

## **EDITORIAL**

MSNIM MANAGEMENT REVIEW (MMR) is a biannual research journal of Manel Srinivas Nayak Institute of Management. It is published in January and July every year. MMR publishes articles with a aim of promoting scientific and analytical thinking on diverse management areas such as Human Resource Management, Marketing Management, Financial Management, Organizational Behaviour, International Business, Knowledge Management, and Environmental Management.

The Journal targets academicians, research scholars, corporate professionals, and practitioners. The objectives of the Journal are to disseminate knowledge and ensure the art of professional management .The articles of the Journal focus on research and reflections relevant to academicians and managers. The Journal aims at a PAN (Presence across Nation) India reach and a discernible international subscriber and readership base.

This debut issue features six research papers, each of which deals in different paradigm of business management.

The article “Leveraging Digital Approaches for Transparency in Corporate Social Responsibility”, authored by Swapna Shetty J, Dr Molly Sanjay Chaudhuri, and Dr Ankitha Shetty, examines the features of social responsibility, the most preferred term for social cause. The article also narrates the meaning of corporate social responsibility (CSR), and examines the preferred CSR communication method.

The article Poverty and Agricultural Innovation: A Systematic Literature Review by Selvananthan, Gopikrishna, and others evaluates the literature reviews on Agricultural Innovation and Poverty in a global context. They reviewed the articles by applying a systematic method.

Impact of Covid-19 on Digital Transformation, authored by Manju Yadav and Dr. Mehak Jonjua, discusses the factors that influenced people to embrace technology.

In article Digital Transformation in Provision of Audit Services: Lessons from Kenya, Charles Mwitari and Dr. Sharan Kumar Shetty critically review the impact of the pandemic on provision of audit services with reference to Kenya.

Aliyu Mohammed, and Dr. Shanmugam Sundararajan, in their paper ‘Emerging Trends of Business Transformation,’ argue that business transformation in all the facets bring sustained growth. Therefore organizations should make necessary adaptations for future growth.

‘A Study on Digitalisation of Gold Purchase and its Impact on Indigenous Gold Traders in Mangaluru City’ by Dr Catherine Nirmala explains the struggle of traditional goldsmiths in Mangaluru due to the digitalization of gold purchase and competitions from branded jewellery stores.

The book “How to win friends and influence people: the only book you need to lead you to success....” reviewed by Ashalatha, highlight the approaches to handle the people the way you are thinking. The book also draws the principles for becoming a social person.

We thank all the contributors of this issue and hope our readers benefit from reading these articles and enrich themselves.

Chief Editors

Dr. Molly S Chaudhuri & Ashalatha

# **MSNIM Management Review**

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Volume 1 Number 1 January –June 2023

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## Leveraging Digital Approaches for Transparency in Corporate Social Responsibility

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### Abstract

In recent years, corporate social responsibility (CSR) has gained popularity amongst academicians and businessmen, but this popularity has not properly channelized to consumers' awareness. This paper aims to identify the most preferred social cause, meaning of the term corporate social responsibility (CSR), and examines the preferred CSR communication method. The underlying objective of the study is to propose measures for digitalizing CSR communication to the internal and external stakeholders of the company.

### Introduction

The changing demand has made the companies to pay significant attention to their impact on the economy, society as well as the environment. Businesses are gradually integrating corporate social responsibility criteria into their operations. A significant number of organizations are truly interested in corporate social responsibility initiatives which illustrate all facets of CSR as well as their effect on financial benefits (Rashid et al., 2017). Further, engaging in corporate social responsibility dialogues and campaigns as a way of communicating with stakeholders, including consumers, has been recognized as a valuable tactic by brand managers (Fombrun, 2005; Gardberg and Fombrun, 2006).

CSR awareness and importance are rising because of the firm's goodwill (Kang, Lee et al. 2010). CSR is critical in shaping a company's brand, credibility, and stakeholder relationships (Etter, 2013). Even then, organisations continue to have a minimal level of communication when it comes to CSR concerns, which poses obstacles when it comes to implementing it in businesses (Vinke, 2011). Stakeholder preferences change frequently, thus a company's CSR interaction must be reviewed regularly (Morsing & Schultz, 2006). Therefore, the focus of CSR communication must turn away from one-way communication toward exchanges (dialogue) between companies and stakeholders. According to a study conducted by Accenture, improved CSR contact interactivity leads to higher message credibility and stronger feelings of identification with the brand, as well as a boost in corporate reputation (Eberle, Berens, & Li, 2013).

## Literature Review

Applying the social relationship theory (Aggarwal, 2004) in the context of the consumer-brand relationship, when consumers engage with brands in a social environment, their attitudes toward brands are developed by assessing brands' actions concerning certain social motives and norms, just as social interactions between humans are formed. It is argued that when people see CSR posts from brands on social media site, they are more likely to shape their attitudes toward CSR initiatives (Sreejesh et al., 2019). Similarly, employees' attitudes towards their organization can evolve when they involve in the company's social commitment. Provided, this involvement is voluntarily, and employees are provided application or tools to see the CSR update of the company.

Most of the prior studies on CSR assume that the consumers possess certain knowledge about the CSR activities of the company. Further, the studies on real companies or scenarios are relatively very low as most of these studies are done in a hypothetical setting (Mohre et al., 2001). Due to which the real awareness of consumers is questionable. Further, there is no proper communication mechanism of the CSR programs to the public, which has led to a lack of awareness (Jain et al., 2014). Also, consumers themselves do not pay attention to CSR activities during their purchase (Shabib & Ganguli, 2017). However, it cannot be ignored that CSR can be criteria in the consumer's purchase (Butt et al., 2019), provided the timely information on CSR is provided (Senet al., 2006; Pomerling & Dolnicar, 2009).

Communicating CSR programs to the stakeholders in particular to employees and customers is multifaceted and fragile. When too much is spoken about CSR, its stakeholders might be sceptical and if too little is spoken then the awareness is not created (O'Sullivan, 1997). Channel of CSR communication can also play a crucial role in creating awareness. The conventional method of communicating CSR on televisions has led the consumers to be sceptical (Webb and Mohr, 1998). Hence, consumers prefer CSR to be communicated through websites or on annual reports (Morsing, and Schultz, 2006). In this internet era, consumers prefer CSR communication through the digital platform, as reachability and accessibility are higher.

## Research Objectives

1. To understand the consumers' preferred choice of communication mode.
2. To provide suggestions for disseminating CSR information on digital platforms.

## Methodology

The data was gathered through a standardised questionnaire in Mangaluru (Karnataka). Just 384 of the 450 questionnaires distributed were found to be correct and were considered for

further study. A convenient sampling technique was used to collect the data.

#### ➤ Instrument / Scales

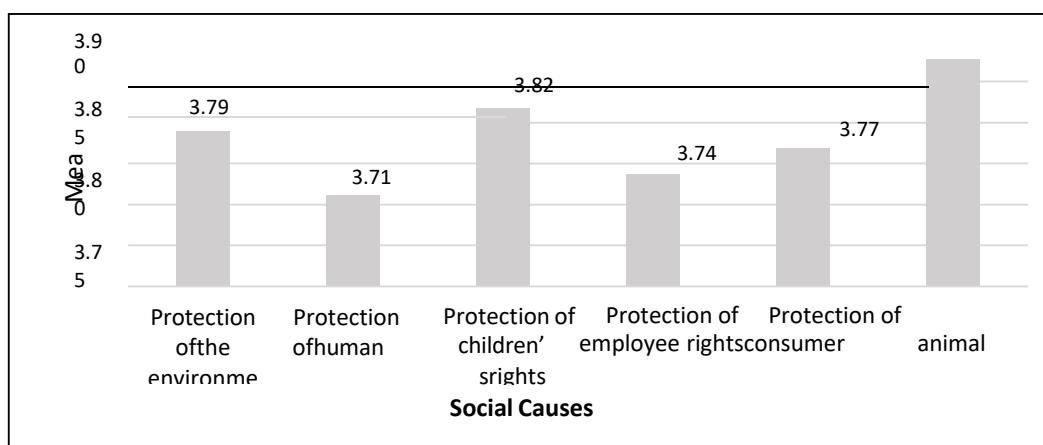
Four multiple-choice statements, such as giving back to society (Öberseder et al., 2013) and using CSR as a method to support a company's product/services (Zdravkovic et al., 2010), were used to assess participants' understanding of CSR. Consumers' favourite social support causes were measured using CSR dimensions found in well-known indices such as the environment, employees, consumers, children, and animals (Galant & Cadez, 2017), all of which were rated on a five-point scale (1 = not at all willing to support, 5 = fully willing to support). The preferred method for CSR Communication was adopted from Schmeltz (2017) and Pomering & Dolnicar (2009), the ranking scale was given to measure the preference of the consumers.

### Data Analysis and Results

**Demographic profile:** Based on the gender there was 47 per cent of male and 53 per cent of female respondents. Millennials (aged 22 to 37 years) made up about 32 per cent of respondents, while generation X (aged 38 to 53 years) made up 12 per cent, post-millennial (18 to 21 years) made up 51 per cent, and baby boomers (aged 54 to 72 years) made up just 5 per cent.

Consumer's willingness to support various social causes in terms of contribution of money or time Chart 1 shows that most respondents preferred to support the cause of saving animals, followed by protecting children's rights, and least preferred was protecting human rights. The mean of the responses was considered to calculate the preferences for supporting different social causes. We can see that these preferences are focused on the degree of knowledge that has been generated in society. Animal compassion has grown, like cruelty to these speechless creatures has gone beyond the point of tolerance.

Chart1: Support for various social causes



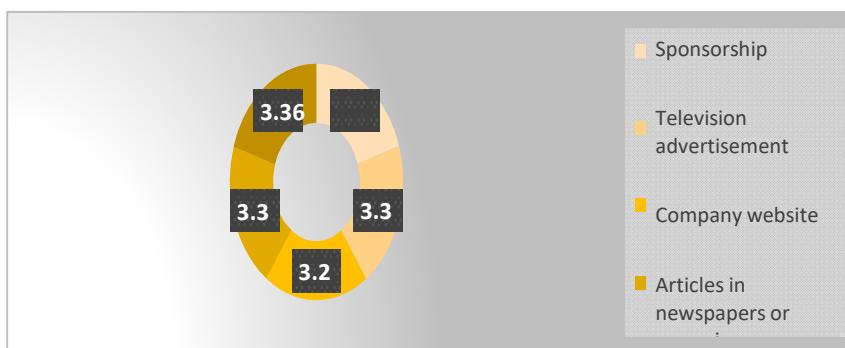
### *Consumers' Understanding of CSR*

Consumers were polled on how they perceived the word "corporate social responsibility." CSR is a way of giving back to society, according to most respondents (51 per cent). About 30 per cent of respondents believe that CSR is a tactic used by businesses to sell their goods. As a result, we can conclude that there is a split of opinion because some consumers view CSR viewed as altruistic conduct while others believe that corporations initiate CSR practices for their good.

### *Channels of CSR Communication*

As seen Chart 2, when asked to select the favourite medium for CSR communication, most respondents preferred packaging and television advertisements (both mean: 3.36), followed by sponsorship (mean: 3.34) and newspaper articles (mean: 3.33). CSR communication on the company website scored the lowest mean (3.26) indicating that customers tend to use the easily available networks.

Chart 2: Channels of CSR communication



Source: Author's calculation

### **Discussion**

The most preferred social cause found in the study was to protect animals. This could be due to most of the respondents about 50 per cent were in the age group of 15-21 years and their choice of the social cause could be different from other age groups. Most of the respondents understood the term CSR as a way of giving back to society. Furthermore, the study found that television and product packaging were the most preferred methods of CSR communication. While the order of choice varied in Schmeltz's (2017) report, whereby the order was the packaging, articles in newspapers or magazines, corporate website, and television advertisement.

### ***Measures to be adopted by the companies for digitalizing CSR***

Companies can extensively use digital platforms for CSR communication, as it can be more effective than other models of communication. Digital platforms can be adopted for internal as well as external stakeholders. Some of the measures for digitalizing CSR are stated below.

### **External stakeholders**

#### **(1) Customers**

Communication of CSR performance of the company usually happens through annual reports (as it is mandatory under the Companies Act), and are also made available on the website. Companies can also adopt the below strategies to educate the consumers on CSR.

