerously in the uncertain environment aroused mainly due to the prominently visible effects of the Climate Change (CC). So in order to achieve a considerable reduction in the risk of disaster and loss of life and properties, we must set our action priorities to take immediate remedial action to counter the effect of Climate Change and to achieve the 7 global strategic targets and 38 indicators, as set by the UNDRR under Sendai Frame Work to focus on the Target G: “Substantially by 2030”.

3. Survey of Literatures

During the last two decades, disasters have killed 1.3 million people and affected 4.4 billion in others in irreversible ways. World-wide it is a reported fact that in past three decades the frequency of disasters has almost doubled and the financial losses have tripled. If no investment is made in for building resilience the sustainable developmental goal will never be achieved (Mami Mizutori, 2018). Disaster is subjective in nature (Mohd Iqbal, 2020), it affects all people and all sectors, and it never discriminates (E Garnier, 2019). Since nothing undermines development and prosperity like a disaster, thus we must ensure the building of resilient societies. The damages caused by the natural hazards like cyclones, droughts, earthquakes, and floods can be substantially reduced through an act of identifying the risk in advance and reducing the same for the prevention of hazard (UNISDR, 2016). By adopting the latest innovative DRR techniques (Words into Action, 2022) we can substantially reduce our exposure to hazards, which also diminishes the defenselessness of surrounding populations and the loss of their properties. Thus wise management of land and the environment, and efforts for improving the preparedness and latest methods of early detection and advance warning systems for predicting adverse events may perhaps be adopted for reducing the heavy economic losses reported due to disasters. The disasters are not natural, as disaster risk is equal to hazard multiplied by its exposure and multiplied by its vulnerability (USAID, 2013). Further, the disaster risk (R) = (V*H/C) can also be mathematically defined as equal to vulnerability (V) of exposure multiplied by the impact of hazard (H) and divided by the capacity (C) of coping, as illustrated above (Dewald van Niekerk, 2011). Hazard themselves does not constitute a disaster, but the magnitude of the disaster is termed as its adverse effects which, hazards have on our lives, our property, our infrastructure, and the environmental damage and cost of post-disaster recovery and rehabilitations etc. (Ilan, Kelman, 2020). Natural hazards do not have to roll into disasters to break the ferocious cycle of disasters, we have to Respond, Recover, and Repeat (Principles for Resilient Infrastructure, 2022). Thus we have to understand the risk of disasters in all their dimensions. Reducing the risk of disaster is everything we have to do to prevent or reduce the damages caused by natural hazards like earthquake, floods, droughts and storms (Strategic Framework 2022-2025). The aim of disaster risk reduction is basically its prevention, but when it is not possible then we have to think of minimizing the harm to people, their assets, and livelihoods by deploying an early warning system. The recently released UNDRR-WMO joint report analyzes the current status of the multi-hazard early warning systems (MHEWS) against the global target G of the Sendai Framework (Aminesh Kumar, 2022). Hazard risk assessment methodology basically consists of three components namely hazard identification, estimation of risk its vulnerability, and the social consequence evaluation (Ferrier and Haque 2002). For managing the risks associated with climate change, it is very essential for making long-term planning and taking the right policy decisions and adaptation measures, which shall be taken immediately (Yohe Gary, 2010). The world has seen the huge devastations unleashed by the recent floods in the Asia-pacific region. Extreme weather events will happen, but they do not need to become deadly disasters. Therefore real and concrete action plans on losses and damages must be made a global priority. All international financial institutions and civil societies must start investing in MHEWS and provide end-to-end support to those who do not have capacities, as we need to stop the destructions happening out of the disasters and contribute to a more resilient future (Mami Mizutori, 13 Oct 2022).

4. Statistical Data

Available secondary data are quite horrific and atrocious let's have a disastrous look!

Table 1: Annual Average Number of Deaths and Number of Millions Affected by Disaster Type in 20Y

Deaths	37942 Nos.	10442 Nos.	8648 Nos.	5185 Nos.	2146 Nos.
Disaster	Earthquake	Strom	Ext Temp	Flood	Drought+rest
Affected	82.7M	67.5M	37.4M	6.3M	6.2M
Disaster	Flood	Drought	Strom	Ext temp+rest	Earthquake

Source: https://undrr.org

Table 2: Total Number of 250 Plus Reported Disasters per Country in the Last 20Y

1. China	2. USA	**3. India**	4. Philippines	5. Indonesia
577	467	**321**	304	278

Source: https://cred.be

Table 3: Classification of Natural Hazards by Disaster Type

Geophysical	Hydrological	Meteorological	Climatological	Biological	Extra-Terrestrial
Earth Quakes	Flood	Strom	Drought	Animal Accident	Impact
Dry Mass Movements	Land Slides	Extreme Temperature	Glacial Lake Outburst	Epidemic	Space Weather
Volcanic Activities	Wave Actions	Fog	Wild Fire	Insect Infestation	-

Source: https://emdat.be/new-classification

Table 4: Total Number of People Affected in Millions with Major Events in the Last 20Y

Events	Drought	Flood	Flood	Flood	Drought
Year	2002	2003	2007	2010	2015
Country	India	China	China	China	India
Numbers	300	150	105	134	300

Source: https://cred.be

Table 5: Total Number of Reported Deaths in Thousands with Major Events in the Last 20Yrs

Events	Heat-wave	Tsunami	Earthquake	Strom	Earthquake	Earthquake
Year	2003	2004	2005	2008	2008	2010
Country	15 Euro C	12 Asi/Af	Pakistan	Myanmar	China	Haiti
Numbers	72.2	226.4	73.3	138.4	87.5	222.6

Source: https://cred.be

Table 6: Ten Deadliest Disasters Reported in the Last 20Yrs

Event	**Disaster Type**	**Country**	**Year**	**Death Toll**
1	Eq and tsunami	Indian Ocean	2004	226,408
2	Earth Quake	Haiti	2010	222,570
3	Strom	Myanmar	2008	138,366
4	Earth Quake	China	2008	87,476
5	Earth Quake	Pakistan	2005	73,338
6	Heat Wave	Europe	2003	72,210
7	Heat Wave	Russia	2010	55,736
8	Earth Quake	Iran	2003	26,716
9	Earth Quake	**India**	**2001**	**20,005**
10	Drought	Somalia	2010	20,000

Source: https://cred.be

Table 7: Total Numbers of People Affected by Disaster Types in the Last 20Yrs

Disaster Type	Flood	Drought	Strom	Earthquake	Rest & Others
People affected	1.65 Billion	1.43 Billion	727 Million	118 M	109M
Events % age	41%	35%	18%	03%	03%

Source: https://cred.be

Table 8: Total Number of People Deaths by Disaster Types in the Last 20Yrs

Disaster Type	Earth Quack	Strom	Extreme Temperature	Flood	Rest & Others
Reported Deaths in Nos.	721,318	199,718	165,923	104,614	42,564
Events % age	58%	16%	13%	09%	3%

Source: https://cred.be

Table 9: Top Ten Countries by Total Population Affected in Million by Disasters in Last 20Yrs

China	**India**	Philippines	Bangladesh	USA	Thailand	Pakistan	Ethopia	Brazil	Vietnam
1729m	**1083m**	149m	112m	110m	77m	60m	46m	41m	39m

Source: https://cred.be

Table 10: Top Ten Countries Most Affected by Disasters per 100,000 Inhabitants in Last 20Yrs

Eswatini	Mauritania	Cuba	Somalia	Mongolia	Zimbabwe	Philippines	Lesotho	Dominica	Niger
11380	9279	9051	8939	8664	8511	7796	7650	7560	7500

Source: https://cred.be

Table 11: Top Ten Countries by Total Deaths Reported by Disaster in the Last 20Yrs

Haiti	Indonesia	Myanmar	China	Pak	India	Russia	Sri Lanka	Iran	France
230077	187121	139759	113178	84604	79732	58300	37010	29636	25917

Source: https://cred.be

Table 12: Top Ten Countries by Total Deaths Reported per Million Inhabitants in the Last 20Yrs

Haiti	Myanmar	Sri Lanka	Somalia	Dominica	Bahmas	Samoa	Indonesia	AmSamoa	Niue
1159	139.9	95.2	86.4	67.3	54.2	46.1	41.6	35.0	29.2

Source: https://cred.be

Table 13: Breakdown of Recorded Economic Losses per Disaster Type in the Last 20Yrs

Strom	Flood	Earth Quack	Drought	Wild Fire	Rest & Others
1.39 Trillion	651 Billion	636 Billion	128 Billion	93 Billion	63 B$
47%	22%	21%	04%	03%	03%

Source: https://cred.be

Table 14: Breakdown of Recorded Economic Losses by Disaster per Continents in the Last 20Yrs

America	Asia	Europe	Oceania	Africa
1.32 Trillion	1.26 Trillion	271 Million$	82 Billion $	27 Billion$
45%	43%	09%	02%	01%

Source: https://cred.be

Table 15: Top Ten Countries by Economic Losses as % of GDP by Disaster in the Last 20Yrs

Dominica	Cayman	Haiti	Grenada	Turks/ Caicos	Bahamas	Guyana	Prico	Belize	Samona
15%	9.1%	8%	7.8%	5.8%	4.3%	3.6%	3.5 %	4.3%	2.1%

Source: https://cred.be

5. Setting Our Targets

The 7 global targets as set under Sendai Frame Work are to be made as a benchmark for setting the targets of every country in order to substantially reduce the global disaster mortality by the year 2030, with an aim to lower the average per 100,000 global mortality rates in the decade 2020-2030 as compared to the period 2005-15 and to substantially reduce the total number of people affected globally by the year 2030, aiming to lower the average global figure per 100,000 in the decade 2020 -2030 as compared to the period 2005-2015 and to reduce the direct disaster economic losses in relation to the global gross GDP by the year 2030. Therefore every country must substantially reduce the disaster damage to their critical infrastructure and disruption of basic services, like health, education, transportation, telecommunication and other basic facilities by developing its resilience by the year 2030. Every country must provide a helping hand in substantially increasing the number of countries in the development of their national and local disaster risk reduction strategies by 2030 (UNDRR).

Every country must also take a lead role in substantially enhancing international cooperation with other developing countries through their adequate measures and sustainable support system to complement their national actions for fair implementation of the Sendai Frame Work by 2030 and finally every country must collectively act to substantially increase the availability of and access to their early warning systems and disasters risk information and assessments to the people by 2030 (UNDRR).

6. Our Action Priorities

The 4 Action Priorities as set under Sendai Frame Work must also be prioritized well in advance for its fair implementation by every country by 2030. They must understand the disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics, and the environment. Such knowledge shall be used for risk assessment, prevention, mitigation, preparedness and response system. They must strengthen the disaster risk governance to manage disaster risk at the regional, national, and global levels, which is very important for prevention, preparedness, mitigation, response, recovery, and rehabilitation, as it fosters collaboration and partnership. They must promote public and private investment in disaster risk reduction for developing resilience for disaster risk prevention and reduction through structural and non-structural measures to enhance the economic, social, health, and cultural resilience of persons, communities, countries, their assets, as well as of the overall environment. They must enhance their disaster preparedness for providing an effective response and to “Build Back Better” in case of recovery, rehabilitation, and reconstruction. The growth of disaster risk means, there is a need to strengthen the disaster preparedness for response, to take action in anticipation of events, and to ensure that their capacities are in place for effective response and recovery at all levels. Since the recovery, rehabilitation, and reconstruction phase is a critical opportunity to build back better by integrating the disaster risk reduction methods into development measures (UNDRR).

7. Our Commitments

The 5 commitments, which must be full filled to develop the risk informed business strategies and to develop resilient infrastructures by every country. This can be very well achieved by raising awareness with respect to disaster risk and mobilization of the private sector, by exercising influence in respective spheres of expertise, by sharing domain knowledge, experience, and adaptation of the good governance practices amongst the private as well as public sectors, and by being a catalyst to generate innovation and collaboration in developing the risk informed business strategies and to develop resilient infrastructures by implementing the projects and activities to achieve the 7 global targets with 38 indicators of the Sendai Framework Resolutions as adapted by the United Nation Office for the Disaster Risk Reductions (UNDRR).

Thus every country, commitment shall be to prevent new and reduce the existing disaster risk by effective implementations of integrated, inclusive, economic, structural, legal, social, health, cultural, educational, environmental, technological, political, and institutional measures that overall prevents and reduces global exposure to hazard and vulnerability to disaster and increases the preparedness for an early response and recovery system, and in turn strengthen our resilience (Myung Hee, Kim, 2020).

8. Inferences and Recommendations

Imagine if in case we were not having Airport at Bhuj, how we should have received international aid in a few days of earth quack? Imagine if we have not built bridges across the giant Brahmaputra River then how we should have reached to the flood-affected people of the Upper Assam Region. Imagine if we have not planned for FCI and CWC food grain storage godowns then how we would have survived in drought and famine.

If no primary health centers were built at block levels then how we would have handled the recent pandemic? Don't forget, how better roads and logistics have helped us in supplying liquid medical oxygen tankers during the second wave of Covid-19. If no better communications means would have been developed then how we would have been remain connected to the rest of the world? And if we would not have developed the alternative renewable energy sources then how we would have solved the problems of scarcity of fossil fuels? "Thus to tackle climate change at a local and global level we have to rebuild our cities and economies to be greener, fairer, and more sustainable" (Sadiq Khan Mayor London, UK). Taking cognizance of on the prominently visible climate change effects and based on the above highlighted secondary data it is time to act fast, and without giving any second thoughts to it, we must start paying our highest consideration to ESG Policies to build upon the climate resilient infrastructures for everyone's safe and secure future at planet earth. We must develop our community-based early warning system for hazard monitoring and identify the warning signs of upcoming disaster, and communicate the multi-hazard warning information well in advance to the surrounding population likely to be affected to save their precious lives.

At the same time, we must start and initiate our preparedness actions to provide rescue and response by supporting the livelihoods, so that life can bounce back to normalcy after the deadliest impact of disasters. Thus immediate measures are to be taken to promote climate financing and to increase socially responsible risk investments for creating climate-resilient infrastructure particularly in the domain of agriculture, building, construction, communication, education, energy, finance, health, transport, and water sanitation to name a few. We must conserve our agriculture works for food security even in times of drought; we must prepare shelters incorporating design elements to withstand different hazards like storms, rains, thunders, tsunamis, and earthquakes, etc. Geographically three side boundaries of our country are fully surrounded by oceans and one side is covered by gigantic Himalayas thus the danger of disaster owing to Tsunamis, Storms, Floods, Earthquakes, Avalanches, and Landslides are always present, thus we must promote climate financing and socially responsible risk investment to counter the adverse effects arising due to climate change.

Therefore it is high time that Government must promote risk informed investments in the projects meant for creating resilient infrastructures and encourage climate financing by means of providing colossal tax relief to the corporate as well as private sectors working in this domain in our country. Thus it is recommended that the Corporate Social Responsibility Policy as defined under clause (i) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules 2014 of the Companies Act 2013 may perhaps be amended for promoting the education and employment sector

To ensure the enhancement of the vocation skills, and other livelihood enhancement projects meant for surrounding populations of the disaster prone areas. Accordingly amendments of Clause (ii) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the Companies Act, 2013, may also be considered for the promotion of gender equality, women empowerment and measures for reducing inequalities faced by the socially, and economically backward groups.

Similarly, amendments of Clause (iii) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the Companies Act, 2013, may perhaps be immediately considered for further strengthening the laws required for ensuring ecological balance and achieving environmental sustainability goals. Similarly amendments under Clause (iv) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the

Companies Act, 2013, can be considered for promotion and development of traditional arts and handicrafts to generate rural employment. For providing other livelihood options to the affected population similar amendments under Clause (v) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the Companies Act, 2013 may perhaps be considered. Risk-informed Investments from the corporate sectors in contributing to the funds set up by the Central Government for the socio-economic developments of the rehabilitees and for providing relief and measures for women's welfare as provided under Clause (viii) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the Companies Act, 2013 may be generously allowed with attractive tax incentives and similarly Climate Financing Schemes based on the low-interest rate loans may also be easily made available for making the investments required for rural development projects as provided under Clause (x) of Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules, 2014 of the Companies Act, 2013.

In view of the above, it is judiciously hoped that by initiating these futuristic initiatives the Govt. will ensure that the overall objective of the CSR Policies of all the PSU Cos. will endeavor to formulate, implement, monitor, and evaluate their CSR, Environmental Protection Responsibility (EPR) and Environmental Sustainability (ES) Projects and set right other relative activities through a structured mechanism, to include the better CSR EPR and ESG Proposals in their company's annual budget and will further ensure the effective utilization of the allocated budget by providing a robust inspecting and auditing mechanism to promote the climate financing and sensible risk investments to counter the effect of climate change and building resilient infrastructures in India. As climate change, population growth, unsustainable consumption, biodiversity loss, ecological degradation, disease outbreaks, food insecurity, political instability and conflicts, financial instability, and inequality are the major driving risk factors and increasing vulnerability in the development and humanitarian contexts across the world. Since the risk is increasing quite systematically and risk is the probability of an outcome having a negative effect on people, systems, or assets and it is also portrayed as a function of the combined effects of hazards, assets, or people exposed to hazard and the vulnerability of those exposed. So for reducing the risk, we have to be increasingly joined up in our actions by working across sectors, with ESG adaptation in our CSR activities to ensure harmony and to achieve the Environmental Sustainability Goals.

9. Future Directions

This year on international day for disaster reduction, i.e. on 13th Oct, the UN, Secretary General has addressed that: “The climate disasters are hurting countries and economies like never before. These increasing calamities cost lives and hundreds of billions of dollars in loss and damages. Three times more people are displaced by climate disasters than by war. Half of humanity is already in the danger zone.

However, the world is failing to invest in protecting the lives and livelihoods of those on the frontline and those who have done the least to cause the climate crisis are paying the highest prices”. The entire population are being blindsided by cascading climate disasters without any means of prior alert, as people need an adequate warning to prepare for extreme weather event (Antonio Guterres, 2022). Therefore Climate Financing and socially responsible investments are required to be promoted for building strong resilience infrastructure to reduce the risk of disaster across all sectors of development by taking due account of environmental, social, and governance (ESG) adaptations while making financial and investment decisions among the Indian corporate sector to achieve the Sustainable Development Goals (SDG). Government may perhaps think of introducing “Climate/Nature Bonds” for PSUs, Corporate Sectors, NGOs, and Private Players like that of Electoral Bonds for funding for Climate Financing Projects, or may start “DRR/Climate Fund” for Creating Green Assets for future utilization in disastrous situations as designed by Lian-Biao CUI, et al (2014), and recently proposed by Dr. Ben Caldecott, (2020).Or as being adopted in the case of PM Drought/Flood Relief Fund or PM Care Fund as lastly created during Covid-19 period. As we all know that Sustainable Development is a paradigm which is adopted by the United Nations to promote the economic development, which is inclusive and makes the life of future generations secure. The adoption of this paradigm has become an urgent need due to threats of global warming and scarcity of natural resources (fossil fuels). At the same time, if the fruit of economic development is not reaching to the bottom of the pyramid, then social and political instability will hamper the economic growth of our country. Therefore Systematic Research based on the latest technology and artificial intelligence may perhaps be undertaken and it may be judiciously funded particularly only to those higher technical educational institutes of national importance willing to work for developing an “Early Warning System” for identifying the future threats of disasters in advance by increasing the presently levied Educational Cess on Income Tax further by one more percent to make out the full benefits of the economic development and to keep it long-lasting, since there is a consensus around the world to strive for SDG without making any further delay (UNDRR Policy Brief No 2, Oct 2021). Therefore by focusing on the risk informed developments (as reported in the GAR, 2022) of the following core sectors namely agriculture, building and construction, education, energy, environment, finance, health, planning, telecommunication, tourism, transport, urban, and rural development, water and sanitation for building the climate resilience infrastructures and to achieve the environmental sustainability by increasing the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people in India by the year 2030. As sustainable development is the pathway to the future we want for all. It offers a framework to generate economic growth, achieve social justice, exercise environmental stewardship, and strengthen governance (Ban Ki Moon). Hope in COP 27 Climate Conference Egypt UN will launch an action plan for providing early warning systems to all the countries.

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Corporate Governance and Foreign Direct Investment in Sub-Saharan Africa

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Abstract

This paper presents new indicators for corporate governance (effectiveness of the corporate board, ethical behavior of firms, regulation of securities and exchange, and protection of minority shareholders) by the Global Competitiveness Index Report rather than the traditional ones, this study confirms the relationship between corporate governance and foreign direct investment (FDI) (board size, CEO non-duality, board independence, board diversity). The poll examines the relationship between FDI and corporate governance using information from 2009 to 2016. The Generalized Method of Moments (GMM) was the primary evaluation technique used in this study. According to the review, corporate governance affects FDI in Sub-Saharan Africa (SSA). While regulation of securities exchanges has a negative impact on FDI, ethical business practices, effective corporate governance, and the protection of minority shareholders have beneficial effects. The study suggests that sub-Saharan African economies should strengthen corporate ethics, guarantee the effectiveness of corporate boards, and safeguard the interests of minority shareholders.

Keywords

Corporate governance, Ethical behavior, Board of directors, Investors, and Security and Exchange.

1. Introduction

Corporate governance can be understood as rules and guidelines utilized in coordinating firms of a host country as they have a locational advantage that energizes the inflow of FDI. This is not shocking on the grounds that investors have one or two doubts about murky corporate governance structures both at the firm and large-scale levels in light of the specialized risk to their investments in a climate of poor corporate governance. Recent occasions demonstrate that some of these economies have understood the pertinence of good corporate governance and the need to flag straightforwardness and accountability both at the firm and national levels and have embarked on huge corporate governance reforms (Appiah Kubi et al., 2020; Adelopo and Obalola, 2009). Dunning (2006) presented corporate governance in his eclectic paradigm as one of the locational benefits that support the inflow of foreign investment. In light of the eclectic theory by Dunning (2006), this study thinks that the decrease or expansion in FDI in an economy depends upon the corporate governance of the economy.

This is extremely evident in light of the fact that the corporate governance of a nation reflects how firms are coordinated and controlled within a nation. Hence, it would be something significant an investor would consider prior to choosing a specific country to invest in (Appiah Kubi et al., 2019; Adelopo and Obalola, 2009; Johnson A., 2006).

Despite the fact that there have been various investigations into corporate governance and FDI (Basson, 2015; Esew and Yaroson, 2014), however, this study affirms the connection between corporate governance and FDI by presenting new pointers for corporate governance (ethical behavior of firms, the efficacy of corporate boards, protection of minority shareholders, and regulations of security and exchange) by competitiveness index report rather than traditional ones (CEO non-duality, board size, board diversity, and board independence). It is against this backdrop that this study separates itself by utilizing new indicators from the Global Competitiveness Index report as a measure of a nation's level of corporate governance to break down the connection between corporate governance and FDI in Sub-Saharan Africa (SSA).

2. The Purpose of the Study

The primary reason for the review is to look at the role of corporate governance in the attraction of FDI in Sub-Saharan Africa.

3. Research Question

This study responded to the inquiry: do the effectiveness of the corporate board, ethical behavior of firms, regulation of security and exchange, and protection of minority shareholders draw FDI into the SSA?

4. Review of the Literature

Studies were reviewed based on their relevance to the review's purpose, which is to investigate the relationship between country-level corporate administration and a new direct interest in Sub-Saharan Africa. These are the factors that have legitimized corporate and foreign direct investment in Sub-Saharan Africa.

Buchanan (2017) investigated corporate governance and the shareholder: certainty and decision-making. This study bridges the gap between the impacts of governance disclosure and the certainty and dynamic tendencies of non-institutional accredited investors (NIAIs).

Tariquzzaman (2017) examined the effects of corporate governance guidelines on Bangladeshi investor decisions in a trial assessment. The principal reason for the review was to see whether investors assigned significance to corporate governance in making investment decisions.

Xiaolu, Jieji, and Jian (2016), likewise, conducted a study on the influence of corporate governance level on investor confidence. It chose the variable of corporate governance level to research the impact of corporate governance level assessment on keeping up with and expanding investor confidence, according to the point of view of investors. The technique to measure investors' confidence and corporate governance level has been improved, and the information of A-share organizations recorded in the Shanghai Stock Exchange in 2011–2013 was chosen as the example to examine the panel data. That's what the outcomes show: the higher the corporate administration level, the more grounded the financial investor certainty. A study conducted by Basson (2015) examined the relationship between full-scale level governance performances in the Sub-Saharan African region and FDI inflows, with the goal of determining whether a contributing variable influences FDI inflows. The study utilized panel data information and a fixed impact assessor for an example of 45 Sub-Saharan African economies from 2002 to 2011. The outcome of the study was that the higher the corporate governance level, the stronger investors' confidence.

5. Research Methodology

Model Specification

In order to reflect several units (Countries in Sub-Saharan Africa) and time series data for each unit from 2009 to 2016, a panel model was used. The dynamic panel model for FDI and other explanatory variables is defined as follows by Desbordes and Wei (2017):

DI= f (FDI, C.GOV, GDPCG, INFL, AE, TO) *(1)*

Where AE stands for access to electricity, FDI stands for foreign direct investment, C.GOV stands for corporate governance, GDPCG stands for gross domestic product per capita growth, INFR is for the inflation rate, and TO stands for trade openness. According to Baltagi et al. (2009), there is a link between past and present foreign direct investment, which necessitates the inclusion of lag values for the dependent variable in the explanatory variables in order to prevent miss specification. Therefore, the dynamic GMM panel model of equation (2) is modeled as:

$$FDI_{it} = \alpha_{it} + \delta FDI_{it-1} + B_3 C.GOV_{it} + B_4 GDPCG_{it} + B_5 INFL_{it} + B_6 AE_{it} + B_7 TO_{it} + u_i + \mathcal{E}_{it} \qquad (2)$$

Where *i* refers to the country (*i* = 35); t refers to the time-period from (2009 to 2016) (t = 7); *FDI* is dependent, FDI_{it-1} is a first lag of foreign direct investment; u unobserved country-specific effect and ε is the error term assumed to be serially uncorrelated.

6. Justification and Measurement of Variables

The measurements used for the variables being examined were considered based on literature and theories.

7. Foreign Direct Investment (FDI) (% of GDP)

It is defined as the net investments made to get a long-term management interest (10 percent or more of voting stock) in a company that operates in a different economy than the investor's own. Consequently, FDI symbolizes the influx of capital into a nation. Foreign direct investment will be calculated as the log of foreign direct investment in accordance with Adam and Tweneboah (2009).

8. Independent Variable

Country-Level Corporate Governance

The study used a composite of country-level corporate governance, which includes the protection of minority shareholders, effective corporate boards, and ethical business practices (Global Competitiveness Index, 2016). Because this study thinks that improved corporate governance would boost the inflow of foreign direct investment, corporate governance is the independent variable. This is due to the beneficial association between corporate governance and foreign direct investment (Basson, 2015; Esew & Yaroson, 2014). Therefore, having sound corporate governance increases the amount of foreign direct investment coming in.

9. Control Variables

This section presents other variables for which studies have established their impact on foreign direct investment. Specifically,

10. Growth in Gross Domestic Product Per Capita (GDPCG)

The value of all marketed and some non-marketed products and services generated within a specific nation is defined as the gross domestic product (GDP) (World Bank, 2019). It is used to gauge the economic production of a nation. A study on the factors that influence foreign direct investment in developing countries by Demirhan and Masca (2008) revealed a significant positive relationship between GDP per capita and FDI; a similar study by Mottaleb and Kalirajan (2010) revealed the following factors: Additionally, a comparative investigation revealed that nations with higher GDP growth rates get more FDI.

11. Inflation (INFLA)

According to studies, "inflation" is the persistent rise in the general price level (Cantah, Wiafe, & Adams, 2013). The cost of procuring a typical consumer's basket of goods and services, which may be fixed or modified at predetermined intervals, such as annually, is measured by the consumer price index (World Bank, 2017). Numerous studies have emphasized the negative association between FDI and inflation (Wani, Haq, and Rehman, 2017; Demirhan & Masca, 2008).

12. Access to Electricity (AE)

It measures the proportion of people who have access to electricity (World Bank, 2017). This suggests that a country's population or business usage of power may be explained by the availability of electricity. Based on the findings of Nutassey (2018) and Ibrahim (2015), this study anticipates a favorable association between access to electricity and foreign direct investment (2015).

13. Trade Openness (TO)

According to Elheddad (2016), empirical findings demonstrate that one of the key elements promoting FDI is trade openness. Trade as a part of GDP, defined by the World Bank (2017) as the total of exports and imports of goods and services measured as a share of GDP, is a proxy measure of trade openness. This analysis anticipates a favorable relationship between FDI and trade openness.

14. Sources of Data

Previous research on the subject, economic theory, and whether the variables statistically fit the models effectively were all taken into consideration while choosing the variables to be utilized in the models. Annual series data from 2009 to 2016 was used in the study. The World Bank's 2015 Development Indicators (WDI) provided the data on foreign direct investment and the control variables, whereas the Global Competitiveness Index provided information on corporate governance.

15. Estimation Technique

The study assesses the relationship between corporate governance and foreign direct investment using data spanning from 2009 to 2016. The main estimation technique that this study employed was dynamic. The Generalized Method of Moments (GMM) Arellano and Bond (1991) and Blundell and Bond (1998) popularized the dynamic general method of moments (GMM) estimator, which is the most effective for two key reasons. This is so that endogeneity issues brought on by the independent variables can be directly controlled by the dynamic Generalized Technique of the Moment method.

16. Data Analysis

Descriptive Statistics

Table 1: Descriptive Statistics of the Dependent, Independent, and Control Variables

Variables	Mean	Standard Deviation	Minimum	Maximum	Observation
FDI	4.97	9.21	-6.01	79.94	242
CGOV	3.92	0.72	2.02	6.37	242
EBF	3.25	0.61	2.49	6.26	242
ECB	4.16	0.55	2.23	6.19	242
MSP	3.901	0.89	2.46	5.94	242
RSE	3.57	0.99	1.25	6.49	242
GDPC	32.73	20.18	0.20	78.63	242
INFL	30.36	29.15	0.65	84.85	242
AE	166.14	76.09	49.14	310.2	242
TO	287.00	967.34	3.98	5.282	242

Source: Field survey, (2019).