- (i)** Opinion poll can be collected from the consumers using digital media for understanding the most preferred and needed CSR activity.
- (ii)** Update the CSR activities on the social media platform, along with the testimonials of the beneficiaries.
- (iii)** Communicating CSR initiatives on the packaging was the most preferred method in the survey done. Companies also speak about their CSR footprints in the packaging. Along with this, companies can also have a QR code given in the packaging, whereby the consumers on scanning can be routed to the CSR website of the company

#### **(2) Non-Government Organizations**

- (i) Transparency with the digital platform:** Most of the organizations work along with Non-governmental organizations for performing their CSR activities. There needs a collaborative working to get the real-time update on the CSR performance. For Example, Godrej Consumer Products Ltd (GCPL) in the year 2019-20 failed to comply with CSR contributions as it did not diffuse the entire amount for the NGO or implementing agency. With collaborative working, all the latest updates of CSR can be shared by the NGO to the company and the required corrective actions can also be taken.

### **A. Internal stakeholders - Employee**

- (i) Link employees to the CSR program:** Digital platforms created for the CSR activities of the company can link employees to the CSR programs. Employees can browse at the various CSR initiatives taken up by the company, they can also involve themselves in the CSR activities of the company and they can voluntarily contribute their time in their interest area of CSR. This can also reduce the burden of the human resource department of deploying employees for CSR projects.
- (ii) Maximizes employee engagement:** Engaging employees on CSR projects can maximize the overall benefit of engagement. Working with deadlines and stressful projects can sometimes deteriorate employee performance. CSR engagements can reduce the difference between the department or colleagues as they would be uniting for a more meaningful and greater cause

### **Conclusion**

The major limitation of the study is that the data is drawn from one region, i.e., Mangaluru city, Karnataka and hence the study cannot be generalised. The survey on CSR awareness is done only on consumers and not on employees, hence an employee survey or interview will give a broader scope for the study. Organizations all over the world are recognising their social and environmental responsibilities and participating in a variety of social and environmental events.

The need of the hour is to digitalize CSR and develop an effective strategy, based on the company's history, content, and unique relationships with its various stakeholders.

## References

- 1) Aggarwal, P. (2004).The effects of brand relationship norms on consumer attitudes and behaviour. *Journal of Consumer Research*, 31(1), 87-101.
- 2) Butt, I., Mukerji, B., & Uddin, M. H. (2019).The effect of corporate social responsibility in the environment of high religiosity: an empirical study of young consumers. *Social Responsibility Journal*, 15(3), 333–346.
- 3) Eberle, D., Berens, G., & Li, T. (2013).The impact of interactive corporate social responsibility communication on corporate reputation. *Journal of Business Ethics*, 118, 731–746.
- 4) Etter, M. (2013). Reasons for low levels of interactivity. *Public Relations Review*, 39, 606–608
- 5) Fombrun, C.J. (2005).A world of reputation research, analysis and thinking – building corporate reputation through CSR initiatives: evolving standards. *Corporate Reputation Review*, 8(1), 7-12
- 6) Galant, A., & Cadez, S. (2017).Corporate social responsibility and financial performance relationship: A review of measurement approaches. *Economic Research-Ekonomska Istrazivanja*, 30(1), 676–693.
- 7) Gardberg, N.A. and Fombrun, C.J. (2006).Corporate citizenship: creating intangible assets across institutional environments. *Academy of Management Review*, 31 (2), 329-346.
- 8) Jain, P., Datta, S. K., & Roy, A. (2014). Awareness and attitude towards corporate social responsibility: A study of MBA students in Rajasthan. *International Journal of Law and Management*, 56(3), 231–246.
- 9) Kang, K. H., Lee, S., & Huh, C. (2010). Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry. *International Journal of Hospitality Management*, 29(1), 72-82.
- 10) Mohr, L. A., Webb, D. J. ., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible ? The impact of corporate social responsibility on buying behavior' Published by : Wiley Stable URL : <http://www.jstor.org/stab>. *Journal of Consumer Affairs*, 35(1), 45–72.
- 11) Morsing, M., & Schultz, M. (2006).Corporate social responsibility communication:

- Stakeholder information, response and involvement strategies. *Business Ethics: A European Review*, 15, 323–338.
- 12) Öberseder, M., Schlegelmilch, B. B., & Murphy, P. E. (2013). CSR practices and consumer perceptions. *Journal of Business Research*, 66(10), 1839–1851
- 13) O'Sullivan, T. (1997). Why charity schemes need a delicate touch. *Marketing Week*, 20, 22-24.
- 14) Pomering, A., & Dolnicar, S. (2009). Assessing the prerequisite of successful CSR implementation: Are consumers aware of CSR initiatives? *Journal of Business Ethics*, 85(SUPPL. 2), 285–301
- 15) Rashid, R., Kaskeen, M. Y. M., & Javaid, F. (2017). Corporate Social Responsibility and corporate financial performance: Case study of Pakistan. *Universal Journal of Management*, 5(10), 457–476.
- 16) Sen, S., Bhattacharya, C. B., & Korschun, D. (2006). The role of corporate social responsibility in strengthening multiple stakeholder relationships: A field experiment. *Journal of the Academy of Marketing Science*, 34, 158–166.
- 17) Schmeltz, L. (2017). Getting CSR communication fit: A study of strategically fitting cause, consumers and company in corporate CSR communication. *Public Relations Inquiry*, 6(1), 47–72.
- 18) Shabib, F., & Ganguli, S. (2017). Impact of CSR on consumer behavior of Bahraini women in the cosmetics industry. *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(3).
- 19) Sreejesh, S., Sarkar, J. G., & Sarkar, A. (2019). CSR through social media: examining the intervening factors. *Marketing Intelligence and Planning*, 38(1), 103–120.
- 20) Vinke, N. (2011, October 31). Green Tweets: Communicating corporate responsibility through social media. Social Media for Social Purposes Conference, Copenhagen Business School, Copenhagen.
- 21) Webb, Deborah J. and Lois A. Mohr( 1998).A Typology of consumer responses to cause-relatedmarketing: From skeptics to socially concerned? *Journal of Public Policy and Marketing* 17 (Fall): 226-238.
- 22) Zdravkovic, S., Magnusson, P., & Stanley, S. M. (2010). Dimensions of fit between a brand and a social cause and their influence on attitudes. *International Journal of Research in Marketing*, 27(2), 151–160.

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## Poverty and Agricultural Innovation: A Systematic Literature Review

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### Abstract

The world we live is evolving day to day. The economy within the developing and the developed nations are chaotic in nature. Agricultural practices, innovations, and procedures that were used in the past are now being phased out. Agricultural evolution, whether directly or indirectly, aids in the alleviation of poverty on a larger scale. Poverty, as a sustainable development goal, is a burning issue in most developing countries. Upon considering the developing nations, the setbacks in the evolution of the technological innovation in agriculture and the rapid progress in the poverty are caused by many chaotic forms such as war, natural disaster, political volatilityetc. The main aim of this research is to assess the literature reviews on Agricultural Innovation and Poverty in a global context. To succeed the goal, the author conducts a systematic literature review in this paper, addressing all important keywords associated with agricultural innovation and poverty from a macro perspective. In conclusion, technological schemes within agricultural innovation are limited across developing countries, despite the fact that it is a critical subject. Overall, there is a deficiency in the availability of a comprehensive analysis of literature with sufficient recognitions to assist researchers in gaining an overview of technological innovation in agriculture and poverty alleviation. The paper expressly recognizes the established flaws and emphasizes the importance of new discovery channels for future study.

### Introduction

The world that we live today is demarcated on one side with high level of technology along with the presence of abundant commercial good; whereas the other side is observed with severe poverty that exist among the people (World Bank Group,2016). The agriculture in

the following two decades is becoming boundless in nature, which not only will satisfy the growing demand for food but also alleviate the poverty and thus contribute to fulfill the sustainable development goals (United Nations,2019). Across the global perspective the increase in the supply of agriculture yield can't only be achieved through the expansion of the land or healthy supply of water as both the availability of water and land has become scarce across both Asian and Europe (Hazell & Thurlow,2010). Thus, it is conclusive that the increase in the agricultural yield can be achieved only through the growth of the cultivable. Agriculture has a significant role to play in poverty reduction, since more than three-quarters of the world's poor people live in rural areas, where they depend on agriculture or agricultural-based businesses to make a living (Bekun & Akadiri,2019).

The root cause of poverty that is observed in many rural areas are mainly due to the slashing of the agricultural growth (Weerakoon,2018; CBSL,2019). This is further reinforced by the fact that many agricultural systems in developing countries are more reliant on ineffective conventional approaches (Godoy & Dewbre,2010). The Agricultural development can be accomplished by resolving the current issues surrounding food insecurity (Henegedara,2015), employment opportunities for the rural poor (Cai & Xia,2018), and the conventional technologies and techniques followed in the cultivation (Dhrifi,2013). Significant technological restructuring within the sector will lead to increased productivity, lower chemical concentrations in the manufacturing process, and better resource management. Agricultural technological advancement can benefit both poor and non-poor farmers by providing individuals with different resources, improving productivity, and managing the Agri supply chain.

## Methodology

This systematic review of literature employs the content analysis as the approach to accommodate the knowledge on selected significant areas of Poverty an Overview (V1), Agricultural Innovation (V2) Agricultural Innovation and Poverty (V3). The first step in the review was to examine the papers that were important to the thesis. The quest yielded numerous research articles in the specified study areas from a variety of academic and statistical databases, including the Department of Census statistics, IEEE Xplore, Science Direct, Elsevier, and Research Gate, among others. 108 articles/reports were gathered in the first stage based on their titles, abstracts, and keywords. 92 papers/reports were screened for further analysis after each paper was thoroughly scrutinized to remove redundant and insignificant articles to the study. Finally, for the purposes of review, 84

articles/reports were considered. The figure 1 depicts the selection procedure used under the study based on the relevancy to the context selected. The articles that are reviewed under the study are presented at the end in the reference section. Despite the fact that the analysis has thoroughly examined each article, the author of this paper assumes that the actual knowledge gaps that have been overlooked by previous studies are exposed without exhaustion. To uncover the knowledge gap found in the study areas described above, a systematic literature review was conducted. Since poverty and agricultural innovation are concepts that have evolved over time, the articles chosen to span the years 1970 to 2021. Even in the modern era many of the nation still practice the conventional approaches which ever were practiced in the early 18<sup>th</sup> and 19<sup>th</sup> centuries. In this paper, the author has conducted a thorough analysis of articles spanning a 50-year period to provide readers with a sufficient understanding of the evolution and transformation of the above-mentioned phenomenon across various countries around the world.

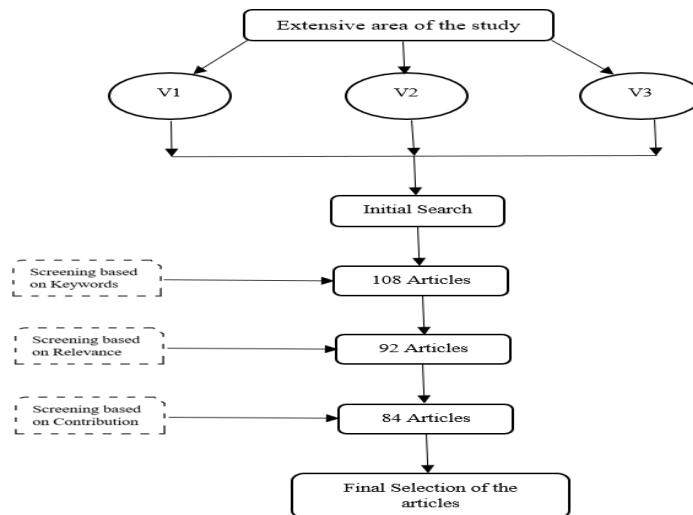


Figure 1 Screening process of systematic review of literature

Source: Author Developed

## Results of the Reviewed Studies

All the key articles taken into consideration in the analysis are briefly discussed under the following section.

### *A. Poverty an Overview*

Poverty is considered as a sustainable concept in the modern era. European council in 1975 defines poverty as a concept in which the individuals or families whose resources are so small as to exclude them from the minimum acceptable way of life of the member state in which they live (Council Decision,1975). Poverty is a measurement of the individual household income benchmarked against the poverty line (Nolan & Whelan,1996); the poverty is termed as the multidimensional concept which comprises health, education, and standard of living as the key determinants (DCS,2019). According to a few other studies, poverty is described as a phenomenon in which individuals fall short in terms of their well-being, income level consumption, human needs, and a variety of other socioeconomic conditions (DCS,2009; DCS,2015; DCS,2016).