Note: *This Table presents the descriptive statistics for the sample used in the analysis. 35 Sub-Saharan nations are represented in this sample, which spans the years 2009 to 2016. The nations included were Benin, Angola, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Chad, Cote d'Ivoire, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Nigeria, Rwanda, Namibia, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Zambia, Uganda, Tanzania, and Zimbabwe.*

With a time span of seven years, the descriptive statistics in Table 1 cover 35 economies. The dependent variable, foreign direct investment, has a standard deviation of 9.214, larger than the central tendency, a mean of 4.971, indicating that there is significant variation around the mean, ranging from 6.014 to 79.942. The composite of the four corporate governance measures also has a standard deviation that is higher than the mean-3.925 of 0.725. This indicates that there is little variation around the mean, which is between 2.025 and 6.269. The descriptive statistics for each of the individual indicators were once again provided as follows: The standard deviation of ethical behavior of firms (EBF) within the range of 2.499 to 6.269 is 0.618, which is lower than its mean of 3.257 and suggests low variation around its mean. A significant degree of volatility around the mean is also shown by the standard deviation of 0.550 and a mean value of 4.169 for the effectiveness of the corporate board. The standard deviation for minority shareholders' protection (MSP), which has a range of 2.467 to 5.945 as well, is 3.901. This indicates considerable variability around the mean and is higher than its mean of 0.890. The standard deviation for regulation of securities exchanges is 0.995, which is lower than the mean of 3.578 and indicates that there is less variation around the mean. In addition, the control variables' respective standard deviations for the variables trade openness (TO), access to electricity (AE), inflation (INFLA), and gross domestic product per capita (GDPC) are 20.186, 29.152, 76.090, and 967.341, respectively. The corresponding means of 32.73, 30.364, 166.142, and 287.00 are lower than these. This suggests that their means are less variable.

17. Results and Discussion

Table 2: Regression Result Corporate Governance Indicators and Foreign Direct Investment in Sub-Saharan Africa
Dependent Variable: Foreign Direct Investment

	Model 1	Model 2	Model 3	Model 4	Model 5
	Model	**Model**	**Model**	**Model**	**Model**
FDI -1	0.0411	0.039	0.040	0.031	0.029
	0.001	0.002	0.001	0.001	0.000
CGOV	40.986				
	0.000				
EBF		35.001			
		0.0000			
ECB			24.114		
			0.0001		
MSP				31.909	
				0.0005	
RSE					-9.000
					0.008
Control					
GDPC	9.158 0.120	8.511 0.069	8.632 0.082	8.657 0.062	9.276 0.101
INFL	-0.011 0.000	-0.011 0.000	-0.010 0.000	-0.012 0.000	-0.010 0.000
AE	0.026 0.001	0.025 0.001	0.023 0.000	0.022 0.000	0.028 0.000
TO	0.015 0.000	0.019 0.0004	0.018 0.000	0.019 0.000	0.019 0.000
Diagnostic					
J- Stat	36.600	36.521	34.157	35.365	36.499
Prob. of J- Stat	0.439	0.440	0.500	0.491	0.474
AR(2):z	0.716	NA	0.195	0.201	0.790
No. of Obs.	326	326	326	326	326

**p < .05 ** p < .01*

Model 1: The Role of Corporate Governance in Attracting FDI in Sub-Saharan Africa

Indicator 1 indicates a positive, significant level of 1 percent in the association between the composite of the four corporate governance indicators and foreign direct investment inflows into Sub-Saharan Africa over the period from 2009 to

2016. This indicates that the findings disprove the claim that there is a causal link between corporate governance and foreign direct investment in Sub-Saharan Africa. According to the results in the table, there was a 40.986 percent rise in foreign direct investment into Sub-Saharan Africa for every 0.01 increase in corporate governance. As a result, the finding suggests that before making an investment decision, international investors take company governance into account. This is true since a business will be managed and controlled after it is created in an economy just like corporate governance has been chosen in that economy. The large impact of corporate governance is highlighted by the 40.986 percent increase in foreign direct investment that corporate governance caused, as seen in Model 1.

Corporate governance is important for attracting international investors. This explains why Dunning (1977) included corporate governance in the eclectic theory in 2006 to account for the geographic advantage an economy has in luring international investors. Lien, Piesse, Strange, and Filatotchev (2005) claimed in their study that the type of corporate governance in a country influences the choices of foreign investors, which lends support to the conclusion. The findings of the study by Fazio and Talamo (2008) confirm that effective corporate governance is a significant attractor of foreign direct investment (FDI). Kim (2010) made a similar argument, claiming that the degree of corporate governance or transparency in host nations has an impact on the performance of FDI in those nations. Wang, Alba, and Park (2012) came to the opposite conclusion in their study, arguing that improved corporate governance can limit the potential for increasing shareholder value and deter merger and acquisition inflows of foreign direct investment. This finding and those of other studies are at odds with Wang, Alba, and Park's (2012) findings. Furthermore, given the complementarity between merger and acquisition and non-merger and acquisition foreign direct investment inflows, it is hinted that good governance might potentially deter non-merger and acquisition foreign direct investment inflows. Once more, the results of model 1 demonstrated that, at a confidence level of 0.99, the lag of foreign direct investment has a positive, significant association with the present FDI. Accordingly, a rise of 0.01 in prior foreign direct investment results in an increase of 0.0411 percent in current foreign direct investment (FDI). This implies that there is an endogeneity issue and that the insertion of the lag of foreign direct investment was required to avoid results that were not as expected. While Dellis, Sondermann, and Vansteenkiste's (2017) findings are in opposition to this one, Nutassey's (2018) results support it. Additionally, the results showed a significant positive association between FDI (foreign direct investment) and GDP per capita in Sub-Saharan Africa from 2009 to 2016. It was determined that every 0.01 rise in GDPC results in a 9.1583 percent increase in FDI inflows. This validates earlier findings, such as those by Demirhan and Masca (2008), who discovered a strong positive relationship between FDI and GDP per capita. A further finding from Model 1 showed a strong inverse association between inflation and foreign direct investment in Sub-Saharan African nations. Foreign direct investment (FDI) decreases by 0.011 following a 0.01 increase in inflation. Finding inverse correlations between FDI and inflation in the literature is quite common (Wani, Haq, and Rehman, 2017; Demirhan & Masca, 2008). This is due to the fact that a high inflation rate implies a greater price increase, which results in a higher cost of production for foreign investors. The findings also showed a strong positive correlation between foreign direct investment and access to electricity.

More specifically, a 0.01 increase in power access led to a 0.0260 percent increase in foreign direct investment. The findings of Ibrahim (2015), who discovered a beneficial association between access to power and foreign direct investment, can be taken as validation of the outcome. This assumes that improving access to power is one way the government may attract foreign direct investment. In Sub-Saharan Africa from 2009 to 2016, model 1 shows a substantial positive relationship between trade openness and foreign direct investment at a 1 percent significant level. According to this, a rise in trade openness of 0.01 led to an increase in FDI of 0.0152. This shows that a country tends to attract more foreign direct investment when it becomes more business-friendly. The result of this study is backed by Shah and Khan (2016), who also proved a positive relationship between trade openness and foreign direct investment inflows.

Model 2: There is no significant relationship between the ethical behavior of firms (ECB) and FDI in Sub-Saharan Africa.

In terms of the association between corporate ethics and foreign direct investment inflows into Sub-Saharan Africa between 2009 and 2016, Model 2 showed a significant positive level of 1percent. This indicates that the findings disprove the claim that there is no connection between business ethics and foreign direct investment in Sub-Saharan Africa. The result in the table suggests that a 0.01 increase in corporate governance results in a 35.001 rise in foreign direct investment into Sub-Saharan Africa. Miletkov, Poulsen, and Wintoki (2014), who made the case that independent and successful company boards of directors attract foreign capital investment, support this finding. In their study, Carney et al. (2011) found that corporate boards encourage investment efficiency. This means that nations that want to boast about having foreign direct investment must make sure that company boards are ethically sound and well-constituted. According to Kim (2010), the ability of a board to be transparent greatly affects its ability to draw in international investors. Any business that acts ethically will most likely be open and honest. The outcome once again highlights the importance of moral principles in luring foreign capital into Sub-Saharan African economies. Fairness, equity, and transparency toward stakeholder groups, particularly investors, are seen as essential conditions for attracting foreign direct investment in every economy (Kasser & Sheldon, 2009). This suggests that Sub-Saharan Africa must be able to guarantee ethical corporate operations in order to be appealing to high-end global investors.

Similar to model 1, model 2's findings demonstrated a positive and significant link between the lag of foreign direct investment and the present FDI at a 1 percent significant level. Accordingly, an increase of 0.01 in previous foreign direct investment results in an increase of 0.0399 in current foreign direct investment (FDI). This implies that there is an endogeneity issue and that the insertion of the lag of foreign direct investment was required to avoid results that were not as expected. According to the findings of Agyemang et al. (2019), there is a bad correlation between foreign direct investment that has lagged and current foreign direct investment. More specifically, the findings revealed a significant positive link between Sub-Saharan Africa's FDI and GDP per capita from 2009 to 2016.

It was determined that every 0.01 rise in GDPC results in an 8.515 percent increase in FDI inflows. This is consistent with the findings of Mottaleb and Kalirajan's (2010) study on the factors influencing FDI in developing nations: According to a comparative analysis, nations with faster GDP growth rates receive more foreign direct investment.

Additionally, the results of model 2 showed a strong inverse association between inflation and foreign direct investment in Sub-Saharan African nations. For every 0.01 increase in inflation, foreign direct investment (FDI) inflow will decrease by 0.0115. According to studies, "inflation" is defined as a persistent increase in the general level of prices (Cantah, Wiafe, & Adams, 2013). This deters investment. The findings also revealed a strong positive correlation between FDI and access to electricity. This suggests that a 0.01 increase in energy access resulted in a 0.0251 rise in foreign direct investment. In her study, Nutassey (2018) outlined how the production of energy affects foreign direct investment. This assumes that expanding access to power is one way the government may attract foreign direct investment. Intuitively, investors are likely to be wary about investing in an economy where there is limited access to electricity. Finally, model 2 shows a 1 percent significant positive association between trade openness and foreign direct investment in Sub-Saharan Africa between 2009 and 2016. According to this, a rise in trade openness results in an increase in foreign direct investment of 0.194 percent (FDI). When rules and regulations over businesses in a country concerning doing business are reduced, it helps to bring in more investment.

Model 3: There is no significant relationship between the efficacy of corporate boards and FDI in Sub-Saharan Africa.

In the association between the effectiveness of company boards and foreign direct investment inflows into Sub-Saharan Africa between 2009 and 2016, Model 3 also exhibited a significant positive level of 5 percent. This indicates that the findings disprove the claim that there is no connection between the effectiveness of company boards and foreign direct investment in Sub-Saharan Africa. According to the results in the table, there has been a 24.114 percent rise in foreign direct investment into Sub-Saharan Africa for every 0.05 percent increase in corporate governance. The findings of this study highlight the specific interest that foreign investors have in economies where corporate boards are answerable to shareholders and corporate boards. As a result, overseas investors think their investments won't be safe in a country with an unaccountable corporate governance system. (Globerman and Shapiro, 2003). In keeping with the findings of this study, Miletkov, Poulsen, and Wintoki (2014) found that successful company boards had a considerable impact on foreign direct investment. Several corporate scandals and the global financial crisis of 2007–2008, according to the Global Competitiveness Index (2016), have brought to light the importance of accounting and reporting standards and transparency for preventing fraud and mismanagement and ensuring good governance, which in turn led to maintaining and boosting investor confidence. However, model 3's results showed a strong inverse link between inflation and foreign direct investment in Sub-Saharan African nations. For every 0.01 increase in inflation, foreign direct investment (FDI) inflow will decrease by 0.0109. The outcome conflicts with the findings of this investigation because Omankhanlen (2011) found that there is no relationship between inflation and foreign direct investment. Again, the results showed a significant positive relationship between access to electricity and foreign direct investment at a 1 percent level. This implies that a 0.01 increase in access to electricity leads to a 0.0239 increase in foreign direct investment. Based on this result, we can say that foreign investors require greater access to electricity to choose a country as a host.

Lastly, for model 3, the results depict a significant positive relationship between trade openness and foreign direct investment in sub-Saharan Africa from the period of 2009 to 2016 at a 1 percent significance level. This indicates that a 0.01 increase in trade openness led to a 0.0189 increase in foreign direct investment (FDI).

Model 4: There is no significant relationship between the protection of minority shareholders and FDI in Sub-Saharan Africa.

In the association between the effectiveness of company boards and foreign direct investment inflows into Sub-Saharan Africa between 2009 and 2016, Model 4 also exhibited a significant positive level of 1 percent. This indicates that the findings disprove the claim that minority shareholder protection and foreign direct investment are significantly related in Sub-Saharan Africa. According to the results in the table, there was a 31.909 percent rise in foreign direct investment into Sub-Saharan Africa for every 0.01 percent increase in minority shareholder protection. According to numerous studies, comparable economies that safeguard minority stockholder interests draw more foreign direct investment because investors feel secure doing so (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 2000). This has prompted several nations to create solid corporate governance guidelines in an effort to attract substantial foreign investment and foreign direct investment (Cuervo-Cazurra & Aguilera 2004). These laws give minority shareholders the same rights and authorities as stockholders in the majority. This finding supports the agency theory, which maintains that when a nation fails to safeguard the interests of minority shareholders, it encourages international investors to divert revenue from that nation (Klapper & Love, 2004). Additionally, Model 4 demonstrated that the lag of foreign direct investment has a positive significant link with the present FDI at a 1 percent significant level. This implies that an increase of 0.1 in past foreign direct investment results in an increase of 0.0311 in present FDI. This implies that there is an endogeneity issue and that the implementation of the lag of foreign direct investment was required to avoid the occurrence of unexpected results. More specifically, the findings revealed a significant positive link between Sub-Saharan Africa's FDI and GDP per capita from 2009 to 2016. It was determined that every 0.01 rise in GDPC results in an 8.6572 increase in FDI inflows. According to Lamsiraroj and Doucouliagos (2015), economic growth and foreign direct investment have a strong positive relationship. They also stated that single-country case studies showed much higher correlations than cross-country analyses. Once more, they said that it seemed like growth in emerging nations was somewhat more correlated with FDI. Additionally, the results of model 4 showed a strong inverse association between inflation and foreign direct investment in Sub-Saharan African nations. For every 0.01 increase in inflation, the foreign direct investment (FDI) inflow will decrease by 0.0126. The finding is corroborated by Kiat (2008), who found that there is a negative association between inflation and foreign direct investment (FDI) in a study titled "The influence of exchange rate and inflation on foreign direct investment and its relationship with economic growth in South Africa". The findings also revealed a strong positive correlation between foreign direct investment and the availability of power. This suggests that a 0.01 increase in power access resulted in 0.229 foreign direct investments. Model 4 again demonstrates a significant positive relationship between trade openness and foreign direct investment in Sub-Saharan Africa from the period of 2009 to 2016 at a 1 percent significance level. This indicates that a 0.01 increase in trade openness led to a 0.198 increase in foreign direct investment (FDI). This finding is consistent with Donghui, Yasin, Zaman, and Imran (2018).

Model 5: There is no significant relationship between the regulation of security exchange and FDI in Sub-Saharan Africa.

Model 5 showed no discernible correlation between foreign direct investment inflows into Sub-Saharan Africa between 2009 and 2016 and the regulation of the securities market. This indicates that the data did not disprove the premise that there is no meaningful connection between foreign direct investment and regulation of the securities market in Sub-Saharan Africa. According to the results in the table, there was a 9.000 reduction in foreign direct investment into Sub-Saharan Africa for every 0.01 rise in corporate governance. It also lessens restrictions on how enterprises can conduct themselves within a nation, which encourages foreign investment (Nutassey, 2018). The model demonstrated a positive and significant association between the lag of foreign direct investment and the present level of FDI at a 1 percent significance level. This suggests that a 0.01 rise in past foreign direct investment leads to a 0.0296 increase in current foreign direct investment (FDI). This implies that there is an endogeneity issue and that the insertion of the lag of foreign direct investment was required to avoid results that were not as expected. The findings from Dellis, Sondermann, and Vansteenkiste (2017) are in direct opposition to this finding because the FDI lag in their research was not statistically significant. More specifically, the findings revealed a significant positive link between Sub-Saharan Africa's FDI and GDP per capita from 2009 to 2016. It was determined that every 0.01 rise in GDPC leads to a 9.2768 increase in FDI inflows. According to Simionescu (2016), economic growth in the EU28 is positively correlated with foreign direct investment. The study did find that not all economic development increased foreign direct investment, though. Additionally, the results show a strong inverse correlation between inflation and foreign direct investment in Sub-Saharan African nations. Foreign direct investment (FDI) inflow is reduced by 9.2768 when there is a 0.01 increase in inflation. According to studies, inflation is the general price level rising steadily (Cantah, Wiafe, & Adams, 2013); this deters investment. The findings also revealed a sizable positive link between foreign direct investment and the availability of energy. This suggests that a 0.01 increase in energy access resulted in a 0.283 percent rise in foreign direct investment.

From 2009 to 2016, it once again demonstrated a 1 percent significant positive link between trade openness and foreign direct investment in Sub-Saharan Africa. According to this, a rise in trade openness of 0.01 is linked to an increase in FDI of 0.0192.

18. Conclusion

According to the study's findings, corporate governance affects foreign direct investment in Sub-Saharan Africa. While regulation of the securities exchange has a negative impact on foreign direct investment, ethical business practices, effective corporate governance, and protection of minority shareholders have beneficial effects.

19. Recommendation

Sub-Saharan African economies should improve business ethics, make sure company boards are effective, and safeguard the interests of minority shareholders. To increase the inflows of FDI's, the regulation of the securities market should be relaxed or made more accommodating.

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An Exploratory Study: Destination Weddings and India

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Abstract

A destination wedding is seemingly the most amazing trend in the history of tourism. It is also known as 'Wedding Tourism' or 'Marriage Tourism' in some contexts. We cannot ignore this trend in the tourism industry, regardless of how one treats the situation. One of the nations that benefit from this wonderful trend is India. All Indian weddings, with all of their customary ceremonies and fascinating locations, are becoming increasingly popular among NRIs and foreigners. The already lucrative Indian wedding market generates around INR 50,000 Crores annually, with about a 25 percent annual growth rate, and is looking for partnerships with top hotels and travel agencies to court this expanding market. We cannot disregard this sector, despite the fact that it is challenging to locate exact information and figures about the tourist industry in India. This paper makes an effort to comprehend the idea of a destination wedding. The study looks at potential causes for its rise in popularity as well as how it has helped the tourism, hotel, and related industries, such as wedding resorts, open up new business opportunities. The study comprises of the use of secondary data available on various websites, research papers, research reports, articles, and so on, for the purpose of the collection of information.

Keywords

Destination wedding, Wedding tourism, Marriage tourism, Indian weddings, Indian wedding industry, and Indian destination weddings.

1. Introduction

As the term implies, a destination wedding refers to a strategy of moving to another location in order to get married. A destination wedding is not a brand new idea in India. After all, it is customary for the bridegroom's family to make the trip to the bride's home with other family members and guests to conduct the wedding ceremony. Confusion results from the use of numerous names to describe a single mode of transportation (Crompton, 1979).

The rise of destination weddings is a result of a cultural shift in how people see the wedding ceremony as a whole. A wedding was traditionally thought of as a ceremony performed in accordance with societal norms entrenched in the community. The discourses of society and the individual, marriage and romance, and industry and consumer, are only a few examples of the historical tensions that modern couples increasingly regard marriage as a ritual serving to reconcile. Destination weddings serve as a means of explaining how society and couples are addressing the shifting social relations and evolving social identities (Aegon Life, 2018).

In India, the Ministry of Tourism and Media refers to it as 'Marriage Tourism'. In her remarks at International Tourism Bourse Berlin's opening ceremony, Berlin's tourism minister Ambika Soni brought up the word 'Marriage Tourism'. Contrarily, in the West, going out of one's way or abroad to get married is known as wedding tourism or destination wedding. When planning a destination wedding, the location is equally as significant as the ceremony itself. When discussing international weddings where the honeymoon also takes place, some academics have also coined the term 'Wedding Moons' (Das, 2022).

We all know that while marriage lasts for a lifetime, weddings only last a day. Marriage is defined as "a legal union of a man and a woman for cohabitation and frequent procreation" by the Oxford dictionary. Additionally, "the act or ceremony commemorating such collaboration" is referred to as marriage. The definition of a wedding in the Oxford dictionary is "the marriage ceremony". Everyone uses the term 'wedding' and 'marriage' interchangeably because both are considered "ceremonies" (Baker & Cameron, 2008).

We may understand a destination wedding as a travelling activity to get married in an exotic area in a special way, regardless of the legality of this union in their home country, or hometown or the place of ceremony. Probably, for this reason, some couples choose to get married legally in their home country before or after their ideal destination wedding. Contrarily, marriage tourism would involve getting hitched in a ceremony that is recognized legally, at least in the wedding destination. Although the phrases wedding tourism or destination wedding are more closely associated with tourism, these terms as well as marriage tourism will be used interchangeably in this study (Awaritefe, 2004).

2. Review of the Literature

A destination wedding is a type of wedding that occurs outside of the city or town where the soon-to-be-married couple resides. A wedding that takes place at an hour away location from the couple's present home or a few states far is assumed as a destination wedding. Another distinguishing attribute of a destination wedding is that most or all the guests are required to travel from away of the town in order to attend the wedding ceremony (RedBarn 20, 2016).

A destination wedding is one where the ceremony is held at a location where most of the invited guests will have to travel and possibly remain for several days. This might be a straight forward ceremony at the residence of a far-off friend or family, a grandiose celebration in a city resort, or a beach ceremony in the tropics. Despite the 2009 recession, destination weddings have continued to increase as compared to traditional weddings because of the cheaper costs associated with fewer guest counts (Bhatia S., 2019).

A group of individuals who travel or leave their normal living situation to celebrate a major occasion in their life with their family and friends is known as a destination wedding. This event will bring together their origins and traditions because migration is expanding quickly these days, and weddings are essential symbols of togetherness for families of both the bride and the groom who were forced to be apart from their loved ones (Bhargava, 2020).

Any overseas journey made by a tourist to get married or celebrate their wedding can also be referred to as a destination wedding. The industry for destination weddings also caters to other occasions like honeymoons and vows renewals. The destination wedding market saw a surge of 75 percent between 2017 and 2019, which demonstrates an incredibly strong trend globally (Country Roads, 2018).

Destination weddings are regarded as a one-of-a-kind events since they are provided to clients by tourism destinations, which offer services and locations that are out of the ordinary with the primary objective of creating memorable moments. According to the Fair Child Bridal Group, only 16 percent of the couples who truly had the intention of planning a destination wedding actually were able to do so (Settheewongsakun, 2019).

The term destination wedding or wedding tourism or marriage tourism in India was first used by the then Union Tourism Minister in a speech at the International Tourism Bourse-Berlin’s opening ceremony on March 7, 2007, even though the idea of a destination wedding was widely used at that time (Baker & Cameron, 2008).

India is the world’s centre for religion, spirituality, and socio-culture. Indian weddings bring to mind the country’s rich cultural and historical traditions. The current situation, which observes a changing trend, its nature of composition, its involvement of many socio-economic classes, its choice of high-quality services, and vendors make it a diverse tourism offering (Gupta, 2019).

3. Objectives of the Study

The objectives of the study are as follows:
3.1 To understand the concept of a destination weddings.
3.2 To explore the growth and development of destination weddings in India.

4. Research Methodology

The research methodology involved in the present study is the descriptive literature review method. The research comprises the use of secondary data for collecting information. The researcher has studied and reviewed the literature available in relevant, research papers, articles, conference proceedings, reports, and some online sources for the conduct of the purpose of research.

5. Factors Relating to the Choice of Destination Weddings

Every famous event and often-asked question in the modern world may be found online. The internet has developed into a goldmine of knowledge about destination wedding-related activities. Numerous forums and DIY/self-help websites, like www.ultimatewedding.com and offers, offer guidance to couples planning their destination wedding. Below are a few intriguing questions and their responses (Destify, 2017).

Why opt for destination wedding? It provides an opportunity for creativity and fewer extra-curricular activities before and after marriage.

How to choose a location? Either a brand-new location or a well-liked vacation spot for families is generally chosen as a wedding destination.

Which legal issues are to be considered? How to get a marriage registered according to the norms of the destination.

How many visitors? Whether the wedding is small and cozy or vast and opulent, it is necessary to make the plans for transportation and lodging, as well as expected visitor numbers.

What are the activities for visitors? Some sort of entertainment for all the visitors, as done in the traditional wedding ceremonies as it will be a new location, which every visitor would love to explore.

The questions listed above provide a general sense of the wants and requirements of the couples travelling to a location to get married. We also need to comprehend the reason behind this recent development, especially in light of the amount of attention destination wedding is generating. The following is a discussion of some of the potential factors for the rising popularity:

5.1.Exotic Wedding Traditions

Exotic wedding customs and traditions draw guests from afar. Going to a place like Hawaii, where one can get married on a private beach while wearing flip flops, makes the wedding less formal and more laid back. Numerous people travel to India to marry in accordance with Hindu traditions in cities like Jaipur, Rajasthan, Pushkar, Rishikesh, Udaipur ad so on. Essentially, these weddings are for NRI couples or foreigners who are willing to experience Indian wedding and marital customs in order to be blessed with a happy married life (Dreamz wedding planner, 2019).

5.2.Unique Experience

The most daring couples prefer to exchange their vows in remarkable ways in special locations while engaged in an activity they both love, getting married underwater, in a hot air balloon, while skydiving, bungee jumping, or any of the extreme sports described above (Booking.com, 2019).

5.3.Legal Considerations

The location's rules also encourage couples to get married somewhere other than their home. This is particularly valid for same-sex weddings. Only a small number of nations worldwide allow and accept same-sex relationships, and even fewer allow them to legally wed and enjoy the rights of a married couple (Bhargava, 2020).

5.4.Expenses

Cost is a key consideration when choosing a destination wedding. Over a western style wedding, some places are more affordable than others. In a country like India, a sit-down wedding is almost five times less expensive compared to the USA. If the bride and groom stay there for a predetermined number of nights, especially all inclusive wedding resorts are less expensive and offer the wedding ceremony free of charge. In rare circumstances, the package even includes the wedding reception party (Country Roads, 2018).

6. Destination Weddings and Scope of India

Both NRIs and foreign tourists already find Indian weddings to be quite appealing. Some international visitors think that participating in the revered Hindu marriage ceremonies will make their union continue longer. A few pages on the Ministry of Tourism website are devoted to the diverse Indian wedding rites and ceremonies, appealing to wedding travelers. During the International Tourism Fair in Berlin, the Ministry of Tourism even stages a mock Indian wedding in a unique mandap decorated with flowers for a willing German couple in order to market India as a destination for weddings (Desai, 2020).

Royal weddings are being offered by tour operators and event management firms in places like Udaipur, Jaisalmer, Jodhpur, Jaipur, and so on. At the same time, many tourists continue to enjoy visiting the holy city of Pushkar. The marriage of British actress and model Liz Hurley and her Indian fiancé Arun Nayar in March 2007 at the Umaid Bhavan Palace Hotel in Udaipur, followed by two additional functions in Rajasthan, one at the Hotel Lalsamand Palace, located 5 kilometres away from Umaid Bhavan, and the other at the 4th century Nagaur Fort, increased demand for Rajasthan as a wedding destination (Kassean & Gassita, 2013).

Numerous superstars from the Mumbai film industry have also wed in the stunning palaces of Rajasthan, Jaipur, and Jodhpur. The accommodations, accessibility, and transit options at these locations may be the cause of their appeal. Numerous historic hotels in all price ranges provide a wide selection of options for destination weddings. While Jaipur and Jodhpur are less expensive, Udaipur offers accommodation for roughly INR 20,000 per person per night. Goa is another well-liked location, as might be expected. The affordability of Goa is what makes it so popular. Goa is also less expensive than Rajasthan in terms of price (Settheewongsakun, 2019)

Apart from the wedding destinations in these states, there are beautiful wedding locations in Madhya Pradesh including Orchha and Bhopal. In the North including Jammu, Rishikesh, and many more. In the South including Kerala, Tamil Nadu, Hyderabad, and so on. The Principal Secretary of Kerala Tourism already marketed Kerala abroad as an exotic location for nuptials and Munnar as a honeymoon destination because the state of Kerala’s stunning landscapes are in such high demand for wedding tourism. Both Indians and NRIs are becoming more and more enamoured with Sahara’s Ambi Valley and Mahabaleshwar (Bhatia A., 2013)

India’s tourism industry would undoubtedly benefit from its prominence as a travel destination. The maximum ratio of foreign guests to Indian guests at an NRI wedding is typically 7:3. Additionally, a wedding in India often costs between INR 5 lakhs to INR 10 lakhs. There are many opportunities for the destination wedding industry to prosper as a result. On the Gurgaon-Sohna road, the Omaxe Construction Company has built a mall specifically for Indian weddings. Both domestic customers and wedding tourists are served by this. All wedding-related services, with the exception of lodging, is offered by this theme mall, including clothes, jewellery, entertainment, beverages, wedding planning, tour operators, and others. There is a requirement for India to be observed as one of the major global wedding destinations including the United States, Carribbean and Europe (Donnellan, 2016).

7. Conclusion

A Destination wedding is no doubt one of the most recent trends in the tourism sector, and we must move quickly to optimize India's chance in the global context. There are several stories and media pieces on this phenomenon, but there are no precise statistics available regarding the wedding industry or the potential earnings from destination weddings in India.

The middle class in India still finds it difficult to embrace the idea of entrusting a wedding planner with the planning of a family wedding. We have a large number of event management businesses and wedding companies that handle destination weddings in India and work mostly with foreign visitors. The necessity of the hour is to strengthen the ties between the wedding industry and the travel and tourism sector. In addition to helping western tourists grasp the significance of many customs, explaining the Indian marriage ritual will help them feel as though they understand the wedding ceremony. The traditions surrounding marriage that are specific to each section of the nation would further broaden the potential for destination weddings in India by allowing couples to create their ideal wedding by combining the many rituals, traditions, and wedding attire from other places.