Poverty measurement varies depending on individuals, communities, and regions. The key measurement techniques that are reviewed by various philosophers are Poverty Headcount Index which measures the proportion of the population for whom the consumption is lesser than the poverty line, represented as  $HCI = NP/N^1$  (Atkinson,1987), The Poverty Gap Index measures the spread of the poor below the poverty line by looking at the average depth of poverty which is represented as  $PGI = (1/n)^q \sum_{i=1}^n (L-Ci)/LJ^2$  (Foster & Shorrocks,1991; HBS,2007), Income GapRatio which measures the mean consumption or the income of a poor that is  $I=1-\mu p/z^3$  (Nair & Haridas,2008) and Foster Greer Thorbecke measures the poverty that exist in a region from the dimension of inequality that exist among the poor within a region that is  $FGT2 = 1/N^q \sum_{i=1}^n [(z-c)/z]^2$  (James , Joel , & Erik,2010).

<sup>1</sup>  $Np$  denotes the number of poor and  $N$  represents the total population.

<sup>2</sup>  $L$  represents the poverty line,  $C$  shows the average consumption expenses per adult equivalent person,  $i$  represents the individual persons,  $n$  represents the total population, and the  $q$  shows the number the persons with average consumption expenses per adult equivalent persons lower than the poverty line.

<sup>3</sup>  $\mu p$  denotes the mean consumption or income of the poor.

<sup>4</sup>  $q$  represents the total number of poor, the  $n$  represents the total population, the  $c$  depicts the consumptionexpenditure.

A bivariate correlation is clear in the literatures based on various factors that affect poverty. The household size, infant and child mortality, child/adult ratio and the consumption or the income greatly leads to the poverty (Musgrove,1980; Visaria,1977; Van de Walle, Dominique, & Martin,1992; Birdsall & Sabot,1991).Various other research findings concludes that gender plays a significant role among the society in

influencing the poverty across both developing and developed nations; poverty remains persistent for women and is considered impermanent for men (Dreze & Sen,1989; Bardhan,1985; Standing,1985; Bennett,1991; Haddad,1991; Behrman,1991). The national studies conducted in various south Asian countries concluded that the old age is a factor that influences poverty; Aging is a determinant that affects both health and economic stability, resulting in a higher likelihood of poverty in such a population (Deaton & Paxson,1991; Ravallion, Gaurav, & Van de Walle,1991). According to the findings of the Economic Research Service in 2003, education is a major contributor to poverty among rural residents; the literature concludes that a lack of education leads to cultural chaos, such as male domination, alcoholism, and domestic violence (Economic Research Service,2003; Cotter,2002).The rise in unemployment within a country has a greater effect on those who are asset less than on those who are asset-based self-employed, so it is clear that unemployment is a serious proposition that leads to poverty<sup>5</sup> (Udall & Sinclair,1982 ; Furuokaa, Idrisa, Limb, et al.,2019). Furthermore, findings from a few other studies have shown that wage discrimination based on gender, caste, or ethnic group influences productivity or work period, as well as poverty among individuals and communities (Birdsall & Sabot,1991; Osmani, 1991).

#### *B. Agricultural Innovation an Overview*

In association with the idea proposed by Lee (2005), agricultural production is a highly decentralized and geographically diversified activity which is moderated by various types of technology and technicality that varies over time. The bio technologies acts as a moderator in certain developed and developing nations to benefit the economy of the nation in a greater scale (Adelaja,2003). The literature review proposed by Ghadim and Pannell (1999), states that agricultural innovation is important for the growth of the agricultural industry as it improves skills and allows for more efficient decision-making; the study results are supported by on-farm trials and experiments. Moreover, a study of several other literatures has suggested that global

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<sup>5</sup> Unemployment rate in USA is 3.9% and the unemployment rate in Asia is 5.7% issues such as deforestation, wetland, and marine system degradation, as well as the booming global demand for food, fiber, and biofuels, have led to the emergence of agricultural innovation to address the issues; therefore, agricultural innovation plays a critical role for emerging economies (Sayer & Cassman,2013; Jayne, Mather, & Mgahenyi,2010; Gov.UK,2011). Klerkx, Aarts and Leeuwis (2010) states that the

presence of agricultural innovation systems has become one of the most important phenomena in scrutinizing agricultural technical, economic, and institutional changes; the study findings propose two key types of agricultural systems, viz., a poultry husbandry system and a system that interconnects individual farms across the country to achieve economies of scale. Moreover, according to a few other views, agricultural advancement in the form of biotechnology and precision technology has influenced many institutional changes; agricultural innovation, according to the results of a few other studies, is seen by industrialization, product differentiation, and integration in agriculture, both of which are closely related to human capacity and learning (Sunding and Zilberman,2001; Zilberman, Schmitz, Casterline, Lichtenberg, et al.,1991).

Hunger and Poverty are the most pressing sustainability issues in the twenty-first century, and they are primarily due to a lack of production in different regions around the world, which is caused by variations in climatic conditions, demand for biofuels, farm produce, and property (Alexandratis & Bruinsma,2012). Many agricultural innovations have occurred around the world, with Aeroponics, Hydroponics, Aquaponics, Vermiponics, and Bioponics being a few of the key innovations examined by a few scholars in both the European and Asian contexts. The Aeroponics utilizes the substrate culture to cultivate the plants without utilizing the soil. Findings in overall proves that the presence of aeroponic system instead of soil-based cultivation creates a greater potential towards an increase in income along with a reduction in cost of production over quality seeds (Osvald, Petrovic and Demsar,2001; Buer, et al.,1996; Lakhia, Gao, Syed, et al.,2018; Chadirin, Matsuoka, Suhardiyanto, et al.,2007; Otazu,2010). The Hydroponics is an approach where the plants are cultivated in a nutrient solution with or without the presence of an insert medium such as the gravel, vermiculite, rockwool, peat moss, saw dust, coir dust, coconut fiber etc. In compared with the soil-based cultivation the hydroponic closed system saves 90% of water, 85% of fertilizer and boost up of 250% in productivity. The findings concludes that the application of the hydroponic system not only serve the farmers to earn greater yield in a shorter period but also helps the farmers to cultivate even in waterless environment (Sharma, Acharya,Kumar, et al.,2018; AlShrouf,2017). Aquaponics is a hybrid of aquaculture and hydroponics, in which the effluents of the fish serve as nutrients and are bound to a floating raft system; the research findings proves that the aquaponics improves the agricultural yield (Surnar, Sharma and Saini,2015; Kloas, et al.,2015). Vermiponics is a technique in which the earthworms are used as a substrate to improve the microbial activity along with the decomposition

process, the process not only improves the agricultural productivity but results in reducing the chemical footprints (Dominguez & Edwards,1997; Katheem, Mahamad, Shlrene, et al.,2015; Ansari and Ismail,2012). Finally, the Bioponics is a systematic method of Hydroponic growing in which the vegetables and the plants are grown through the organic manner which utilizes the organic fertilizer, microbes, bacteria and fungus instead of any chemical composition. Similar to that of vermicponics, the bioponics results in reducing the chemical footprints and improve the ecological balance (Shubha, Mukherjee, Dubey, et al.,2019; Azariz, Elblidi, Yahyaoui, et al.,2017).

### *C. Agricultural Innovation and Poverty*

Agriculture is a rapidly expanding industry around the world. Poverty in agriculture is critical because poor farmers are drawn to poor lands, as demonstrated by the existence of a greater number of poor lands in the United States (Schultz,1950). According to a study conducted in the Philippines, poverty is more prevalent among agricultural households, which account for 57% of poverty contributions, far exceeding the contribution of non-agricultural households, which is only 17% (Reyes, Tabuga, Asis, et al.,2012). Agriculture and poverty are intertwined, with farming households suffering significant losses in agriculture due to a lack of knowledge and resilience in adapting to changes in the industry. This condition affects farmers both psychologically and physically, acting as a driver towards poverty (Winslow, Shapiro, Thomas,et al.,2004). Hertel and Rosch (2010), argue that the poverty, as a distinct problem within a nation, is linked directly to climatic changes within that country; the findings suggest that poverty and climatic change, as well as climatic change and agriculture, have a proportionate relationship. Study based on Indonesia concludes that the growing poverty in agriculture are mainly due to the deficiencies in quality human resources, assets in agriculture, social facilities, information, and communication. Also, various other literatures concludes that the unavailability of irrigation facilities due to the low economic activity are a crucial reason for individual fall into

the poverty line (Amarasinghe, Samad, & Anputhas,2005). Failing to meet the breakeven within the agricultural sector results in the drastic downfall of the consumption expenses per individual which results in the formation of the poverty among the communities (Shaw,2004). Finally,when it comes to the spatial clustering of rural poverty and food insecurity in Sri Lanka, the higher poverty is observed in rural areas where agriculture is the dominant practice, so it isoverly assumed that agricultural poverty is a significant

determinant for the country's economy.

The presence of new technology leads to an increase in farming income due to a decrease in the marginal cost of producing an output (Berdegué & Escobar, 2002). According to a study conducted in central Cameroon on fish farming, the integration technology focused on agricultural byproducts as a fishpond input acts as a factor in strengthening the fish farming; whereas the study findings clearly shows that the aquaculture as a technique helped in alleviating the poverty (Brummett, Gockowski, Pouomogne, et al.,2011). The study findings from 32 Sub Saharan African countries for a period of 1990 to 2011 concludes that the productivity in agriculture is a factor of innovation concerning technology, raw materials, process, and policies (Dhrifi, 2013; Dhrifi, 2014). Furthermore, few other literatures suggest that the application of Sen Index which focuses on the dimensions of public policies that increase farmers' technical knowledge directly and indirectly, increases production within the regions facing poverty (Devkota & Upadhyay,2013). According to other scholarly findings, agricultural innovation in the form of biotechnology entails a wide range of biological disciplines that result in a rapid increase in crop yield by providing a buffer against drought or pests, resulting in an increase in productivity (Sere & Rege,2006; Mendola,2007). The study based in Soviet areas of China interprets that agriculture along with internet can alleviate the poverty, that is the presence of a strong rural internet and the infrastructure improves the information flow in the Agri business, establishes a strong ecommerce which builds a strong supporting system for agriculture and the allied Agri business, along with which few other studies based in china suggested that the optimization of supply chain within agriculture can act as the driver to alleviate poverty (Yang & Huang,2018; Yuhui,2017; Pu,2018).

The study findings of Africa concludes that the establishment of agricultural SMEs will result in an increase in agricultural demand, as well as increased production and innovation within the sector, resulting in the alleviation of poverty (Okpachu,2018). The study based on animal husbandry and cultivation clearly concludes that the existence of financial facilities in the formof insurance and credit facilities improves the livelihood of poor farmers by ensuring adequate funds availability, which indirectly supports the farmers' risk resistance potential; the accessibility of the financial feasibility privilege the poor farmers in stepping onto the zone of innovation in agriculture (Yin,2020; Ejembi, Attah, & Damulak,2015). Few other research findings conducted based on Asian countries states that the organic approach mainly in the form of integrated duck farming

and vermi compost in the agriculture are a vital and most innovative approach to improve the agricultural productivity; furthermore the approach reduces the poverty through leveraging the productivity and also by opening up new business opportunities to the farmers furthermore this increases the cash inflow within the households (Hossain,2013; Hossain, Sugimoto, Ahmed, et al., 2005).

## Conclusion

The importance of agricultural innovation on poverty in both developing and developed countries has been extensively discussed in this paper. Furthermore, the study findings provide an adequate understanding on the existing issues in developing nations and the deterioration of economic stability in rural areas compared to urban areas. The review on range of literatures have illustrated the innovations in various platforms such as policies, procedures, financial aids, learning & development, institutional restructuring and the technological or technical schemes. When viewed at a macro level, the impact of agricultural innovation on developing countries is marginal when compared to developed countries, which are further influenced by various forms of chaos within the region, such as war, natural disasters, etc. The results of the literature reviews revealed that the implementation of these Innovative approaches in agriculture is minimal in the context of developing nations, so this paper serves as evidence for future research in the aforementioned context. Many countries have tried to alleviate poverty by implementing various forms of agricultural innovation. When comparing study results from key publications, technological innovation for agriculture is effective in some developed countries but is still in the experimental stage in many developing countries. Many studies have found that the existence of technological innovation within agriculture streamlines the financial terms associated with farmers and strengthens the roles of departments associated with agriculture such as sales and marketing, as well as improves the input/output ratio that prevails in the process. Overall, the presence of Agricultural Innovation drove on technological platform results in the uplift in the country's economic stability.

## References

1. Adelaja, A. (2003). The 21st century land grant economist. *Agricultural and Resource Economics Review*, 32(2), 159-170.
2. Atkinson, A. B. (1987). On the measurement of poverty. *Econometrica. Journal of the Econometric Society*, 749-764.