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Agriculture and Agribusiness in India: An Entrepreneurial Development of Agriculture

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Abstract

Agriculture and agriculture-related sectors are important sources of revenue in India. It is especially critical for persons living in rural regions. In light of technical improvements, several service and manufacturing industries have emerged. Agribusiness has profited immensely from technical advancements as well. Agriculture is an important element of the Indian economy, contributing to more and over 17 percent of the total GDP and supporting more than 60 percent of the workforce. Agribusiness encompasses a wide variety of commercial operations that occur from farm to fork. It entails the supply of agricultural inputs as well as the production and processing of farm commodities. Agribusiness comprises all activities in the agricultural, food, and natural resource industries that are connected to food manufacturing and fibre. This article's goal is to highlight the sustainability of agricultural progress and development in the field of the business sector. Transformation of Agriculture to Agribusiness is a big move for farmers to become entrepreneurs in the Agribusiness as agri-Entrepreneurs.

Keywords

Agriculture, Agribusiness, Agri-entrepreneurs, Entrepreneurship, Portfolio entrepreneurs, and Agripreneurship.

1. Introduction

India is a vibrant nation with a rising economy. Manufacturing, services, and agriculture account for the majority of the country's GDP. Agriculture is the major financial means of support for around 58 percent of India's population. In 2019 - 20, agriculture, forestry, and fisheries generated a Gross Value Added of Rs. 19.48 lakh crores (US$ 276.37 billion). At current prices, agriculture and allied industries contributed 17.8 percent of India's gross value added (GVA) in 2019 - 20. Following a pandemic-driven dip, consumer expenditure in India might increase by up to 6.6 percent in 2021. Agribusiness provides people with food, clothes, and shelter. Masses of people are employed in disciplines such as research, science, technology, marketing, promotion, administration decision-making, and distribution to major trading and commodities groups. Agribusiness involves both the governmental and private sectors. The public sector refers to the economic and administrative functions associated with the delivery of products and services by and for the government. The area of the economy that the private sector makes up is primarily concerned with private profit and is not governed by the government. India's agro-climate diversity allows for the production of temperate, subtropical, and tropical agricultural crops. Organic fertilisers, food and feed, and bio-fertilizers are in great demand as agricultural inputs. The Indian food sector is poised for significant development, with its contribution to global food commerce expanding year after year, owing to its enormous value-adding potential, notably in the food-producing industry. The market for groceries and food in India is the world’s sixth biggest, with retail accounting for 70 percent of total sales. The Indian food processing sector is among the country's major sectors, accounting for 32 percent of the total food market and ranking fifth place regarding production, utilization, export, and expected growth. Agriculture and associated product exports reached $41.25 billion in Financial Year 2021.

2. Agriculture's Contribution to the Indian Economy

Agriculture and agribusiness provide important contributions to India's economic growth and riches. The agriculture industry's most recent contributions to the national economy are listed below.

- In 2019-20, India's total horticultural product production was over 310 million tonnes.
- In 2019-20, India produced about 24 million tonnes of onion and exported nearly 2 million tonnes.
- Potato output was over 51 million tonnes in 2019-20, while tomato production was around 19 million tonnes.
- Total fresh vegetable output was predicted to be over 97 million tonnes, with roughly 16 lakh tonnes exported.
- In 2019-20, grape output was 1.9 lakh million tonnes, while mango production was about 49 thousand million tonnes (as well processed mango pulp adding a further 85 thousand tonnes).

- Cattle, buffalo, goats, sheep, pigs, and poultry account for around 530 million of the number of livestock in India in 2019.
- India is the biggest milk factory in the world, sending milk to countries such as Bangladesh, Nepal, Bhutan, the United Arab Emirates, and Afghanistan.
- India exported around 11 lakh million tonnes of buffalo meat, 14,000 million tons of sheep/goat meat, and 3.5 lakh million tonnes of poultry goods in 2019-20.

3. Agribusiness Advancement and Indian Government Initiatives

The agrarian sector in India will be worth INR 63,506 billion in 2020. As per IMARC Group, the market would be worth INR 125,350 billion by 2026, with a 12 percent CAGR from 2021 to 2026. Agriculture has always been a priority for the Indian government due to its importance to residents' livelihoods. Here are a handful of the most important projects launched by the Indian government.

- The Krishi UDAN 2.0 concept was launched by the Civil Aviation Ministry in October 2021. The proposal suggests financial assistance and incentives for agri-produce air transportation. Growers, logistics providers, and airlines are anticipated to benefit from the Krishi UDAN 2.0, which will be installed at 53 airports around the country, with a focus on the Northeast and tribal regions.
- A Memorandum of Agreement (MoA) was signed in October 2021 by the "Agricultural and Processed Food Goods Export Development Authority" (APEDA) and the ICAR-Central Citrus Research Institute (ICAR-CCRI), Nagpur, to promote citrus exports and significant goods.
- According to the "Union Ministry of Agriculture and Farmers Welfare," 820,600 seed mini-kits would be given free of charge in 343 specified districts from corner to corner in 15 major producing states under a special initiative in October 2021. This strategy is projected to boost production and the effectiveness of increasing seed replacement rates, allowing farmers to make more money.
- Prime Minister Narendra Modi announced 35 crop varieties with distinct features such as higher nutritional content and weather resistance in September 2021.

- Prime Minister Narendra Modi inaugurated the Pradhan Mantri Kisan Samman Nidhi Yojana (PM-Kisan) on February 24, 2019, sending Rs. 2,021 crores (US$ 284.48 million) to the bank accounts of over 10 million beneficiaries.
- According to the Union Budget 2021-22, the Indian government has announced the “Digital Agriculture Mission” for 2021-25 for agriculture projects utilising cutting-edge technology such as artificial intelligence, block-chain, remote sensing, and GIS technology, drones, robots, and others.
- In September 2021, the Union Ministry of Agriculture and Farmers' Welfare signed Memorandums of Understanding with CISCO, Ninja cart, Jio Platforms Limited, ITC Limited, and NCDEX e-Markets Limited. The memorandum of understanding will comprise five pilot projects to help farmers decide which crops to grow, which seeds to use, and which best practices to use to optimize output.
- The 'Production-Linked Incentive Scheme for Food Processing Industry (PLISFPI)', with a budget of US$ 1.46 billion, was established in order to develop global food manufacturing champions commensurate with India's natural resource endowment and to strengthen Indian food brands in global markets.
- In the Union Budget 2021-22, the Pradhan Mantri Krishi Sinchayee Yojana received Rs. 4,000 crores (US$ 551.08 million) (PMKSY-PDMC).

4. Why is Agricultural Entrepreneurship Important?

Agriculture has always been viewed being a low-tech sector with little dynamism controlled by a plethora of tiny family businesses concentrated on completing tasks well rather than developing unique things. This scenario has altered considerably over the previous decade on account of economic liberalization, diminished agricultural market shelter, and a rapidly changing, more determined society. Agricultural enterprises are increasingly required to react to market fluctuations, changing customer lifestyles, strengthened environmental rules, new requirements for product quality, chain management, food security, sustainability, and so on. These changes have paved the path for new participants, innovators, and portfolio entrepreneurs.

5. Types of Agribusinesses

Agribusiness ventures of many forms.

- **Farm Level Producers:** At the individual family level, each family is to be viewed as a venture, with the goal of increasing output by making the greatest use of technology, assets, and market demand.
- **Service Providers:** Services of several kinds are required at the village level to optimize agriculture by every family company. These comprise obtaining and distributing input, renting machinery including tractors, sprayers, seed drills, threshers, harvesters, and dryers, and utilising scientific services such as irrigation facility setup, weed curb, plant security, yielding, threshing, conveyance, warehouse, and so on. Aside from the distribution of cattle feed, mineral combinations, fodder grains, and so on, there are chances in the animal husbandry industry to provide breeding, vaccination, illness detection, and treatment services.
- **Input Producers:** There are many thriving businesses that require vital inputs. Bio-pesticides, soil amendments, bio-fertilizers, vermicomposting, plants of various species of vegetables, fruits, ornamentals, root media for raising plants in pots, production of cattle feed concentrate, agricultural tools, irrigation accessories, mineral mixture, and complete feed are some of the inputs that can be produced by home entrepreneurs at the village level. During the sponsorship of vital service facilities in rural regions, there are strong opportunities to promote fisheries, sericulture, and poultry.
- **Farm Produce Processing and Marketing:** A well-organized administration of post-production processes necessitates a greater degree of knowledge as well as investment. People's Organizations can manage such ventures in the form of cooperatives, service joint stock corporations, or societies. In several states, dairy cooperatives, sugar cooperatives, and fruit producers' cooperatives have been the most successful examples. The success of such an endeavour, however, is entirely contingent on the dependability and competency of the leaders engaged. Such a venture requires solid specialized assistance to manage the operations as a competitive trade and to successfully compete with other market players, mostly retail merchants and intermediaries.

6. Agriculture Entrepreneurship Development Opportunities

Currently, simple usage of technology, the beginnings of microfinance, liberalized government rules, awareness and training programs on agri and allied sectors, and, finally, a shift in the mind-set of highly qualified people to pursue self-employment in agriculture have all contributed significantly to enhancing India's entrepreneurship potential (Bairwa et al., 2014) Dairying, Sericulture, Goat rearing, Rabbit rearing, Floriculture, Fisheries, Shrimp Farming, Sheep rearing, vegetable cultivation, nursery farming, farm forestry are all examples of entrepreneurship in agriculture (Pandey, RK 2009) **Agriculture Entrepreneurial Opportunities Include:** Agroprocessing units - These units do not create new products. They just process agricultural products, such as rice mills, dal mills, and decorticating mills. **Agro-Produce Manufacturing Activities** - These units create completely new items using agricultural produce as the primary raw material. Sugar plants, bakeries, and straw board units, for example. **Agro-inputs Manufacturing Units:** These units create commodities for agricultural mechanization or for growing manufacturing facilities, such as fertilizer production units, food processing units, agricultural tools, and so on. **Agro Service Centres:** These include facilities for repairs and maintenance for repairing and servicing agricultural implements. Aside from the aforementioned areas, the following may be encouraging for the **Establishment of Agri-enterprises:** Apiaries, feed processing units, seed processing units, mushroom production units, commercial vermin compose units, goat rearing farmers club, organic vegetable and fruits retail outlets, bamboo plantation, and jatropha cultivation.

7. Agripreneurship's Role in the National Economy

Agripreneurship performs a variety of functions in the growth and development of the national economy by fostering entrepreneurship, which raises income levels and job prospects in both rural and urban regions (Bairwa et al., 2012). Agripreneurship also plays the following role in the economic system: it helps smallholder farmers increase production and integrate them into local, national, and worldwide markets. It helps to reduce food costs, supply uncertainties, and improve the diets of the country's rural and urban poor. It also promotes growth, increases and diversifies income, and creates business possibilities in both rural and urban locations.

8. Conclusion

In the past few years, India's agribusinesses and agro-food processing sectors have grown quickly, and they have received special attention due to their significant potential to contribute to revenue and development. India's agricultural companies and food processing sectors have grown quickly in recent years. The government has prioritized agro-industries due to their tremendous potential for adding value to agricultural products and enhancing small farmer incomes and rural employment. India has prioritized agro-processing and marketing agribusinesses due to their significant potential to contribute to economic growth.

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Analysis of Role of Foreign Direct Investment in India's Economic Development

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Abstract

Foreign Direct Investment is a kind of investment that helps to foster the growth of the economy by attracting foreign capital in the country. With the help of foreign capital, the country will be able to enhance their level of productivity, and employment opportunity, improving working skills, technical advancement, and infrastructure development. That is why; FDI is the best way for the economic development. Nowadays, every country needs to explore them globally and avail the opportunities available in the global market. So, that FDI is one of the mediums for developing the emerging sectors of the economy. The present study investigates the flow of FDI in India and its significant relation with GDP. This study is based on secondary data from the financial year 2011-12 to 2020-21. Data is analyzed by using Trend analysis and Regression analysis. Therefore, it has been found that the Trend analysis showed a positive trend from the year 2011-12 to 2020-21 and the Regression analysis showed that there is significant relation of foreign direct investment inflows with GDP in the computer software and hardware sector followed by the service sector, and telecommunication sector.

Keywords

Foreign Direct Investment (FDI), Gross Domestic Product (GDP), Economic development, Reserve Bank of India (RBI), Trend analysis, Regression analysis, and FDI flows.

1. Introduction

Foreign direct investment (FDI) is the most attractive kind of investment for economic expansion. Economic expansion is depending upon various constituents. So, investment is one of the constituents of economic expansion, without investments no country will be able to expand its economy. Especially in the case of developing countries, because developing countries are not self-reliant to develop their economy world at large. The government of such countries takes various steps to boost their economy and attract foreign capital in their country. In view of this fact, these countries have no adequate funds. Therefore, they require overseas capital in the form of foreign direct investments.

FDI takes place when the individual, entity, or corporate invest a certain amount of money in another country in the form of investment for making more return or capturing the market share of another country and acquiring investments and controlling ownership in a business of a foreign entity because FDI flows rapidly as compare to any other type of investments. At present time FDI become a very significant criteria for the growth of the economy.

Therefore, FDI becomes the key to the development of the country. The main objective behind the investment is to make better utilization of resources available in the country. FDI has a significant role in globalization, by adopting such practices across the country helps to accelerate the growth of the economy. Therefore, most of the developed countries gave more importance to FDI and they are heavily dependent upon it.

2. Review of the Literature

According to **Sinha, M. (2021)**. FDI is the key for the development of the economy and it helps to generate employment and technological enhancement in their study entitled a study on the trend of FDI in India and its impact on Indian GDP. The purpose of this study is to examine the FDI inflows in India and study its effect on GDP. The main findings of the study show a positive trend of FDI in India and it increases in a significant manner. GDP rates were also very higher in the year 2016-17. This research is based on secondary data is analyzed by using trend analysis and growth percentage.

Shalini, S. (2020). Their study attempted to find out the pattern of the flow of FDI in India and know the interconnection between foreign direct investments and GDP. For analyzing the data various statistical tools like trend analysis, and correlation was used. The result of the study reveals the service sector plays a crucial role in captivating FDI inflows in India and some other sectors also include in this way namely the manufacturing, service industry, the telecommunication sector is one of the major sectors for FDI. It also concluded that there is no significant association between FDI and GDP.

According to **Nidhumolu, R.S., Madasu, P. (2020)**. FDI is crucial in foreign trade and the economic development of the country. In their studies, they investigate the growth among the various sectors by introducing FDI and critically assess the interrelation between FDI and economic growth. For achieving the objectives of the study various statistical tools were used for analyzing the data viz. regression

analysis and analysis of variance (ANOVA). Based on this analysis, the study reveals that there is a significant relationship between FDI and economic growth.
Mishra, R., Palit,S, (2020). Reveals the role of FDI on employment scenario in India. the main objective of this study is to examine the association among the FDI, GDP growth rate, and employment opportunities in India. The researcher has been concluded that the service sector in India attracted FDI for the year 2002-2012 and there were a large number of employment opportunities available in-the service sector rather than this there were not so good employment at that time so the government needs to take the effective initiative to improve the employment opportunities in India.
According to Pasupathi,S., Sakthi,V. (2019). Indian economy is experiencing a positive trend in FDI, and it's going up at a good pace. They also distiguish that the Indian economy is the investment hub for various nations. Their study titled with recent trends of foreign direct investment in India and its impact on economic growth examine the association between foreign direct investment and economic upturns in India by using trend analysis data analyzed from 2014 to June 2018. On the basis of the above analysis, it has been concluded that the most attractive sector for FDI in India is the service sector which is 19.51 percent of the total FDI.
Sultanuzzaman, R., fan, H., Akash, M.,Wang,B., Shakij, U.S. (2018). Explores the association among FDI inflows, exports, and economic growth by using autoregressive distributed lag (ARDL). So, the finding of this study is that there is significant association of FDI with the economic development of the country in the long run and short run. The study found that FDI inflows has a positive relationship with GDP and is negatively associated with export in the long run.