3. Alexandratrs, N., & Bruinsma, J. (2012). World agriculture towards 2030/2030. The 2012 revision. *Global perspective Studies. ESA Working Paper* No. 12-03. FAO.
4. AlShrouf, A. (2017). Hydroponics, aeroponic and aquaponic as compared with conventional farming. *American Scientific Research Journal for Engineering, Technology, and Sciences*, 27(1), 247-255.
5. Amarasinghe, U., Samad, M., & Anputhas, M. (2005). Patial clustering of rural poverty and food insecurity in Sri Lanka. *Food Policy*, 30(5-6), 493-509.
6. Ansari, A. A., & Ismail, S. A. (2012). Role of earthworms in vermitechnology. *Journal of Agricultural Technology*, 8(2), 403-415.
7. Azariz, L., Elblidi, S., Yahyaoui, A., & Fekhaoui, M. (2017). Assessment of phytoavailability in the cherry tomato plants exposed to lead and chromium in a nutrient solution. *Journal of Geoscience and Environment Protection*, 5, 176-188.
8. Bardhan, K. (1985). Women's work, welfare and status. *Economic and Political Weekly*, 51-52.
9. Behrman, J. (1991). Nutrient intake demand relations: Incomes, prices, schooling, mimeo. Philadelphia: Department of Economics, University of Pennsylvania.
10. Bekun, F. V., & Akadiri, S. S. (2019). Poverty and agriculture in Southern Africa Revisited; A Panel Causality Perspective. SAGE Journals, 1-10.
11. Bennett, L. (1991). Gender and poverty in India, country study. Washington DC: World Bank.
12. Berdegué, J. A., & Escobar, G. (2002). Rural diversity, agricultural innovation policies and poverty reduction. Agricultural Research and Extension Network, 65-85.
13. Birdsall, N., & Sabot, R. (1991). Unfair advantage. Labor Market Discrimination in Developing Countries. Washington DC: World Bank .
14. Brummett, R. E., Gockowski, J., Pouomogne, V., & Muird, J. (2011). Targeting agricultural research and extension for food security and poverty alleviation: A case studyof fish farming in central Cameroon. *Food Policy*, 36(6), 805-814.
15. Buer, C. S., Correll, M. J., Smith, T. C., Towler, M. J., Weathers, P. J., Nadler, M., . . . Walcerz, D. (1996). Development of a nontoxic acoustic window nutrient-mist bioreactor and relevant growth data. *In Vitro Cellular & Developmental Biology-Plant*, 32(4), 299- 304.
16. Cai, Y., & Xia, C. (2018). Interpretive structural analysis of interrelationships among the elements of characteristics agriculture development in Chinese rural poverty alleviation. *Sustainability*, 786-806.
17. CBSL . (2019). National accounts . Economic and Social Statistics of Sri Lanka, 27-39.
18. Chadirin, Y., Matsuoka, T., Suhardiyanto, H., & Susila, A. D. (2007). Application of deep sea water (DSW) for nutrient supplement in hydroponics cultivation of tomato: effect of supplemented DSW at different EC levels on fruit properties. *Indonesian Journalof Agronomy*, 35(2).
19. Cotter, D. A. (2002). Poor people in poor place: Local opportunity structures and

- household. *Rural Sociology*, 67(4), 534-555.
20. Council Decision. (1975). Concerning a programme of pilot schemes and studies to combat poverty. *OLJ*, 7(75), 8-57.
  21. DCS. (2009/15/16, June). Poverty indicators. Household income and expenditure survey - 2006/07, 2012/13, 2016.
  22. DCS. (2019, August). Ministry of economic reforms and public distribution. Global Multidimensional Poverty for Sri Lanka.
  23. DCS. (2017, October). Poverty indicator. Household income and expenditure survey - 2016.
  24. DCS. (2018/19). Crude Birth Rates & Crude Death Rates by Province, District & Sex 2018 - 2019. Population and Housing.
  25. DCS. (2019, August). Ministry of economic reforms and public distribution. Global Multidimensional Poverty for Sri Lanka.
  26. Deaton , A., & Paxson, C. H. (1991). Patterns of aging in Thailand and Cote d'Ivoire. Living standards measurement study, Working Paper No.81. Washington DC: World Bank.
  27. Devkotaa, S., & Upadhyay, p. M. (2013). Agricultural productivity and poverty reduction in Nepal. *Economics*, 4-18.
  28. Dhrifi, A. (2013). Agricultural productivity and poverty alleviation: What role for technological innovation. *Journal of Economic and Social Studies*, 4(1), 139-154.
  29. Dhrifi, A. (2014). Agricultural productivity and poverty alleviation: what role for technological innovation. *Journal of Economic Social Studies*, 4(1), 139-158.
  30. Dominguez, J., & Edwards, C. A. (1997). Effects of stocking rate and moisture content on the growth and maturation of Eisenia andrei (Oligochaeta) in pig manure. *Soil biologyand biochemistry*, 29(3-4), 743-746.
  31. Dreze, J., & Sen, A. (1989). *Hunger and Public Action*. Oxford: Oxford University Press.
  32. Economic Research Service. (2003). Data presented on the rural income, poverty and welfare. Retrieved from <http://www.ers.usda.gov/Briefing/IncomePovertyWelfare/>
  33. Ejembi, S. A., Attah, A. J., & Damulak, J. S. (2015). Roles of credit institutions in the improvement of rural livelihood and poverty alleviation in mangu local government area, plateau state. *Nigerian Journal of Rural Sociology*, 15(2).
  34. Foster, J. E., & Shorrocks, A. F. (1988). Poverty orderings. *Econometrica. Journal of the Econometric Society*, 173-177.
  35. Furuokaa, F., Idrisa, A., Limb, B., & Borohb, R. P. (2019). Labour market in Asia and Europe: A comparative perspective on unemployment hysteresis. Kula Lumpur: AEI Insights.
  36. Ghadim, A. K., & Pannell, D. J. (1999). A conceptual framework of adoption of an agricultural innovation. *Agricultural economics*, 21(2), 145-155.
  37. Government UK. (2011). The Future of Food and Farming: Executive Summary. London: United Kingdom Government Office for Science.

38. Godoy, D. C., & Dewbre, J. (2010). Economic importance of agriculture for poverty reduction. *OECD Food, Agriculture and Fisheries Paper No.23*.
39. Haddad, L. (1991). Gender and poverty in Ghana. *22(1)*, 5-16.
40. Hazell , P., & Thurlow, J. (2010). The role of agriculture in African Development . Elsevier, 1-9.
41. HBS. (2007). Household statistical survey - Household budget survey. Chisinau: National Bureau of Statistics of the Republic of Moldova.
42. Hertel, T. W., & Rosch, S. D. (2010). Climate change, agriculture and poverty. The World Bank.
43. Henegedara, M. (2015). Agricultural innovations abd food security in Sri Lanka. Research Gate, 86-105.
44. Hossain, S. T. (2013). The role of organic entrepreneurship and innovation for poverty alleviation and development. Friends In Village Development Bangladesh (FIVDB).
45. Hossain, S. T., Sugimoto, H., Ahmed, G. J., & Islam, M. R. (2005). Effect of integrated rice-duck farming on rice yield, farm productivity, and rice-provisioning ability of farmers. *Asian Journal of Agriculture and Development*, 2(1-2), 79-86.
46. James , F., Joel , G., & Erik , T. (2010). The Foster–Greer–Thorbecke (FGT) poverty measures: 25 years later. *The Journal of Economic Inequality*, 8, 491-524.
47. Jayne, T., Mather, D., & Mghenyi, E. (2010). Principal challenges confronting smallholder agriculture in Sub-Saharan Africa. *World Dev*, 38(10), 1384-1398.
48. Katheem, K. S., Mahamad, I. H., Shlrene , Q., & Sultan , I. A. (2015). Vermicompost, its applications and derivatives. Prospects of organic waste management and the significance of earthworms, 201-230.
49. Klerkx, L., Aarts, N., & Leeuwis, C. (2010). Adaptive management in agricultural innovation systems: The interactions between innovation networks and their environment. *Agricultural Systems*, 390-400.
50. Kloas, W., Grob, R., Baganz, D., Graupner, J., Monsees, H., Schmidt, U. Wuertz, S. (2015). A new concept for aquaponic systems to improve sustainability, increase productivity, and reduce environmental impacts. *Aquaculture Environment Interactions*, 7(2), 179-192.
51. Lakhiar, I. A., Gao, J., Syed, T. N., Chandio, F. A., & Buttar, N. A. (2018). Modern plant cultivation technologies in agriculture under controlled environment: a review on aeroponics. *Journal of Plant Interactions*, 13(1), 338-352.
52. Lee, D. (2005). Agricultural sustainability and technology adoption: Issues and policies for developing countries. *American Journal of Agricultural Economic*, 87(5), 1325- 1334.
53. Mendola, M. (2007). Agricultural technology adoption and poverty reduction: A propensity-score matching analysis for rural Bangladesh. *Food Policy*, 32, 372-393.

54. Musgrove, P. (1980). Household size and composition, employment and poverty in urban Latin America. *Economic Development and Cultural Change*, 28(2), 1-18.
55. Nair, N. U., Nair, K. M., & Haridas, H. N. (2008). Some properties of income gap ratio and truncated Gini coefficient. *Calcutta Statistical Association Bulletin*, 60(3-4), 245- 254.
56. Nolan, B., & Whelan, C. T. (1996). Resources, deprivation, and poverty. Oxford: OUP Catalogue.
57. Okpachu, A. S. (2018). Women in small and medium scale agricultural enterprises and poverty reduction in Yobe State: Logistic regression approach. *Agricultural Research & Technology*, 15(5), 1-6.
58. Osmani, S. R. (1991). Wage discrimination in rural labor market. The theory of implicit cooperation. *Journal of Development Economics*, 3-23.
59. Osvald, J., Petrovic, N., & Demsar, J. (2001). Sugar and organic acid content of tomato fruits (*Lycopersicon lycopersicum* Mill.) grown on aeroponics at different plant density. *Acta Alimentaria*, 30(1), 53-61.
60. Otazu, V. (2010). Manual on quality seed potato production using aeroponics. International Potato Center.
61. Pu, R. (2018). On optimization and innovation of rural circulation system in Western China under the targeted poverty alleviation strategy. Proceedings of the 2018 4th International Conference on Social Science and Higher Education. Atlantis Press.
62. Ravallion, M., Gaurav, D., & Van de Walle, D. (1991). Quantifying absolute poverty in the developing world. *Review of Income and Wealth*, 345-361.
63. Reyes, C. M., Tabuga, A. D., Asis, R. D., & Datu, M. B. (2012). Trends in income poverty and distribution. *Poverty and agriculture in the Philippines*, 2012-09.
64. Sayer, J., & Cassman, K. G. (2013). Agricultural innovation to protect the environment. *Proceedings of the National Academy of Sciences*, 110(21), 8345-834.
65. Schultz, T. W. (1950). Reflections on poverty within agriculture. *Journal of Political Economy*, 58(1), 1-15.
66. Sere, C., & Rege, J. E. (2006). Agricultural biotechnology for poverty alleviation: One more arrow in the quiver. 4th AACAA and 31st TSAP Annual Meeting, (pp. 25-32).
67. Sharma, N., Acharya, S., Kumar, K., Singh, N., & Chaurasia, O. P. (2018). Hydroponics as an advanced technique for vegetable production: An overview. *Journal of Soil and Water Conservation*, 17(4), 364-371.
68. Shaw, J. (2004). Microenterprise occupation and poverty reduction in microfinance programs: Evidence from Sri Lanka. *World development*, 32(7), 1247-1264.
69. Shubha, K., Mukherjee, A., Dubey, A., & Koley, T. K. (2019). Bioponics- A new way to grow soilless vegetable cultivation. *Agriculture and Food*, 1(12).

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70. Standing, H. (1985). Women's employment and household: Some findings from Calcutta. *Economic and Political Weekly*, 20(17), 23-38.
  71. Sunding, D., & Zilberman, D. (2001). The agricultural innovation process: research and technology adoption in a changing agricultural sector. *Handbooks in Economics*, 18(1A), 207-262.
  72. Surnar, S. R., Sharma, O. P., & Saini, V. P. (2015). Aquaponics: Innovative farming. *International Journal of Fisheries and Aquatic Studies*, 2(4), 261-263.
  73. Thomas, A. H. (2012, March). Trends, projections, and community & economic development issues. Survey on Economic Human Rights in New York State (9), 44-49.
  74. Udall, A., & Sinclair, S. (1982). The luxury unemployment hypothesis: a review of evidence. *World Development*, 10(2), 49-62.
  75. United Nations. (2019). The 2030 agenda for sustainable development. Transforming ourworld, 5-41.
  76. Van de Walle, Dominique, & Martin, R. (1992). A Profile of poverty in Morocco, mimeo. Poverty Analysis and Policy Division.
  77. Visaria, P. (1977). Living standards. Employment and education in western India. Washington DC: ESCAP/IBRD project on Asian income distribution data.
  78. Weerakoon, D. (2018). Post war economic development in changing global landscape. Colombo: Institute of Policy Studies of Sri Lanka.
  79. Winslow, M., Shapiro, B. I., Thomas, R., & Shetty, S. V. (2004). Desertification, drought, poverty and agriculture. Research lessons and opportunities, 2004.
  80. World Bank Group. (2016). Taking on Inequality. Poverty and Shared Prosperity 2016, 184.
  81. Yang, Z., & Huang, S. (2018). Research on the long-term mechanism of targeted poverty alleviation driven by scientific and technological innovation. The 2nd International Conference on Culture, Education and Economic Development of Modern Society. Jiangxi, China: Atlantis Press.
  82. Yin, L. (2020). Innovation of financial poverty alleviation model of rural black pig breeding base. *Revista Cientifica-facultad De Ciencias Veterinarias*, 30.
  83. Yuhui, X. (2017). Study on the innovative agricultural technology-driven targeted poverty alleviation. *China agricultural information*, 6, 13-15.
  84. Zilberman, D., Schmitz, A., Casterline, G., Lichtenberg, G., & Siebert, J. (1991). The economics of pesticide use and regulation. Berkeley: Department of Agricultural and Resource Economics, University of California.

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## Impact of Covid-19 on Digital Transformation

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### **Abstract**

The study explores the impact of the COVID-19 Pandemic on Digital Transformation in India. It discusses the factors which pushed people to embrace technology. This Research is conducted one year after the occurrence of the first corona positive case. The researcher used the qualitative method to gauge the impact of COVID-19 on Digital transformation in terms of acceptance of Aarogya Setu app, e-learning and OTT platforms.. All the responses were discreetly analysed and interpreted. It was found that initially people were enthusiastic in reception of Aarogya Setu App, but in long run it couldn't become very popular because of technical glitches. In case of e-learning, private School, universities could easily shift to online mode than government ones. Keeping the benefits of e-learning in mind, educational institutions might adopt hybrid teaching method (Offline+Online) in future. Popularity of OTT platforms had augmented during pandemic. Netflix, Amazon Prime, and Disney+Hotstar were the most popular OTT platforms in India. Features like Diverse content, innovative pricing models & flexibility will help Internet streaming platforms to grow more in the coming years.

### **Introduction**

COVID-19 was declared a global health emergency on January, 30, 2020. On 24 March 2020, Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days. This was the first measure step of the Government of India as a preventive measure against the COVID-19 pandemic. As a result, 1.3 billion people were confined to their homes. Markets, offices, schools, universities, Movie theaters, modes of transport were suspended. After this one by one three more nationwide lockdown were exercised, this lasted till May 31 (Bansal & Hasin,2020). This was the time when technology came in handy. Keeping this in background, paper

will study the Impact of COVID-19 in paving way for Digital transformation in the field of health, education and entertainment.

## Literature Review

COVID-19 has impacted our lives badly, be it personal or professional. During this time of fear and uncertainty, each other's support and accepting the need & early adoption of technology have played a vital role in the fighting pandemic. Whitelaw et al., (2020) point out many countries had adopted digital technology and integrated the same into policy and health care for effective implementation of surveillance, testing, contact tracing, and implement strict quarantine strategies. Jiang Nan & Ryan Julie, (2020) explains how authorities across the world had used digital platforms to provide official, trustworthy, and on-time information about COVID-19. 167 countries out of 193 worldwide updated their citizens about the information related to pandemic through national portals, mobile apps & social media platforms. In China, mobile phone locations, mobile payment applications have helped in collecting real-time data of people who had visited the Wuhan market, the epicenter of the pandemic (Wu et al., 2020).

Likewise, South Korea implemented tools for aggressive contact tracing, GPS data from vehicles and mobile phones to provide real-time data and detailed timelines of people's travel. With the help of digital technologies, free treatment, and early isolation, South Korea came as a role model for the rest of the developing countries (Lee et al., 2020).

In Singapore, the health ministry keeps a tab on individuals through a mobile phone application. This app records the data of encounters between people & stores it for 21 days, which can be used later for identifications (Andrews, 2020). A smartwatch did the same job in Germany. It indicated the alarming symptoms by measuring pulse rate, temperature, and sleep patterns (Busvine, 2020). In Australia quarantined people were put under surveillance with the help of tracking devices. In India Government of India launched the Aarogya Setu app to combat the spread of Virus. It is a Bluetooth-based digital service that helps in contact tracing, syndromic mapping, and self-assessment. This app reached more than 100 million installs in 40 days.

**E-learning:** Covid-19 has directly impacted education around the world. Schools and Higher Educational institutions were the first to be shut down following offices, markets, theaters in an attempt to control the spread of the Covid-19 pandemic. According to the UNESCO report, this had impacted 1.57 billion students across 191 countries. In India, more than 32 crore learners were affected (Sharma, 2020). However, Pandemic couldn't deter the spirit of teaching and learning.

There are 993 universities, 39931 colleges, and 10725 stand-alone institutions listed on the portal of the Ministry of Human Resource & Development (Kumar DNS, 2020). MHRD & UGC have made several arrangements on the governmental level to make sure the studies of students do not get affected by the pandemic. Many virtual platforms like e-GyanKosh an online depositories, e-Adhyayan an e-books platform, Gyandarshan an educational channel, and radio were promoted for students (Kumar Jena, 2020). Most of the private educational institutions shifted to e-learning by providing online classes for teaching and assessment activities on multi-device supporting video conferencing tools like Zoom and MS Teams, dedicated educational portals, and social media apps (Rajhans et al., 2020). However, E-learning has its limitation. Students from remote areas and marginalized sections have been facing massive hurdles in the form of resources and internet connectivity to carry on their studies during the pandemic. (Kapasia et al., 2020)

**OTT platforms:** Someone's loss is someone's gain. This happened in the case of film theaters and Over the Top platforms popularly known as OTT. Pandemic and lockdown collectively forced people to stay at home. The only option left for recreation was Television, People reluctant to watch TV Soaps and old movies wholeheartedly shifted their loyalties to OTT platforms (Bhavana, 2020). Boston Consulting Group (BCG) reports that pandemic has increased the growth of OTT platform subscriptions by 60%. (Pinto, 2020). As of July 2020, India had as many as 29 crores OTT platform users.

Increasing penetration of broadband, accessible high-speed smartphones, innovations in media streaming technology, customized OTT apps & innovative pricing models have made OTT popular. (Gupta, 2021). According to research conducted in August 2020, the lockdown has played a crucial role in increasing the popularity of OTT platforms. Average hours spending on OTT has gone up from 0-2 to 2-5 hours. (Madnani et al., 2020). This signals that the OTT popularity is not going to diminish but rise only after life returns to normalcy.

## Objective

To study the impact of covid-19 pandemic on digital transformation in health, education and, entertainment sector

## Research Method

Digitization is the demand of the day. Technology has become part of everyone's life like never before. This research was conducted to explore the motivation or compulsion behind this new shift. Researcher did a pilot study to identify three sectors where impact of covid-19 in paving the

way for digitization was more than evident. These three sectors were Health, Education and Entertainment. The research is qualitative in nature and used Case study technique. These case studies were done by content analysis & in-depth interviews. Three case studies were focusing on one aspect of the research. Out of these nine in-depth interviews, four interviews were conducted face-to face, three on telephone and two with the help of MS teams. All the interviews were semi-structured and conducted at length. To get more insight about the applicability of Aarogya Setu app, reviews available on App stores & Play stores were also studied. Age of the samples ranges from 19 years to 35 years. All these responses were recorded and analysed.

## **Interpretation & Discussion**

Best of the Indian brains from industry, academia and government worked 24x7 for 21 days to build Aarogya Setu app. On 2nd April Government of India launched Aarogya Setu app to respond to the emergencies of the pandemic. People living in terror of being caught by the virus didn't take long to download this app. Within 13 days Aarogya Setu app was running on more than 50 million mobile devices (Burman, 2020). By August 2020, the app touched the mark of 15 crore downloads (PTI).

Aarogya Setu app built by the National Informatics Centre had already traced 85 lakh Bluetooth contacts till September 2020. Out of this 85 lakh, fifteen lakh had been tested & four lakh were found positive (Agarwal, 2020). Many private, government Organisations made it mandatory for their employees to download the Aarogya Setu app. It was found that Corona Warriors found it very useful, as the app used to alert them in case they would have come in proximity with an infected person. Now, moving a step further this app has been integrated with CoWIN. A digital platform, CoWIN helps to monitor the movement of vials and their availability at all centers. With the integration of CoWIN on Aarogya Setu app users would be able to download their inoculation certificates & access vaccine data (Rajagopal, 2021). The app was a blessing for people stranded abroad. These people had registered themselves on the Aarogya Setu app. Later government evacuated them with the help of the registered data on the app. But when it comes to utility people do not have high regard for the Aarogya Setu app, as they complain that it doesn't give proper alerts, and sometimes these come after days.

**E-learning:** Forced closure of educational institutions due to Covid-19 has paved way for the digitization of the Indian education system and it has worked only in pushing the sector forward with technological innovation and expansions (DNS Kumar, 2020). E-learning has become the new normal for teachers & students since the closure of the schools and colleges in March 2020. The sudden decision to go online didn't give ample time for schools-colleges to explore various options available. In jiffy schools & colleges grabbed Zoom, the most popular video conferencing app available for teaching. The purpose was not to falter the pace of education. But soon Indian Government raised the flag over security issues. On the other hand, MS Teams security policy ensured that none of the users' data would be shared with any third party provider. This made the school transition from Zoom to MS Teams & Google meet. Webex, Hangouts, GoToMeeting & Skype were some of the other apps used for various academic purposes.

During the research, many benefits and challenges of the digital shift in the education sector came to light. Closure of school & colleges was nothing less than an extended vacation for the students of all age groups. Initially, everyone was happy but soon excitement turned into irritation. It became difficult for them to stare at the laptop and mobile screens the whole day. As a result, students started getting depressed, annoyed and developed many health issues. The infrastructure was another hitch for governmental institutions to go online. While private schools, colleges smoothly started functioning online, government aided were struggling to get started. During the pandemic, teachers were instructed to teach through online learning platforms. Senior teachers, professors couldn't deal with so much technology of a sudden. Poor Internet connectivity also made it difficult for students to take uninterrupted online classes.

E-learning facilitated students to continue their studies during the pandemic. Many universities took entrance exams through the online proctored method. It was convenient to take classes from anywhere. It saved time and energy spent on travelling which in exchange increased productivity. Recorded classes gave the flexibility to access them anytime. All these benefits signal that e-learning is going to be an integral part of the Indian education system in post COVID-19 period.

**OTT Platforms:** Content is streaming on the OTT platform & OTT platform is streaming in the lives of people now. Lockdown has played a substantial role in mushrooming of OTT platforms. Before that, OTT platforms had a niche market in India. Now with the availability of OTT platforms such as Netflix, Disney Hotstar, Amazon Prime, Zee5, Voot, AltBalaji, MX Player, Sony Liv; audiences have a plethora of options to watch content that is localized with multiple genres & customized according to their personalities (Hattangadi, 2020). After doing a content

analysis of the interviews and available secondary data; it is been found that young people's preference in terms of entertainment has changed. Lockdown gave ample time to people to try new things. Since then Subscription of OTT platforms has gone up considerably high.

Netflix originals in movies and series have made Netflix the most popular streaming platform. In 2020, Netflix also partnered with Jio to provide a mobile-only subscription. According to Netflix, India has the highest film viewership on Netflix globally. Over 80% of the users have watched at least one film every week during Lockdown and trend continued later. Extraction & Raat akeli hai were the most-watched movies in 2020. It was the leisure time that gave the audience to watch diverse content. Viewership of Korean dramas in 2020 rose by 370% in comparison to the year 2019. Amazon Prime is second in the rank order and gives a tough fight to Netflix. With series like Family man, Paatal Lok & Mirzapur 2 popularity of Amazon Prime had only mounted. Alt Balaji had added 1.2 million subscribers to its base in the first quarter of 2020 only. When it comes to the users Disney+Hotstar takes the lead in India with over 400mn monthly active users. It has 8 million paid subscribers. Disney-Hotstar is popular because the sports events like IPL can be streamed live on it.