3. Need of the Study

FDI has a significant role in the development of any country. Therefore, countries try to attract overseas capital by adopting different ways. In India FDI also has great significance because it helps to mitigate and overcome various challenges. After studying various previous literatures, it has been observed that most of the previous studies are based upon the comparative study of foreign direct investment in India and the USA, the role of foreign direct investment (FDI) in India- an overview, role of FDI on employment scenario in India. Therefore, this study "Analysis of Role of Foreign Direct Investment in India's Economic Development" has been taken into consideration.

4. Objectives of the Study

Following are the objectives of the study:

4.1 To analyze the Foreign Direct Investments Inflows in India.

4.2 To study the relationship between Foreign Direct Investments Inflows and GDP.

4.3 To study the relationship between sector-wise Foreign Direct Investment Inflows and GDP.

5. Research Hypotheses

H_{01}: There is no significant relation between FDI inflows and GDP.

H_{02}: There is no significant relation between FDI inflows of computer software and hardware sector and GDP.

H_{03}: There is no significant relation between FDI inflows of the service sector and GDP.

H_{04}: There is no significant relation between FDI inflows of the telecommunication sector and GDP.

H_{05}: There is no significant relation between FDI inflows of the automobile sector and GDP.

H_{06}: There is no significant relation between FDI inflows of the chemical sector and GDP.

H_{07}: There is no significant relation between FDI inflows of drugs and the pharmaceuticals sector and GDP.

H_{08}: There is no significant relation between FDI inflows of the construction development sector and GDP.

6. Research Methodology

Research Methodology for this study is analytical in nature. Secondary data of selected sector of ten year has been used for achieving the objective. Trend analysis, correlation and regression is used for the analyses purpose.

Research design

The research design for this study is analytical in nature.

Sample Size and Selection Criteria

To achieve the objectives of the study top seven sectors has been taken into consideration for the analysis of data. This sector has been shortlisted based on the availability of data over the past ten years. Following are the sectors which has been taken into consideration is as follow:

Table: 1 List of Sectors

S. No.	Sectors
1.	Computer Software and Hardware Sector
2.	Service Sector
3.	Telecommunication Sector
4.	Automobile Sector
5.	Chemical Sector
6.	Drugs And Pharmaceuticals Sector
7.	Construction Development Sector

Source: *Author Compilation*

7. Duration of the Study

For the purpose of analysis of data period of ten years has been taken into consideration. i.e. from the financial year 2011-12 to 2020-21.

8. Types of Data

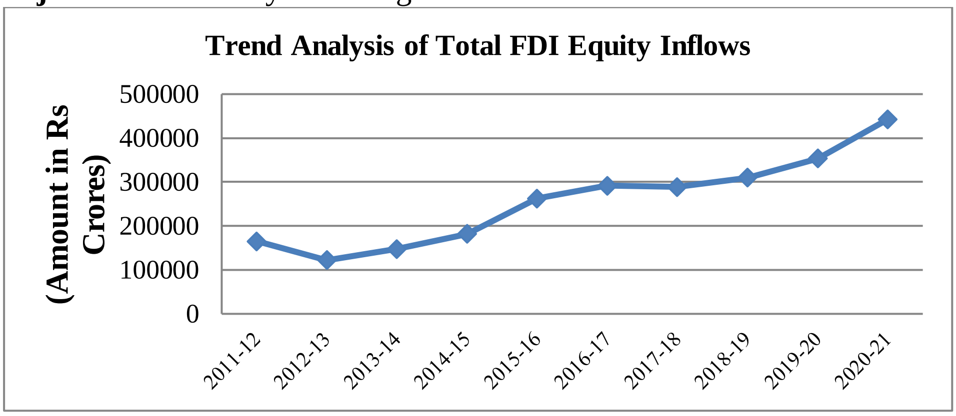
This study is based on secondary data. Data was collected from the Department of Promotion Industrial and Internal Trade (DPIIT) and Reserve Bank of India (RBI) websites.

9. Data Analysis and Presentation Tools

For the analyses of data various tools has been used namely, percentage, trend analysis and correlation, regression. For presenting data graphs and charts has been used.

10. Results and Discussion

Objective -1 To study the foreign direct investment inflows in India.



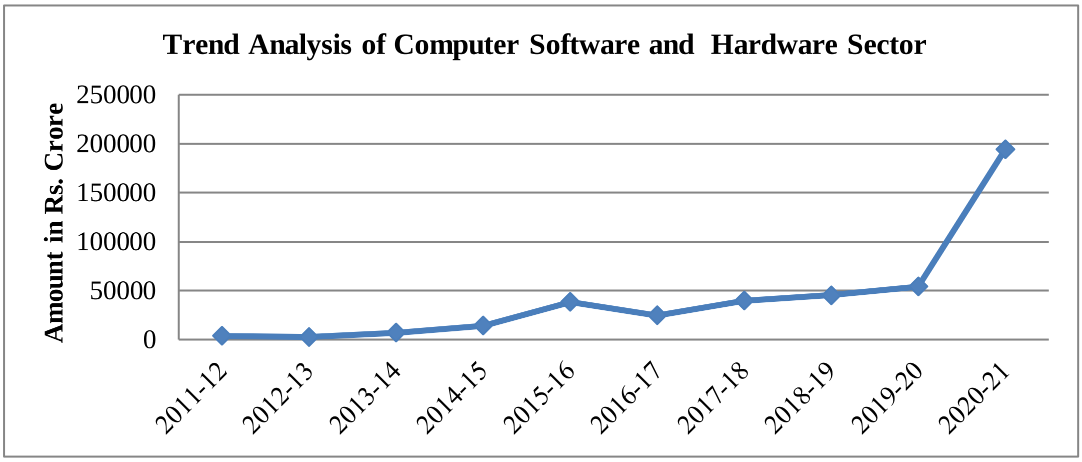
Source: Author Computation

Graph 1: Total FDI Inflows of India from the Year 2011-12 to 2020-2021

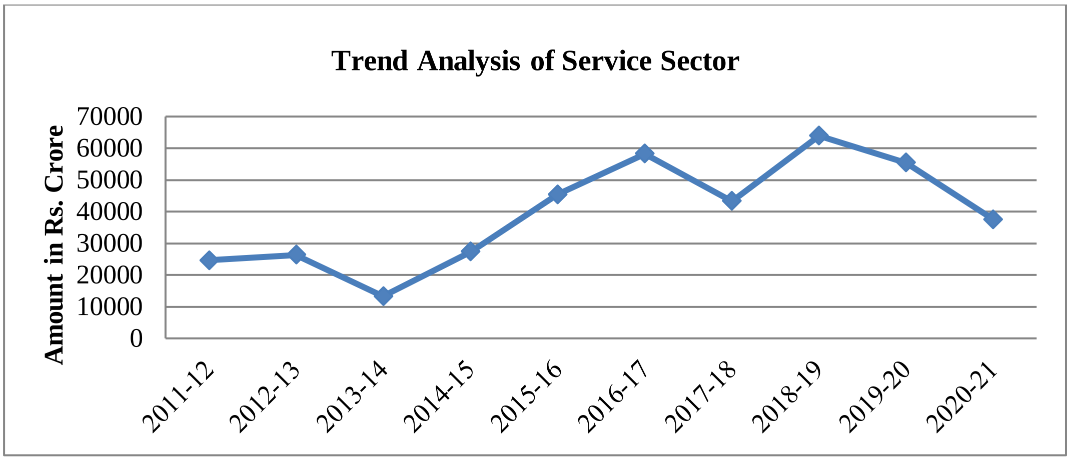
The above graph 1 of the FDI inflows trend shows a positive trend over the years from 2011-12 to 2020-2021. In the graph it has been showed that there were some fluctuations in the commencing years but thereafter, it has increased. In the year 2011-12 the amount of FDI inflows in India is Rs. 165146 crores. But in the year 2020-21 it stands at an amount Rs. 442569 crores which shows that a huge amount of investment over the years. In the year 2020-2021the growth percentage over the last year is 2 percent as per the data of DPIIT.

Trend analysis has been showing the fluctuations. There are various reasons behind this fluctuation. In the starting time period, there were very less development in India. Therefore, very few countries invest their amount in India. As per this analysis, it has been observed that the year after 2015-16 shows a positive trend line which means that there is a great impact of government initiatives for attracting FDI inflows in India like Make in India policy and other government initiatives also which has been taken for the development of the economy.

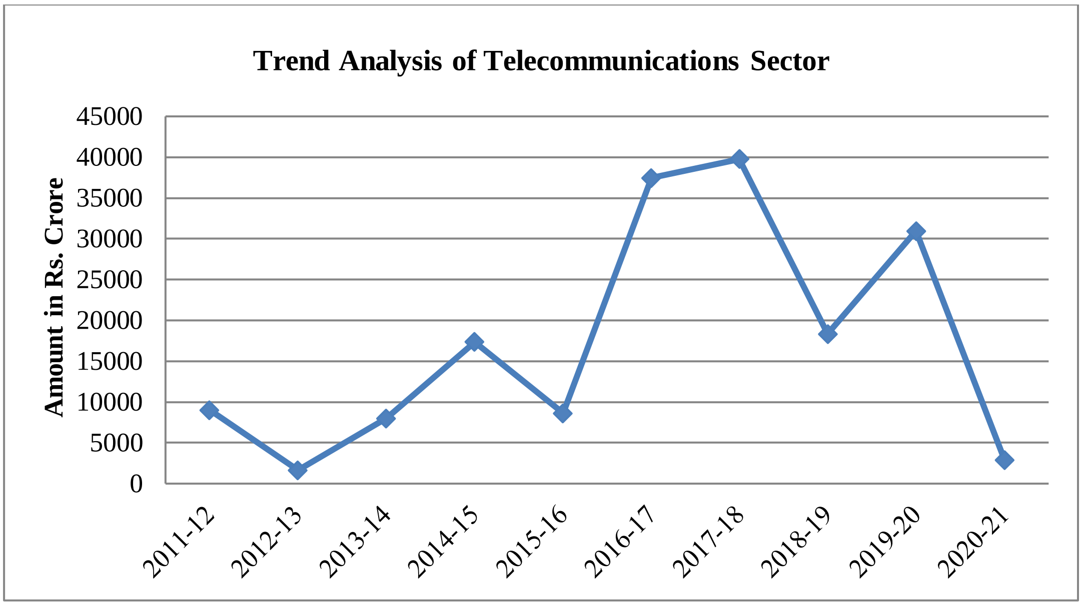
Sector Wise FDI Inflows Trend Analysis from the Year 2011-12 to 2020-2021



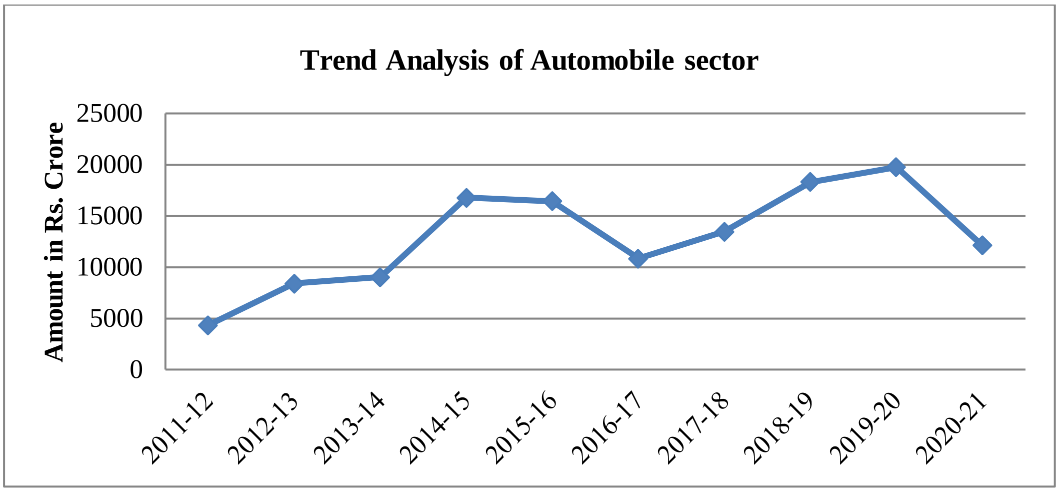
Graph 2: Trend Analysis of Computer Software and Hardware Sector



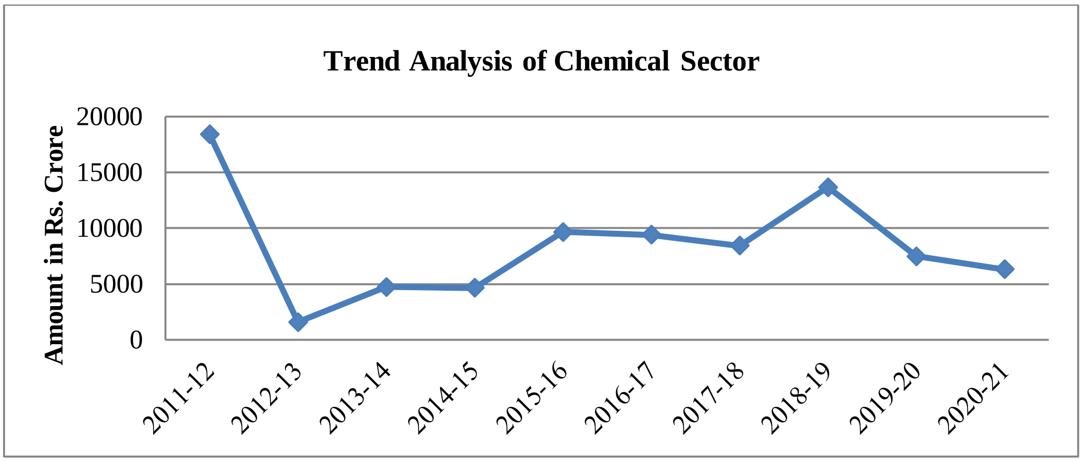
Graph 3: Trend Analysis of the Service Sector



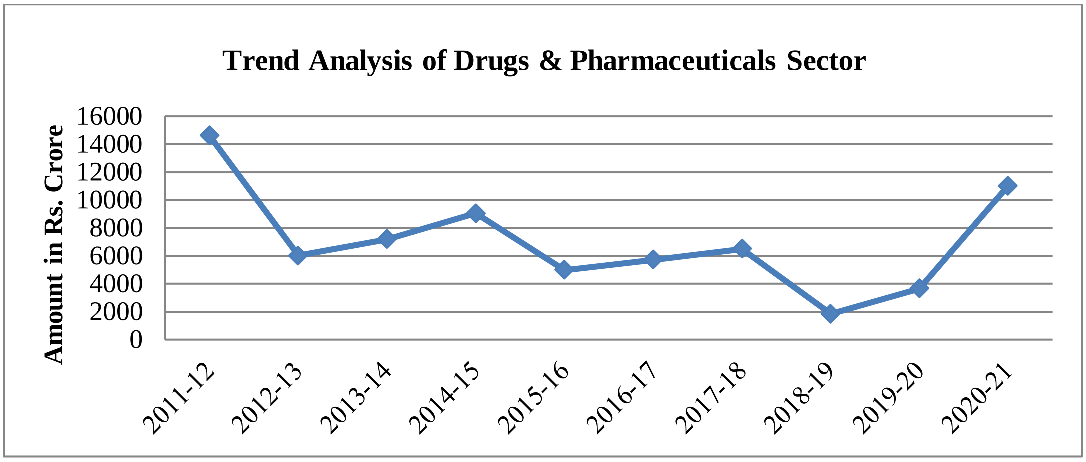
Graph 4: Trend Analysis of Telecommunications Sector