Youth is quite inclined towards the OTT, so are the young homemakers. According to a report by Media Partners Asia, an independent research provider; streaming services are estimated to have spent more than Rs 5,100 crore in India last year. As a result, over-the-top platforms will see services upping their budgets by 25-30 percent to stay ahead of the curve in 2021.

**Study of Objective:** Interviews and reviews available on app download stores point out that the Aarogya Setu app has helped in identifying infected people but it could not do wonders like similar apps in foreign countries because of some technical glitches. Still, it was a good attempt made by the Indian government & can be developed further to provide better services in the future.

The transition from offline to online classes was more than a compulsion than the choice. Video conferencing apps like Zoom, MS Teams, Google meet, Skype which were catering to business enterprises till now started focusing on this newly emerged market. MS Teams advanced integration of the ability to share documents & data made it a comprehensive tool for e-learning. We can say Indian education system is gradually adopting digital platforms and we can expect a parallel online education system along with the offline pedagogy in post covid-19 India.

In 2020 OTT platforms took the TV industry by storm & made it a year of watching the content online. With over 40 OTT platforms more and more people are choosing to subscribe to OTT

subscription over DTH because these have better content, original movies & series, faster movie premiers.

## Conclusion

This research is an attempt to study not only the Impact of COVID-19 Pandemic on digital transformation but the future ahead. Had technology not been there, the world would not have been able to fight the Covid-19 pandemic. During this period technology saved us from doom. It saved the lives of our near and dear ones by early detections and timely treatment, Kept people virtually close with the help of video conferencing apps when in reality they were separated from each other. Students could continue their studies through e-learning mode. People were working from homes, ordering groceries online. OTT platforms entertained people by filling the vacuum created by closed movie theatres. Indeed, technology cannot avert the outbreak of Pandemics; however, it can prevent the spread and strikingly lessen the impact.

## Future Scope of Research

This research is based on secondary data and nine interviews conducted for the in-depth understanding of paradigm shift during COVID-19. However, this can't be considered as representable for all age groups and social strata. In the future different researches can be conducted focusing on each aspect individually with proper segmentation.

## References

1. Jiang Nan, & Ryan Julie. (2020). How does digital technology help in the fight against COVID 19? Worldbank.Org. <https://blogs.worldbank.org/developmenttalk/how-does-digital-technology-help-fight-against-covid-19>
2. Whitelaw, S., Mamas, M. A., Topol, E., & C Van Spall, H. G. (2020). Applications of digital technology in COVID-19 pandemic planning and response. *The Lancet Digital Health*, 2, e435–e440. [https://doi.org/10.1016/S2589-7500\(20\)30142-4](https://doi.org/10.1016/S2589-7500(20)30142-4)
3. Lee, D., Heo, K., & Seo, Y. (2020). COVID-19 in South Korea: Lessons for developing countries. *World Development* 135,105057. Elsevier Ltd. <https://doi.org/10.1016/j.worlddev.2020.105057>
4. Wu, J. T., Leung, K., & Leung, G. M. (2020). Now casting and forecasting the potential domestic and international spread of the 2019-nCoV outbreak originating in Wuhan,

- China: a modelingstudy. [Www.TheLancet.Com](http://www.TheLancet.Com),395,2020. [https://doi.org/10.1016/S0140-6736\(20\)30260-9](https://doi.org/10.1016/S0140-6736(20)30260-9)
5. Kumar Jena, P. (2020). Impact of Covid-19 on higher education in India. *International Journal of Advanced Education and Research.* [Www.Alleducationjournal.Com](http://www.Alleducationjournal.Com), <https://www.e-yantra.org/>
  6. Rajhans, V., Memon, U., Patil, V., & Goyal, A. (2020). Impact of COVID-19 on academic activities and way forward in Indian Optometry. *Journal of Optometry*, 13, 216–226. <https://doi.org/10.1016/j.optom.2020.06.002>
  7. Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., Barman, B., Das, P., & Chouhan, P. (n.d.). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. <https://doi.org/10.1016/j.chilgyouth.2020.105194>
  8. Arora, A. K., & Srinivasan, R. (2020). Impact of pandemic covid-19 on the teaching – learning process: A study of higher education teachers. *Prabandhan: Indian Journal of Management*, 13(4), 43–56. <https://doi.org/10.17010/pijom/2020/v13i4/151825>
  9. Madnani, D., Fernandes, S., & Madnani, N. (2020). Analysing the impact of COVID-19 on over-the-top media platforms in India. *International Journal of Pervasive Computing and Communications*, 16(5), 457–475. <https://doi.org/10.1108/IJPC-07-2020-0083>
  10. Gupta, P. (n.d.). The factors effecting shift of Indian customers from T.V series to web series-The Future of OTT services in India. <https://doi.org/10.36713/epra2013>

## Links

1. [https://github.com/nic-delhi/AarogyaSetu\\_Android](https://github.com/nic-delhi/AarogyaSetu_Android)
2. Archived: WHO Timeline - COVID-19
3. [https://economictimes.indiatimes.com/tech/information-tech/aarogya-setu-app-launched-by-goi-in-public-privatepartnershipmode/articleshow78916970.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/tech/information-tech/aarogya-setu-app-launched-by-goi-in-public-privatepartnershipmode/articleshow78916970.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
4. Aarogya Setu, the Indian contact search application, becomes open-source – Technology News, Firstpost | FR24 News English
5. <https://www.firstpost.com/health/of-5-covid-19-lockdowns-in-india-1st-phase-most-effective-shows-data-but-policy-changes-have-not-eased-public-movement-8434601.html>
6. COVID-19 lockdowns in India, 1st phase most effective, shows data, but policy changes have not eased public movement - Health News , Firstpost

7. Aarogya Setu becomes open source ([news.onair.com](http://news.onair.com))
8. <https://www.itnonline.com/article/deployment-health-it-china%E2%80%99s-fight-against-covid-19-pandemic>
9. <https://cities-today.com/singapore-launches-app-to-combat-spread-of-covid-19/>
10. <https://www.reuters.com/article/us-health-coronavirus-germany-tech-idUSKBN21P1SS>
11. aarogya setu app: Aarogya Setu's new feature to help organisations get health status of staff, other users, Telecom News, ET Telecom ([indiatimes.com](http://indiatimes.com))
12. <https://telecom.economictimes.indiatimes.com/news/aarogya-setus-new-feature-to-help-organisations-get-health-status-of-staff-other-users/77694480>
13. [https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/you-can-access-cowin-vaccine-info-on-aarogya-setu/articleshow/80739030.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/you-can-access-cowin-vaccine-info-on-aarogya-setu/articleshow/80739030.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
14. <http://www.news.onair.com/News?title=10%2C800-people-from-Karnataka-registered-on-Aarogya-Setu-app-to-seek-evacuation&id=38783>
15. <https://theprint.in/india/education/in-india-over-32-crore-students-hit-by-covid-19-as-schools-and-colleges-are-shutunesco/402889/>
16. Impact of COVID-19 on Higher Education - Higher Education Digest
17. <https://www.livemint.com/education/news/pm-modi-chairs-meeting-on-education-emphasizes-need-for-technology-adoption-11588352046875.html>
18. <https://www.financialexpress.com/opinion/covid-19-ott-platforms-go-over-the-top-amid-pandemic/2149267/>
19. <https://news.cleartax.in/role-of-technology-in-the-era-of-covid-19-pandemic/>
20. [https://www.business-standard.com/article/companies/covid-19-pushes-up-ott-subscription-growth-by-60-bcg-report-120121601311\\_1.html](https://www.business-standard.com/article/companies/covid-19-pushes-up-ott-subscription-growth-by-60-bcg-report-120121601311_1.html)
21. <https://www.moneycontrol.com/news/trends/entertainment/ott-platforms-to-up-budgets-by-25-30-this-year-6331391.html>
22. <https://www.livemint.com/news/india/netflix-likely-to-close-2020-with-4-6-million-paid-subscribers-in-india-report-11604309259509.html>
23. <https://www.indiatoday.in/magazine/news-makers/story/20210111-win-some-lose-some-1755080-2021-01-03>

## Digital Transformation in Provision of Audit Services: Lessons From Kenya

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### Abstract

The World Health Organization declared COVID-19 a global pandemic on the 11th of March 2020, but the world is still reeling from its aftermath. Originating from China, cases quickly spread across the globe, prompting the implementation of stringent measures by world governments in efforts to isolate cases and limit the transmission rate of the virus. These measures have however shattered the core sustaining pillars of the modern world economies as global trade and cooperation succumbed to nationalist focus and competition for scarce supplies.

Against this backdrop, this paper presents a critical review of the impact of the pandemic on Provision of audit services and the digital transformation that has emerged out of the pandemic.

### Introduction

The Covid-19 pandemic containment measures included travel restrictions, working from home, reduced contact with third party documents to avoid contamination and restriction on holding of physical meetings.

Proper execution of audit on the other hand requires travel to client premises, examination of documents, discussions with the client during the entry and closing meetings and in-course of the audit for clarification and evidence gathering.

This begged the question; **How Can one carry out a successful audit under Covid-19 restrictions?** The answer to this question would be it is not possible, but thanks to digital transformation successful audit execution has become a reality.

### Transformation of the Audit Process

The Audit process consists of four main steps which include audit planning, fieldwork and review, Audit reporting and follow-up. Each of these steps involves extensive human contact between the auditor and the auditee, between the audit teams, between the audit team and reviewers and between the auditee, auditor and the stakeholders who include the shareholders and business regulators. We shall go through the digital transformation of each step of the audit.

## **Identification and Implementation of Audit Software**

The audit in the past has been largely manual characterized by loads of box files that carried the auditors findings collected during the fieldwork from the client these include copies of payment vouchers, Invoices, contracts and agreements, local purchase orders, delivery notes, minutes of different committees, photos of properties and equipment. They also contain dozens of working papers documenting the tests and workings carried out by the auditor.

Innovation in the ICT sector has come up with off-the shelf audit software that have the capability to automate the otherwise manual process to a paperless process and allow remote access of the same to those authorized hence reducing the need for physical contact. Also available are tailor made software solutions that are modified to fit the needs for the client. The software solutions are available for as little as \$ 10,000 and can be tailored for upto \$ 1,000,000 depending on the modules and number of users. There exists an ICT audit solution for every audit firm.

## **Audit Planning**

Audit planning involves developing of audit procedures that help in risk assessment and obtaining relevant audit evidence in-order to be come up with an appropriate audit opinion. Audit planning involves understanding the client organization including their mandates, budgets and other relevant financial and non-financial information. An audit software is able to store the standard templates and procedures for each of the area of interest such as cash and bank, operating expenses, debtors, creditors, loans, fixed assets among others. The software is also able to store the dully completed planning information for each client for reference during the succeeding stages of the audit and also for future reference in the subsequent audit exercises.

## **Fieldwork and Review**

This a critical stage of the audit where the auditor moves to the field to put in practice the audit procedure developed in the audit planning stage. This acts as the data-mining process. A lot of data is collected from the client which includes financial statements, ledgers, sub-ledgers, schedules, lists, pictorial and documentary evidence. The greatest strength of audit software lies in ability to hyperlink between the auditor tests and the clients source documents, hence making it easy to confirm and verify.

In-order to make sense of the large amount of data the data collected is subjected to data analytics module that is service module that is provided by most audit softwares. The data is analyzed into tables, graphs, pie-charts, trend analysis and descriptive statistics such as mean, mode, median, stand deviations among others are determined by touch of a button. This increases efficiency by reducing time that would otherwise be spent on manual analysis.

To reduce contact with the client during the Covid-19 restrictions period the client sends the required information via email either as scanned documents or as MS-word or MS-Excel files. These files are loaded into the software where they become available for the different members of the team with access rights, this further increases efficiency of otherwise sharing a manual file.

The audit reviewer is also able to review the audit procedures carried out and the output of the same and make notes and comments to the audit team.

## **Audit Reporting**

This is the final product of the audit process. The audit software enables the auditor to produce the report efficiently by using the standard reporting templates available in the system and combination with the results from data analysis and output of the fieldwork from the previous stage.

The report unlike in the manual system which involves typing the report from scratch and attaching all the appendixes and annexes, the audit software simply consolidates the information already obtained in the different modules. The use of standard report templates standardizes the output and ensures consistency in the audit reports.

The audit report being the most important output of the audit is available for review, correction and amendment by the reviewer and enables remote communication between the audit team, the team leader and the reviewers.

## **Follow Up**

Audit follow up involves communication between the auditors and the various stakeholders. The various communications are imbedded in the audit software including the submission letters to the client and to stakeholders such as the donors, the legislature and other interested parties. The matters that are left in abeyance are indicated as Kept -in View (KIV) for purpose of follow up during the next audit cycle. A audit trail is maintained in the system to enable efficient follow-up.

## **Conclusion**

Audit is an important process which provides the assurance if a business organization is being run in an efficient and effective manner, if it is following the laid out laws, regulations and procedures and if its financial statements represent the correct position on its performance.

The ability to continuously execute the audits and reassure the stakeholders despite the limitations caused by different conditions including pandemics such as Covid-19, inability of client or the auditor to travel for meetings, bulky nature of documents , operations in remote and inaccessible locations long distance from the operations , is a welcome development which has been made possible by the digital transformation of the audit services.

## References

1. Al-Htaybat, K., & Von Alberti-Alhtaybat, L. (2017). Big Data and corporate reporting: impacts and paradoxes. *Accounting, auditing & accountability journal*.
2. Antwi, I. F. (2021). Bibliometric analysis: agency theory in accounting.
3. Bernhold, T., & Wiesweg, N. (2021). Principal-agent theory: Perspectives and practices for effective workplace solutions. In *A Handbook of Management Theories and Models for Office Environments and Services* (pp. 117-128): Routledge.
4. Byrnes, P. E., Al-Awadhi, A., Gullvist, B., Brown-Liburd, H., Teeter, R., Warren, J.D., & Vasarhelyi, M. (2018). Evolution of Auditing: From the Traditional Approach to the Future Audit1. In *Continuous auditing*: Emerald Publishing Limited.
5. Caringe, A., & Holm, E. (2017). The Auditor's Role in a Digital World: Empirical evidence on auditors' perceived role and its implications on the principal-agent justification.
6. Chan, D. Y., & Vasarhelyi, M. A. (2018). Innovation and practice of continuous Auditing1. In *Continuous Auditing*: Emerald Publishing Limited.
7. Chedrawi, C., & Howayeck, P. (2018). Audit in the Blockchain era within a principal agent approach. *Information and Communication Technologies in Organizations and Society (ICTO 2018): "Information and Communications Technologies for an Inclusive World*.
8. Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, 14(1), 57-74.
9. Hassan, A., Elamer, A. A., Lodh, S., Roberts, L., & Nandy, M. (2021). The future of non-financial businesses reporting: Learning from the Covid-19 pandemic. *Corporate Social Responsibility and Environmental Management*, 28(4), 1231-1240.
10. Johnsson, C., & Persson, N. (2021). Auditing in times of change: A qualitative study on how Covid-19 will affect audit quality. In.
11. Manita, R., Elommal, N., Baudier, P., & Hikkerova, L. (2020). The digital transformation of external audit and its impact on corporate governance. *Technological Forecasting and Social Change*, 150, 119751.
12. Marashdeh, Z., Saidat, Z., Alkhodary, D., & Al-Haddad, L. (2021). Agency theory and the Jordanian corporate environment: why a single theory is not enough. *Academy of Accounting and Financial Studies Journal*, 25(5), 1-15.
13. Ndung'u, N. (2019). Digital technology and state capacity in Kenya. *Washington, DC*.
14. Njagi, A. B., & Ndavula, J. O. (2020). Influence of Digital Technologies on Digital Transformation of Kenya Airways.

15. Panda, B., & Leepsa, N. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1), 74-95.
16. Tiberius, V., & Hirth, S. (2019). Impacts of digitization on auditing: A Delphi study for Germany. *Journal of International Accounting, Auditing and Taxation*, 37,100288.
17. Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *Managing Digital Transformation*, 13-66.

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## Emerging Trends of Business Transformation

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### Abstract

The word “transformation” gets thrown around a lot these days, but it can have different meanings for different individuals and companies. In a world of unprecedented disruption and market turbulence, transformation today revolves around the need to generate new value—to unlock new opportunities, to drive new growth, to deliver new efficiencies. All transformations require you to rethink how your enterprise creates value today and in the future. In other words, all transformations require you to think big. Why? Because incremental improvement is not enough to win in today’s exponentially disrupted business environment. Every organization requires sustained growth in the face of near constant disruption, and sustained growth requires agile reinvention. It’s not enough to win today. They have to be able to continue to evolve in the future. Therefore, by investing in these specific new capabilities, the organization will be able to separate itself from competitors and establish a platform for future growth.

### Business Transformation: An Overview

It's no secret that firms must adapt to shifting market and customer demands in order to flourish. This is especially true in a world where digitalization and technological automation are fast advancing. And, more often than not, being competitive necessitates far more than implementing a new management strategy or modifying a supply chain. Indeed, some of the most successful worldwide organizations in the last decade have achieved exponential growth by completing a total company transformation.

The word "business transformation" is relatively recent, having initially appeared in the fields of information technology and management consulting. External market developments necessitate an all-encompassing adjustment in how a firm is run, according to experts in both industries. This will necessitate a complete rethinking of its business strategy, as well as significant changes to its processes, technology, and employees. However, corporate transformation entails much more than just making a system more efficient and digital. It entails a shift in thinking as well as

the development of a business plan that can adapt in the future.

## What is Business Transformation?

Business transformation is an umbrella term that refers to all transformation processes that a company goes through in order to deal with market upheavals, including operational, cultural, and digital transformations. Its objectives are to create new value, improve customer satisfaction, and reduce expenses.

Despite the fact that business transformation appears to be a simple concept, it is complex and conceals numerous layers. It's a project that can take months or even years to finish if done correctly. Business transformation must be led from the top because the scope is broad and the decisions taken touch every aspect of the organization.

All business transformation management activities including reframing the company's strategy are overseen by the CEO, Board of Directors, and business architects. They produce more value in the future by breaking down the entire company model and determining which improvements to processes, personnel, and systems are required.

## Business Transformation's 5 Benefits

A comprehensive corporate transformation is a difficult task. It necessitates sound strategic decisions that take into account the unique characteristics of a company. However, if done properly, the benefits are numerous. It's also worth noting that, in the long run, it may be an organization's only option for retaining or increasing market share.

The five most significant advantages of business transformation are listed below.

1. *Increased efficiency:* New integrated technologies enable intelligent automation, allowing for streamlined manufacturing processes. Intelligent machinery and edge computing provide real-time data insights for quick decision-making.
2. *Increased productivity:* By implementing digital technologies, businesses can maximize output while minimizing waste. It is easier to predict and manage the number of materials required by tracking automated production and data analytics.
3. *Return on investment:* Greater efficiency and productivity lead to a higher return on investment. Many businesses are hesitant to invest large sums of money in new digitized systems. However, the payback period begins after about 5 years.
4. *Increased safety:* Automated production lines reduce the need for human intervention. By replacing humans in hazardous situations, robotics and artificial intelligence provide greater control and protect the workforce.

5. *Improved sustainability:* Business transformation enables companies to implement intelligent energy management systems. An enterprise can protect the environment and improve its public image by monitoring and meeting sustainability targets.

## Six Types of Business Transformation

Even though introducing new digital technologies is an important part of business transformation, it entails more than simply replacing manual systems with automated ones. In fact, the term "business transformation" refers to a variety of transformations that can be classified into six categories. Keep in mind that a complete business transformation can only be accomplished if all areas are given equal attention.

The six types of business transformations are described in detail below.

### ➤ *Transformation of an Organization*

The redesign of a company's structure and mode of operation is the first step in business transformation. This ever-changing process is driven by general management and places a strong emphasis on the employees. An actual transformation can take place only if they are supportive and on board with new work processes.

### ➤ *Transformation of Management*

Hierarchical structures and internal relationships have been redefined by new generations. Rigid systems and an abundance of middlemen stifle growth and make it more difficult to cultivate true talent. Furthermore, a more fluid leadership model with collaborating forces can easily adapt to future changes.

### ➤ *Transformation of Culture*

This could be the most difficult transformation for long-established businesses. It entails changing both the individual and collective mindset. Implementing a new corporate culture is only possible after a managerial transformation has occurred and a vision has been formed.

### ➤ *The Digital Transformation*

A company must rethink its business model with a digital strategic mindset during the digital transformation process. The leadership creates a digital business transformation strategy and determines how modern technology can improve the product and all aspects of the customer experience.

### ➤ *Business Process Transformation*

Identifying which business processes can be improved is a critical first step toward greater efficiency. It is critical to weigh various options that could save time and resources. The use of digitized tools to automate repetitive tasks frees up labor hours and allows the company to focus

on core business processes.

➤ *Information Systems Transformation*

Information systems transformation provides a practical guide to organisations seeking ways to understand and leverage existing systems as part of their information management strategies. It includes an introduction to ADM disciplines, tools and strategies as well as series of scenarios outlining how ADM is applied in various modern project initiatives. Drawing upon lessons learned from real modernization projects, it distils the principles, processes and best practices for every industry/business firm.

## The 7 Steps to a Successful Business Transformation

With all the different types of business transformations in mind, it's not surprising that every initiative that aims to change a business from the ground up involves multiple steps. If a business transformation isn't planned out well, it can cause major disruptions to the company and unnecessary loss in revenue.

From strategy to implementation, we've outlined the seven most important steps as a starting point.

### *1. Plan of action*

Before any action is taken, a company must develop realistic business transformation strategies. It is critical to understand the current state of the business in order to map out a future vision in the form of a target operating model. Every decision made after that should be in line with this vision.

### *2. Formalize Leadership*

Aside from managerial transformation, a company must appoint a program director or team to oversee the entire transition to a new operating model. This includes tasks such as budget control and ensuring that the main vision is at the center of all decisions. The CEO, CFO, and board members are ideal candidates for these positions.

### *3. Preparation and Scoping*

The overall strategy is advanced to the next level in this step. A company must identify all of the departments, work processes, and systems that will be impacted by the transformation. This is useful for outlining sub-projects, their goals, timeframes, and budget constraints. It's also critical to consider how the changes will be communicated to employees and customers.

### *4. Establish Program Management*

The program director appoints transformation managers in each individual work stream, such as

HR, Finance, and IT, to establish program governance. It is their responsibility to meet deadlines, motivate the team, and adhere to the roadmap. Many businesses set up a Program Management Office to monitor success and identify potential problems early on.

#### *5. Develop Resources*

It is unrealistic to expect an enterprise's current team to be fully equipped to manage a successful business transformation. As a result, most businesses seek outside assistance and hire experienced experts to collaborate with the program director and internal transformation managers. A well-balanced team ensures that a neutral viewpoint is combined with valuable insider knowledge.

#### *6. Implementation*

Business transformation takes time because there are so many layers and steps involved. Depending on the size of the company, the time between strategy and execution can take several years. It is critical to engage the staff and to re-evaluate the implementation plan on a regular basis, adjusting it as needed along the transformation journey.

#### *7. Integration*

The most vulnerable stage of the transformation process begins immediately after the changes are implemented. New ways of working and new systems can be difficult to implement at first. As a result, employees must be trained prior to execution and provided with dedicated support during the integration phase, while integration architects provide critical data about the integrations within your organization.

### **The Framework for Modern Business Transformation**

When a company decides to transform, there are several business transformation frameworks that can help provide direction and structure. However, because transformations take a long time to plan and execute, it's important to remember that digital transformations, in particular, necessitate a nimble framework. When new technologies are implemented, innovation does not come to an end. It is constantly evolving and forces an enterprise to go through a continuous and ever-changing transformation. The Modern Business Transformation Framework (MBT) was created to address the conflict between day-to-day business operations and innovation.

Unlike other digital transformation strategy frameworks, the cyclonic MBT framework takes a comprehensive approach. It is implemented in a systematic and repeatable manner, allowing a company to make incremental improvements.

Most importantly, the framework recognizes that business transformation is an ongoing process that must be reviewed and adjusted as innovation accelerates. The framework is made up of three

pillars, which are outlined below:

**Uplift Capability:** The ability to identify aspects of business operations that should be optimized and prepared for innovative change.

**Improve Systems:** The internal system capability is improved through incremental adoption in this agile process.

**Embed Innovation:** At the heart of embedding innovation is extracting the most value from innovative ideas.

Because this framework is designed in the shape of a cyclone, greater efficiency is generated when the outer pillars "Uplift Capability" and "Enhance Systems" collaborate. After all, the core derives its energy from the momentum of the outside world.

## **Successful Business Transformation Case Studies**

### ***Case Study 1: Netflix***

Netflix is a company that operates in the entertainment industry. Its main line of business is subscription-based DVD rentals and streaming.

#### *The Goal*

In 2013, Reed Hastings, CEO of Netflix, proposed shifting the company's business model from digital content distribution to original content production.