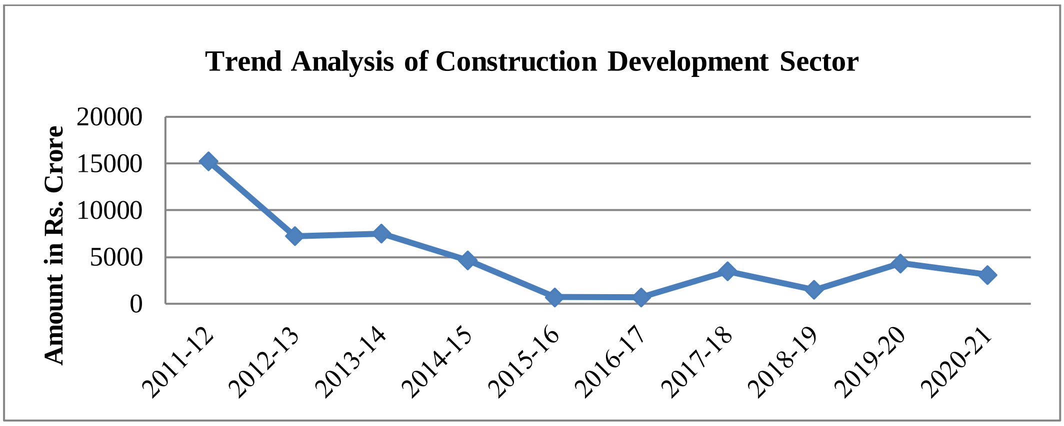
Graph 5: Trend Analysis of Automobile Sector



Graph 6: Trend Analysis of the Chemical Sector



Graph 7: Trend Analysis of Drugs & Pharmaceuticals Sector



Source: Author Computation

Graph 8: Trend Analysis of Construction Development Sector

Trend analysis of FDI inflows in India of different sectors as per the result of the above analysis it has been observed that there is a huge investment in the computer software and hardware sector.

In the year 2011-12 to the amount of investment in computer software and hardware was Rs. 3804 crores but as the year passes this sector attracts more investments as compared the other sector due to the technological advancement in this sector. The amount of investment in the year 2020-21 was Rs. 194291crores. after this sector, there are other sectors also which are contributing for the development of the economy like the service sector, automobile sector, drugs, and pharmaceuticals sectors also.

Objective– 2 To study the relationship between FDI inflows and GDP.

Table 2: Total FDI Equity and GDP Data from the Year 2011-12 to 2020-21

YEAR	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Total FDI Equity	165146	121907	147518	181682	262322	291696	288889	309867	353558	442569
GDP	8736329	9944013	11233522	12467959	13771874	15391669	17090042	18886957	20351013	19745670

Source: DPIIT, RBI website

H_{01}: there is no significant relationship between foreign direct investment inflows and GDP.

Table 3: Regression Results

Regression Statistics	
Multiple R	0.924
R Square	0.854
Adjusted R Square	0.836
P-value	0.000
Observations	10

Table 3 shows the result of regression statistics, which observed that the correlation coefficient (multiple R) shows a high degree of co-relation between total FDI inflows and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0.854. It showed that model explains approx. 85 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{01}) will be rejected as the p-value of is less than 0.05. Hence, it can be concluded that there is a significant relation between total FDI inflows and GDP.

Objective– 3 To study the relationship between Sector wise Foreign Direct Investment Inflow and GDP.

H_{02}: there is no significant relation between FDI inflows of computer software and hardware sector and GDP.

Table 4: Regression Results

Regression Statistics	
Multiple R	0.676
R Square	0.457
Adjusted R Square	0.389
P-value	0.031
Observations	10

Table 4 shows the result of regression statistics, which observed that the correlation coefficient (multiple R) shows high degree of correlation between FDI inflows of computer software and hardware sector and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0. 457. It showed that the model explain approx. 45 percent of the variation. And shows the results of the regression coefficient which concluded that the null hypothesis (H_{02}) will be rejected as the p-value Is less than 0.05. Hence, it can be concluded that there is a significant relation between FDI inflows of computer software and hardware and GDP.

H_{03}: there is no significant relation between FDI Inflow of the service sector and GDP.

Table 5: Regression Results

Regression Statistics	
Multiple R	0.749
R Square	0.561
Adjusted R Square	0.506
P-value	0.012
Observations	10

The Table 5 shows the result of regression statistics which observed that the correlation coefficient (multiple R) shows correlation between FDI inflows of the service sector and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0.561. It showed that the model explains approx. 56 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{03}) will be rejected as the p- value is less than 0.05. Hence, it can be concluded that there is significant relation between FDI inflow of the service sector and GDP.

H_{04}: there is no significant relationship between FDI Inflows of the telecommunication sector and GDP.

Table 6: Regression Result

Regression Statistics	
Multiple R	0.454
R Square	0.206
Adjusted R Square	0.107
P-value	0.187
Observations	10

Table 6 shows the result of regression statistics, which observed that the correlation coefficient (multiple R) shows the correlation between FDI inflows of the telecommunication sector and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0.206. It showed that the model explain approx. 20 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{04}) will be accepted as the p- value is greater than 0.05. Hence, it can be concluded that there is no significant relationship between FDI inflows of the telecommunication sector and GDP.

H_{05}: there is no significant relation between FDI Inflows of the automobile sector and GDP.

Table 7: Regression Result

Regression Statistics	
Multiple R	0.710
R Square	0.504
Adjusted R Square	0.442
P-value	0.021
Observations	10

Table 7 shows the result of regression statistics, which observed that the correlation coefficient (multiple R) shows the correlation between FDI inflows of automobile sector and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0.504. It showed that the model explain approx. 50 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{05}) will be rejected as the p-value is less than 0.05. Hence, it can be concluded that there is significant relationship between FDI inflow of the automobile sector and GDP.

H_{06}: there is no significant relation between FDI Inflows of the chemical sector and GDP.

Table 8: Regression Results

Regression Statistics	
Multiple R	0.602
R Square	.5041
Adjusted R Square	0.124
P-value	0.995
Observations	10

Table 8 shows the result of regression statistics, which observed that the correlation coefficient (multiple R) shows no correlation between the variables. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is .5041. It showed that the model explain approx. 50 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{06}) will be accepted as the p- value is greater than 0.05. Hence, it can be concluded that there is no significant relationship between FDI inflows of chemical sector and GDP.

H_{07}: there is no significant relationship between FDI Inflows of the Drugs and Pharmaceuticals Sector and GDP.

Table 9: Regression Result

Regression Statistics	
Multiple R	0.477
R Square	0.228
Adjusted R Square	0.131
P-value	0.162
Observations	10

Table 9 shows the result of regression statistics which observed that the correlation coefficient (multiple R) shows the correlation between FDI inflows of drugs and pharmaceuticals sector and GDP. R square the coefficient of determination; is the squared value of the correlation coefficient the value of R square is 0.228. It showed that model explain approx. 22 percent of the variation. And shows the result of the regression coefficient which concluded that the null hypothesis (H_{07}) will be accepted as the p-value is greater than 0.05. Hence, it can be concluded that there is no significant relationship between FDI inflows of drugs and pharmaceuticals sector and GDP.

H_{08}: there is no significant relation between FDI inflows of construction development sector and GDP.

Table 10: Regression Result

Regression Statistics	
Multiple R	0.670
R Square	0.449
Adjusted R Square	0.381
P-value	0.033
Observations	10

Table 10 shows the result of regression statistics, in which its observed that the correlation coefficient (multiple R) shows the correlation between FDI inflows of the construction development sector and GDP. R square, the coefficient of determination, is the squared value of the correlation coefficient the value of R square is 0.449. It showed that the model explain approx. 44 percent of the variation. And the table 1.16 shows the result of the regression coefficient which concluded that the null hypothesis (H_{08}) will be rejected as the p- value is less than 0.05. Hence, it can be concluded that there is a significant relationship between FDI inflows of the construction development sector and GDP.

11. Findings

- India has largest the total FDI inflows in the year 2020-21 and the lowest in the year 2012-13.
- In India, computer software and hardware sector has been attract the highest inflow of FDI in the last decade.
- The service sector is the second highest sector that attracts FDI in India.
- The construction development sector has the lowest amount of FDI in India.
- GDP rates highest in the year 2019-20.
- As per the regression analysis, it has been found that correlation coefficient of FDI inflows has significant relation with GDP is 0.92
- The value of R square, the coefficient of determination of FDI inflows is 0.854. It showed that the model explains the 85 percent variation in data.

12. Conclusion

FDI in India is playing a dominant role in the growth of the country because there are numbers of nations who sustain with inadequate domestic funds. So, they are unable to invest in the development. Overseas capital helps to boost economic activities which further helps to develop various sectors like service, infrastructure, and pharmaceutical sector, etc. There are major challenges faced by countries while they explore capital like – political influence, restrictive policies, shortage of resources, and corruption. This study basically focused on current trend and pattern of foreign direct inflows and critically examined the association between FDI inflows and GDP in India. Therefore, on the basis of the above analysis, it can be concluded that FDI in India shows a positive trend over the years. It increases in a significant manner. Further, based on regression analysis it can be concluded that there is a significant relationship between total FDI inflows and GDP. There is various sector in which FDI inflows and GDP has significant relation i.e., computer software and hardware, service sector, automobile sector, and construction development. In the telecommunication sector, the chemical sector, and drugs and pharmaceuticals sector have no significant relation with FDI inflows and GDP. The most emerging sector in India is computer software and hardware and further followed by various other sectors. At present, India needs to enhance its regulatory policies by introducing effective monetary and fiscal deficits and by giving a friendlier environment to foreign investors so that they can easily do investments.

13. Scope for Further Research

The present study is based on the analysis of the role of FDI in India. In this study includes a few economic variables it can be explored by using more variables taken into consideration for further research. Moreover, this study can be elaborate by using the different sectors, states, regions, and countries as well by extending the data for more years in which different statistical tools can also be implemented to make research more worthy and fruitful for society.

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GST and Micro, Small, and Medium Enterprises: A Sustainability Analysis

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Abstract

This paper critically analyses the sustainability of GST on Micro, Small, and Medium-Sized Businesses in Prayagraj District. Existing literature says that GST shall reduce the cost of doing business, increases transparency, decrease the prices of the product, improve tax compliance and simplify doing business easier. To accomplish the objectives of the study, the primary data were collected from 104 respondents of MSMEs operating in the Prayagraj district by using the "Cluster Random Sampling Technique". The statistical tool used to analyse data are Mean, Reliability analysis, Independent T-test, one-way ANOVA (F-test), and Regression was applied. The result of the study discloses that the sustainability of GST in MSMEs has a significant effect on the economic growth of the nation. The study contributes to sustainable GST and fulfils the research gap to some extent by analysing the effect from an entrepreneur's perspective. Thus, the study has implications for policymakers, and its stakeholder provides a better understanding of the new indirect tax system.

Keywords

Sustainability, Goods and Services Tax (GST), Ministry of Micro, Small & Medium Enterprises (MSMEs), Cluster random sampling, and Stakeholder.

1. Introduction

The GST will have various advantages over the current systems, including an easier input credit application process, a single point of taxation, the abolition of the cascading tax structure, and simpler taxes (ASSOCHAM, 2017). The sustainability Tax has considerable potential to promote fairness, responsibility, and transparency. While introducing GST in India there are positive and negatively impacted on all sectors. To sustain the new indirect tax necessary steps are to be taken to maintain the sustainable growth of GST in the MSMEs sector. Tax sustainability is a major concern for various economic agents-producers, distributors, and consumers. Tax sustainability can be explained as how the tax system functions and how it deals with various economic agent that meets the needs of the current economic growth of a nation such as GDP and without jeopardizing the nation's ability for its future needs.

The sustainability of GST deals with the synchronization of government income to drive the economy’s growth and achieves the status of a developed country. The indirect tax system GST combines the current Union and States tax with the nation into a singular tax removing the cascading effects and bringing the country under a singular taxation system. "One Nation, One Market, One Tax" was taken a step further with the introduction of GST in India.

While the inception of GST in India the objective was defined in law so that the new indirect system and its environment can be easily adopted by its stakeholders e.g., Manufacture, Wholesaler, Retailer, Consumers, etc. GST shall reduce the cost of doing business, increases transparency, the product's pricing, the level of tax compliance, and the convenience of doing business. Micro, Small, and Medium Enterprises sectors comprise approximately 37 percent of the country's GDP and can play a role in the Indian economy's primary thrust advancement. MSMEs have arisen in light of the chief employment-creating area in India and have conveyed stable development through various sectors of developing nations. The research has been taken to bridge this gap and to discover the views of stakeholder agents-producers, distributors, consumers, and entrepreneur’s perspectives of MSMEs concerning GST.

The long-term impact of GST on Micro, Small, and Medium Enterprises has brought about transformation. This investigation will helpful for MSMEs business people to beat the negative effect of GST execution by the government.

2. Review of the Literature

Usha C. (2020) the study examines the MSME sector satisfaction with GST implementation in India. The research also investigates the effect of GST on Indian Micro, Small, and Medium Enterprises. (C., 2020).

Shetty Deepa et.al, (2019) made an effort to study MSMEs were growing quick than organized ones as a result of the minimization, of the GST effect, it had made the taxation system transparent. This paper brought out issues and challenges experienced by MSMEs entrepreneur. The relevance of the disparity in the amount of impact of GST among MSMEs is identified in this article. It was determined that the impact of GST on the Indian MSME sector might be both beneficial and unfavourable. (Shetty Deepa Thangam Geeta, 2019)**.**

Neetu Kapoor and Savita Punjabi (2019) the study also examines businessmen's suggestions for further improving GST implementation. Based on the conclusions of this study, there is room to investigate the mechanisms to enable the successful deployment of GST. The data can also be utilised to create guidelines for the proper implementation of the GST system for MSMEs operating in various industries (CMA Neetu Kapoor, 2019).

Chitra Suraj Ashtekar (2019) this research investigates the impact of GST and its consequences for the MSME sector. This tax reform reshapes our economy and the MSME sector's business dynamics. The MSME sector is an important component of our economy and contributes significantly to our country's GDP (Ashtekar, 2018).

M. Jayalakshmi and G.Venkateswarlu (2018) GST and MSMEs were studied, as well as the impact of GST on MSMEs. This report discovered that the Indian economy is predicted to emerge as one of the world's leading economies, with a $5 trillion GDP by 2025, and that significant emphasis is being placed on strengthening our economy's backbone-the SME sector (G.Venkateswarlu, 2018).

Sudipta Chakraborty (2018) The purpose of this paper is to investigate the impact of GST on MSMEs in order to understand how successfully they coped with such a change in the Indian indirect taxation system and how this has put pressure on the nation's GDP growth in the near run (Chakraborty, 2018).

Vidit Mohan and Salman Ali (2018) the purpose of this research is to better understand the effects of the GST in India on the MSME sector. The research consists of a series of qualitative face-to-face interviews, followed by a survey of Indian MSME owners. The study presents a multidimensional analysis of the gaps between the anticipated and existing GST regimes' effects on MSMEs and the accompanying tax compliance (Vidit Mohan, 2018).

Kolluru Soumya and N. Jayaprada (2018) the researcher conducted a research study titled Impact of Select Government Policies toward MSMEs: Evidence from Odisha and Andhra Pradesh with the goal of measuring the impact of selected Government policies on the financials of MSMEs, the quality of their product, and overall enterprise development (Kolluru Soumya, 2018).

Kritika Somani (2018) this article discusses the impact of GST on India's Micro, Small, and Medium Enterprises. GST is intended to bring all indirect taxes under one roof. The Products and Services Tax (GST) is a single tax on the supply of goods and services from the manufacturer to the customer (Somani, 2018).

Rajkumar Salgar (2017) attempted to research that MSMEs in India are major contributors to the Indian economy and growth drivers Because of its low capital-intensive nature and high labour absorption, the MSME sector has made substantial contributions to the country's manufacturing production, employment generation, rural industrialisation, and exports. Next only to agriculture, the sector generates the most job opportunities. The sector is anticipated to employ around 120 million people and provide approximately 46 percent of India's total exports (Salgar, 2017).

Milandeep Kour et.al, (2016) attempted to research the impact of GST when it is implemented, the distinction between current indirect taxes and GST, and what the benefits and challenges of GST will be after it is implemented. GST will also help to accelerate the country's overall Gross Domestic Product (GDP). GST is now widely acknowledged around the world, and nations are implementing it as a sales tax system (Milandeep Kour, 2016).

3. Research GAP

The Goods & Services Tax carried out in the recent year it enormously affected all the sectors in India. To fill the study gap, bring forth new insights on rising pressure on the Tax administration and its stakeholders in MSMEs industries in Prayagraj district. The present research has been taken to bridge this gap and to discover the views of stakeholders of MSMEs concerning GST.

4. Objectives of the Study

4.1 To analyze the sustainability of GST on MSMEs in the Prayagraj District.

4.2 To study the issues and challenges of GST on its stakeholders of MSMEs in the Prayagraj District.

5. Research Methodology

- **Research Design:** For the study, a comprehensive literature examination has been carried out to develop the framework of the research, The primary data collected through the structured questionnaire selected Micro and Small-Scale industries on GST in Prayagraj. Secondary data is collected from research journals, websites, and reports of the DIC Prayagraj, the Government and internet, etc. The data collected was further analyzed.
- **Sample Size and Sampling Technique:** There are 10047 MSMEs in Prayagraj (as mentioned in table 2) to give the representation of the MSMEs sector the sample size of respondents is 104 from Prayagraj district Uttar Pradesh. The respondents were selected based on the "Cluster Random Sampling technique".
- **Questionnaire:** The survey was outlined for study. The survey pertains to MSMEs to see the point of the execution of GST. The surveys were utilized to inspire data on thing estimating segment factors and the level of effect on MSMEs with the part of Goods & Services Tax.

- **Statistical Techniques:** The statistical techniques utilized for examining the information differ from descriptive to multivariate. The statistical tools used for analysis is Frequency distribution analysis, Descriptive statistics like mean, Reliability analysis, independent t-test, one-way ANOVA, and Regression.

6. Need of the Study

The Micro, Small, and Medium Enterprises sector is critical to economic growth and a substantial contributor to government revenue streams. MSMEs generate healthy growth/Employment opportunities next to the agricultural sector. India is a federal country divided into 28 states and 9 union territories among which some states are industrially advanced such as Maharashtra, West Bengal, Gujarat, Tamil Naidu & Uttar Pradesh this state dominates position in terms of industrially advanced in India. For the study purpose, the state of Uttar Pradesh was divided into 75 Districts Agra, Sonbhadra, Mirzapur, Ghaziabad, Kanpur, Gautam Buddh Nager, Lucknow, Balrampur, etc are major industrial areas of Uttar Pradesh state. For research purpose Prayagraj district was selected and it is an industrially backward district in Uttar Pradesh. MSMEs in the Prayagraj district are growing and some are not showing good performance. So, the researcher finds the possibility of conducting research work on GST and its sustainability on MSMEs in the Prayagraj district.

7. Salient Feature of Study Area

The Prayagraj district comprises eight Tehsils namely Prayagraj, Bara, Handia, Karchhana, Karaon, Meja, Phulpur & Soraon. Prayagraj district has got location advantages to connect with other industrial towns. The district is bounded by a marketing center for the neighboring district of eastern Uttar Pradesh & northern Madhya Pradesh.

8. Name of the Important Industries

8.1 Vaidhyanath Ayurvedic, Naini-Allahabad
8.2 Mau Aima Spinning Mill, Mau Aima, Allahabad
8.3 UPTC Ltd., Allahabad
8.4 Waste Processing Com. Ltd. Naini
8.5 Shyam Dairy, Allahabad

Table 1: Detail of Clusters of Micro and Small Enterprise

S. No	Manufacturing Sector	Service Sector
1	Hand-knotted Carpet Cluster, Hadia	Coaching Centers, Allahabad
2	Leather Goods cluster, Mau Aima	Computer Training Institutes, Allahabad

Source: DIC Prayagraj

Table 2: Micro, Small, and Medium Enterprises in Prayagraj District

S. No	MSME Industry & Classification	Number of units
1	Agro based	2060
2	Soda water	12
3	Cotton textile	04
4	Woollen, silk & artificial Thread Based clothes.	09
5	Jute & jute based	04
6	Ready-made garments & embroidery	1250
7	Wood/wooden-based furniture	945
8	Paper & Paper products	41
9	Leather-based	21
10	Chemical/Chemical based	210
11	Rubber, Plastic & Petro based	72
12	Mineral based	56
13	Metal-based (Steel Fab.)	1082
14	Engineering units	1147
15	Electrical machinery & transport equipment	836
16	Repairing & Servicing	1848
17	Others	450
	TOTAL	**10047**

Source: DIC Prayagraj

9. Data Analysis

Table 3: Demographic Profile of the Respondents

Socio-Economic Characteristics	No. of Respondent	% In Total
Gender		
Male	71	68.3
Female	33	31.7
Total	**104**	**100**

Socio-Economic Characteristics	No. of Respondent	% In Total
Occupation		
Agriculture	08	7.7
Handicrafts	01	01
Government Services	14	13.5
Private Services	23	22.1
Business	09	8.7
Other	49	47.1
Total	**104**	**100**
Education Qualification		
Under-Graduation	19	18.3
Post-graduation	54	51.9
Researcher	16	15.4
Professional Degree	15	14.4
Total	**104**	**100**
Annual Income (in ₹)		
Below 2.5L	55	52.9
2.5L to 5L	17	16.3
5L to 10L	26	25.0
Above 10L	06	5.8
Total	**104**	**100**

Source: Primary Data

Table 4: Reliability Analysis of Sustainability of GST on MSMEs

Reliability Statistics	
Cronbach's Alpha	No. of Items
.821	11

Source: Computed Data

The Cronbach's alpha coefficient value of 0.821 indicates good reliability among the eleven scale items. As the value of Cronbach's alpha was satisfactory, further the data is fit analysis for the study.

10. Relationship between Occupation and the Sustainability of GST in MSMEs

This part of the research endeavour to test whether the occupation of the respondent influences the effect of GST. For this purpose, the researcher has outlined the hypothesis and tested of ANOVA test (also called the F test) and the outcome is presented below.

H01: There is no significant relationship between their occupation and Sustainability of GST in MSMEs

Table 5: ANOVA

Statement		Sum of Squares	DF	Mean Square	F	Sig.
The introduction of GST is good & simple Tax reform in India	Between Groups	4.226	5	.845	.678	.041
	Within Groups	122.149	98	1.246		
	Total	**126.375**	**103**			
The implementation of GST has made doing business easier in market	Between Groups	2.245	5	.449	.473	.005
	Within Groups	92.976	98	.949		
	Total	**95.221**	**103**			
GST has helped in the easy movement of goods in the Market.	Between Groups	9.442	5	1.888	1.676	.007
	Within Groups	110.394	98	1.126		
	Total	**119.837**	**103**			
GST is helpful for SME.	Between Groups	7.720	5	1.544	1.632	.009
	Within Groups	92.741	98	.946		
	Total	**100.462**	**103**			
The GST has facilitated in reduction in overall Tax	Between Groups	4.046	5	.809	.611	.002
	Within Groups	129.868	98	1.325		
	Total	133.913	103			
GST reduces in cost of doing SMEs	Between Groups	7.323	5	1.465	1.547	.001
	Within Groups	92.792	98	.947		
	Total	**100.115**	**103**			
GSTN Portal helpline/ helpdesk is helpful	Between Groups	3.357	5	.671	.686	.001
	Within Groups	95.865	98	.978		
	Total	**99.221**	**103**			
Exporting goods & services have now become easier	Between Groups	6.491	5	1.298	1.306	.002
	Within Groups	97.423	98	.994		
	Total	**103.913**	**103**			
The implementation of GST has reduced paper-work for returns	Between Groups	8.401	5	1.680	1.495	.001
	Within Groups	110.128	98	1.124		
	Total	**118.529**	**103**			

Statement		Sum of Squares	DF	Mean Square	F	Sig.
Does GST abolish Inspector Raj.	Between Groups	10.541	5	2.108	2.168	.001
	Within Groups	95.296	98	.972		
	Total	**105.837**	**103**			
Does Government provide GST helpdesk in the market?	Between Groups	6.366	5	1.273	1.137	.000
	Within Groups	109.788	98	1.120		
	Total	**116.154**	**103**			

Significant at a 5% level

Source: Computed Data

Interpretation: based on the above table, the result shows that P-value is less than 0.05 the null hypothesis is rejected at a 5 percent level of significance. There is no difference between the sustainability of GST and the occupation of the respondent in the Prayagraj district.

11. Relationship between Income and Sustainability of Implementation of GST

This part of the research endeavours to test whether the income of the respondent influences the effect of GST. For this purpose, the researcher has outlined the hypothesis and tested of ANOVA test (also called the F test) and the outcome is presented below.

H02: There is no significant relationship between their income and sustainability of GST on MSMEs

Table 6: ANOVA

Statement		Sum of Squares	DF	Mean Square	F	Sig.
The introduction of GST is good and simple Tax reform in India	Between Groups	4.220	3	1.407	1.152	.001
	Within Groups	122.155	100	1.222		
	Total	**126.375**	**103**			
The implementation of GST has made doing business easier in market	Between Groups	1.205	3	.402	.427	.001
	Within Groups	94.016	100	.940		
	Total	**95.221**	**103**			
GST has helped in the easy movement of goods in the Market.	Between Groups	1.827	3	.609	.516	.000
	Within Groups	118.009	100	1.180		
	Total	**119.837**	**103**			

Statement		**Sum of Squares**	**DF**	**Mean Square**	**F**	**Sig.**
GST is helpful for the SMEs	Between Groups	1.060	3	.353	.355	.041
	Within Groups	99.402	100	.994		
	Total	**100.462**	**103**			
The GST has facilitated in reduction in overall Tax	Between Groups	3.073	3	1.024	.783	.001
	Within Groups	130.840	100	1.308		
	Total	**133.913**	**103**			
GST reduces in cost of doing business of SME.	Between Groups	4.027	3	1.342	1.397	.001
	Within Groups	96.088	100	.961		
	Total	**100.115**	**103**			
GSTN Portal helpline/helpdesk is helpful	Between Groups	3.557	3	1.186	1.239	.002
	Within Groups	95.664	100	.957		
	Total	**99.221**	**103**			
Exporting Goods & services have now become easier	Between Groups	2.807	3	.936	.925	.001
	Within Groups	101.107	100	1.011		
	Total	**103.913**	**103**			
The implementation of GST has reduced paperwork for return	Between Groups	5.360	3	1.787	1.579	.001
	Within Groups	113.169	100	1.132		
	Total	**118.529**	**103**			
Does GST abolish Inspector Raj.	Between Groups	1.211	3	.404	.386	.002
	Within Groups	104.626	100	1.046		
	Total	**105.837**	**103**			
Does Government provide GST helpdesk in Market	Between Groups	2.212	3	.737	.647	.001
	Within Groups	113.942	100	1.139		
	Total	**116.154**	**103**			

Significant at 5% level

Source: Computed Data

Interpretation: based on the above table, the result shows that P-value is less than 0.05 the null hypothesis is rejected at a 5 percent level of significance. There is a significant difference between the effect of GST and the respondent's income in the Prayagraj district. The respondents who answered about the sustainability of GST on MSMEs saw no substantial variation in the incomes of MSMEs' employees.

12. Regression Analysis of Demographical Factors and Sustainability of GST on MSMEs

The regression analysis is used to determine the long-term impact of a specific demographic element on the dependent variables. The result is shown in the below table.

Table 7: Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	P-value
1	.447[a]	.553	.526	7.118	.547	.002**
a. Predictors: (Constant), Annual Income, Qualification, Occupation						

Source: *Computed Data*

Table 8: Coefficients [a]

Demographic factors		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.199	2.268		4.777	.000
	Gender	.188	.240	.079	.783	.001
	Occupation	.040	.079	.056	.502	.000
	Qualification	.010	.128	.008	.076	.001
	Annual Income	.156	.130	.140	1.196	.000
a. Dependent Variable: Sustainability of GST on MSMEs ** Significant at 0.01 level						

Source: Primary Data

Table: 7 the regression analysis for the sustainability of GST on MSMEs, where the dependent variable is the GST effect on MSMEs and the independent variable is chosen demographic factors. The multiple regression tables show the coefficient of regression (R2) is .553 which suggests 55.3 percent of the variance effect of GST. The F value got is .547 hence it shows the relationship between the dependent variable 'Sustainability of GST on MSMEs' and the independent variables, demographic factors.

13. Findings

1. An occupation-wise study found that there is no significant difference between occupation and Sustainable GST among respondents who replied to the effect of GST in MSMEs sectors.
2. According to the results of the one-way ANOVA and independent sample t-test, the respondent who provided information on how GST has affected MSMEs does have a significant difference between their income and GST.
3. During the survey, the majority of the respondent experienced the GST bringing drastic changes in the indirect tax system. The challenge phase by the respondent of MSMEs IT systems to make them GST compliant, Multiplicity of rates, decentralized registration, generation of item wise invoice with multiple copies, multiple slab rates, and printing of such invoices containing numerous details have increased the challenges to MSMEs stakeholder.

14. Conclusion & Suggestions

The present study is undertaken to assess the sustainability of Goods & Services Tax in Micro, Small & Medium Enterprises on the economic growth of the nation. The study is evaluative. To accomplish the objectives of the study, primary and secondary data were collected. The primary data were collected from 104 respondents of MSMEs in Prayagraj district, Uttar Pradesh. To study the sustainability of GST in the MSMEs sector various statistical tools like Mean, Reliability analysis, one-way ANOVA (F-test), and Regression were applied. The result of the study concluded that GST is a major source of revenue and the MSMEs sector can contribute. The majority of the population worked and earned in MSMEs. The possibility is this sector can contribute to the national revenue. So corrective measures can be taken by the Central and State governments such as minimizing distortions and facilitating compliance. The realisation of India's goal to have a $5 trillion GDP by 2024 will be made possible by the adoption of GST in MSMEs.

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