#### *What Did They Do?*

Netflix's business model shifted from "single-pay DVD rentals to subscription-based DVD rentals." "Audience data is mined to create an astonishing range of new shows," according to the company. Not only does Netflix use data to drive a compelling customer experience (e.g., tailoring the images used for each show to match customer preferences), but it has fundamentally changed the way it decides which shows to pursue based on viewing behavior data."

#### *The Transformation's Outcome*

From 2012 to 2018, the company's revenue tripled as a result of the transformation, increasing by 6 percent. Profit increased 32 times, and the company's stock CAGR has increased by 59 percent since then. Netflix's original content accounted for 37 percent of its U.S. stream in 2018, a significant increase from 14 percent in 2017.

### ***Case Study 2: Fyffes***

Fyffes is a fruit and vegetable company. The primary business of the company is to market and distribute produce and selected private label items to retail stores.

### *The Goal*

The goal was to change the company's "operating model in order to adapt to a highly competitive marketplace, rapidly evolving consumer needs, and increasingly demanding retail customers.

### *"What Did They Do?*

Recognizing that the company's past and present success does not guarantee future success, the CEO recognized the need to drastically update the company's organization in order to remain relevant in the industry. As a result, the company collaborated with Clarkston Consulting.

Clarkston Consulting reviewed Fyffes' organization and developed a road map. Clarkston Consulting took a number of actions, including: Assessing Fyffes' organization to find over "75 discrete and detailed business challenges across key organizational functions (including finance, operations, logistics, sales, and marketing)." Following the assessment, the development and launch of a "Transformation Management Office to orchestrate all initiatives, creating new governance and reporting mechanisms to drive accountability."

### *The Transformation's Outcome*

Accounts receivable, SG&A, operating cash flow, and customer claims all increased by double digits following the transformation. Collaboration and communication have improved across all functional areas. Fyffes was able to obtain a "clear articulation and deeper understanding of the company's most critical challenges today and in the future."

### **Case Study 3: Ørsted**

Ørsted is a company that works in the energy industry. Prior to 2013, its primary business was oil and gas exploration and production.

### *The Goal*

In 2012, the power and energy industries experienced widespread crises, resulting in a 90 percent drop in gas prices. This was caused by a prolonged period of global gas overproduction. This resulted in a financial crisis for Ørsted. The main priority of the company was survival.

### *"What Did They Do?*

The company hired a new CEO, Henrik Poulsen, who had successfully led the company through a business transformation at LEGO. Rather than attempting to manage the company's crisis, Henrik chose a radical transformation of the company's core business offering to shift from black to green energy with a focus on sustainability. With the coal, oil, and gas industries in decline, Ørsted shifted to offshore wind power.

Henrik went on to divest eight of Ørsted's twelve business divisions in order to invest in wind farming. However, the technology required to run this project was so expensive that it would cost twice as much as onshore wind power production. Henrik was able to create a business model that "began a systematic "cost-out" program to reduce the expense of every aspect of building and operating offshore wind farms while achieving scale in this emerging market."

### *The Transformation's Outcome*

The name of the company was changed from Danish Oil and Natural Gas (DONG) to Ørsted. After the scientist who discovered the principles of electromagnetism. As a result of this transformation, Ørsted is now the world's largest offshore wind company, with a 30% global market share.

In addition, the company was able to reduce the cost of offshore wind power by 63 percent. By 2018, green energy accounted for 75% of the company's energy production. From 2013 to 2018, the company's revenue increased by 5%, and profit margins increased from -2.2 percent in 2013 to 25.4 percent in 2018.

## **Conclusion**

As the preceding examples demonstrate, business transformation may be more than an option for any established organization; it may be a requirement for long-term success. Bypassing transformation opportunities in order to maintain the status quo is a rather short-sighted business strategy that can result in missed opportunities for growth and value. Major changes to current operating models, on the other hand, do not happen overnight and necessitate smart business transformation management as well as a dynamic framework. Any enterprise can maximize its performance and undergo a digital transformation to unlock new potential with the assistance of business architects and a keen eye on innovation.

## **References**

1. Collins, J. (2001), *Good to Great*, London :Random House Business Books.
2. Department of Trade and Industry (1995), *Factory for the Future, Eureka Project: Factory EU 1005*,London: Author.

3. Hammer, M. (2001). The Super Efficient Company. *Harvard Business Review*, September/October. (2001).
4. Cousins, P. and Graves, A. (1985,Eds), What Really Matters in Operations Management,University of Bath, New York: The Free Press.
5. Treacy, M. and Wiersema, F. (1996), *The Disciplines of the Market Leaders*, London: Harper Collins
6. Chun E, Evans A. (2021) Integrating HR. Diversity Strategy in the Private and Public Sectors, Stylus Publishing.
7. Shivakumar G, (2013), The New Talent Acquisition Frontier: Integrating HR and Diversity Strategy in the Private and Public Sectors, Stylus Publishing,
8. Phillips,C (2008), Tapping into the next talent generation. *Strategic HR Review*,7(3), 31
9. Srivastava P, and Bhatnagar J, (2007), - Talent acquisition due diligence leading to high employee engagement: case of Motorola India MDB, APROS 12 Conference, December,2007.
10. Helge Hess, Ph.D., Caspar Jans (2022) <https://www.processexcellencenetwork.com/business-transformation/articles/emerging-trends-in-business-transformation-and-operational-excellence-in-2022/01/26>
11. HelgeHess (2022), “Be the change” for operational excellence,<https://blog.softwareag.com/change-operational-excellence>, February 10, 2022
12. Telstra (2022), The Economist, <http://connectedfuture.economist.com/connecting-capabilities/article/trends-driving-business-transformation/>
13. Vala Afshar (2021) Top 7 trends shaping digital transformation in 2022,<https://www.zdnet.com/article/top-7-trends-shaping-digital-transformation-in-2022/>Vala Afshar, November 3, 2021
14. Cindy Osuorji (2021), ‘Top 7 trends shaping digital transformation’[https://www.linkedin.com/posts/cindy-osuorji\\_top-7-trends-shaping-digital-transformation-activity](https://www.linkedin.com/posts/cindy-osuorji_top-7-trends-shaping-digital-transformation-activity)
15. ZDnet (2021), top-7-trends-shapingTop 7 trends shaping digital transformation in 2022, <https://www.zdnet.com › article › top-7-trends-shapingTop 7 trends shaping digital transformation in 2022>

## A Study on Digitalisation of Gold Purchase and Its Impact on Indigenous Gold Traders in Mangaluru City

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### **Abstract**

For the past few decades, the demand for the branded gold in showrooms has had a detrimental effect on goldsmiths. Traditional goldsmiths in Mangaluru, have been hit badly in their profession as the jewelry business is largely transitioned into the organized sector. Consumer demand for modern patterns and variety of jewelry and also the emphasis much on gold purity and 916 quality, digital payment options, branded jewellers are able to fulfill their demand better than the local unorganized jewellers. The sector is witnessing changes in consumer preferences due to adoption of western lifestyle. Traditional goldsmiths have not made much progress and mostly depend on the craft handed down by their ancestors and have not adopted any technological improvisations to their art work. Digitalization has caused customers to move towards Corporate branded jewellery stores to a large extent due to convenience in gold purchase through monthly schemes and instalments, ready availability of plenty of patterns and types of gold ornaments facilitating immediate purchase rather than the order and wait method, online payments for monthly schemes, aggressive marketing of gold schemes, special discounts and offers for scheme purchasers, festival offers, birthday and anniversary discounts, additional discounts on diamonds etc are the marketing strategies employed by Corporate retailers of gold to draw customers away from traditional goldsmiths. Another important cause for the shift is that the customer is more conscious of quality of gold purchased and insists on the 916 brand of

purity. Many goldsmiths are unable to provide this purity standard to their customers and thus have lost out on customers.

However there is still scope for traditional gold smiths to compete well with branded jewellery stores. This study evaluated the effect of increase in branded gold jewellery on the growth and survival of gold smiths. The major findings of the study was that inspite of the fact that the businesses of the gold smiths have been detrimentally affected due to digitalization and aggressive marketing by branded jewellery stores, the family gold smith has his own place in his customers' lives and still has potential for growth and expansion in the years to come.

## **Introduction**

Gold has always fascinated the mankind's imagination and influenced their urge to possess it. Gold occupies a special role in the social and economic life of poor and rich. In India, individuals are highly sentimental about the gold jewellery in their possession, as the gold ornaments are passed on from one generation to another. Acquisition of gold is considered auspicious and necessary for making family ornaments to get a sense of wellbeing in our country.

A goldsmith is a metal worker who specializes in working with gold and other precious metals. From time immemorial, goldsmith is the only one who with utmost devotion and dedication took up making gold ornaments as their traditional occupation and carried it on till day and in this process acquired high degree of artistic skill in the field. The extraordinary skill that requires making highly aesthetic ornaments with precision is inherent in goldsmiths.

For the past few decades, the demand for the branded gold in showrooms has had a detrimental effect on goldsmiths. Traditional goldsmiths in Mangaluru, have been hit badly in their profession as the jewelry business is largely transitioned into the organized sector. Consumer demand for modern patterns and variety of jewelry and also the emphasis much on gold purity and 916 quality, digital payment options, branded jewellers are able to fulfill their demand

better than the local unorganized jewellers. The sector is witnessing changes in consumer preferences due to adoption of western lifestyle. Traditional goldsmiths have not made much progress and mostly depend on the craft handed down by their ancestors and have not adopted any technological improvisations to their art work. These goldsmiths are local in nature and have limited geographical coverage and digitalization has resulted in established corporate gold brands taking over and ruling the organized market and has witness tremendous growth. The benefits of buying branded jewellery are many in number. But the story of local goldsmiths is heart trending as they are not able to cope up with the stiff challenge. Their customers who were mainly of the gen X would patronize them for all family functions and festivals. However, the Gen Y and the millennials have migrated to the organized sector. Many are jobless and some of them have resorted to the extreme step of committing suicide. But the customers who are oblivious of the behind the scene happenings will go on buying jewellery wherever they feel like buying and that is what sustains the big and gigantic players. The regrettable aspect of this development is that the fine craft of jewellery making by traditional goldsmiths may slowly die out and withthat the lives of the goldsmiths for whom it is the traditional occupation. This research explores different dimensions of factors which affect growth and survival of goldsmiths due to shift in consumer's preference due to digitalization resulting in growth in sales of branded jewellery.

## **Review of Literature**

Zaveri Samrat (2003) in his paper Branded and gold jewellery market in India says that there was shift in consumer demand and as a result women are opting for highly fashionable jewellery. There was a rise in demand for light weight jewellery. The researchers describe that jewellers need to understand the shifting needs motivations and aspirations of consumers in the jewellery market, and to identify new trends and opportunities.

Rncos (2006) in his article Indian customers showing interest in branded

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jewellery found that the gems and jewellery market in India possess a tremendous potential for future growth. It is also found that their low production cost and labours are highly skilled that can separate it from its competitors.

P.C Vinoj Kumar (2008), in his research paper ‘Indian goldsmiths face a doomed future’ stated that several goldsmith in Tamilnadu have levied themselves in the face of non-repayable debts and estimated that 2 Lakh traditional goldsmith are plunging into deeper poverty and few are switching their jobs.

Ekanayake(2010 )Entrepreneurial Strategic Innovation Model for Attaining Premium Value for the Sri Lankan Gem and Jewellery Industry found that the gems and jewellery industry in Srilanka were capable to develop a competitive product base but it had positioned as an experienced reduction in market value. This was resulted to force the firms to work in isolation. They also stated that the industry system value was handled by private sector entrepreneurs without state interference

Growth strategies of Multinational companies Jewellery retail industry (Valerie Haapalainen Nan Skog, 2011).The aim of this paper is to analyse global jewellery retailing business and growth strategies to be able to draw conclusions on whether the business model and strategic decisions have an impact on the company’s profitability. The formulated tasks for the research are (1) to understand what kind of business models and strategies global jewellery retailers pursue, (2) what growth strategies global jewellery retailers pursue and(3) if there is a link between a company’s growth strategy and its profitability.

Diana DaSilva(2013) for the article Global Value Chain Analysis of the Gold Jewellery Industry: Upgrading Trajectories for Guyana conducted a study with the overarching objective of understanding how small to medium sized enterprises (SMEs) in Guyana can competitively improve their presence and insertion into the global market for gold jewellery.

## Need for the Study

Goldsmiths have been an integral part of Indian society for ages. Today, the community is at a crossroads due to drastic changes in jewellery making and the economy. The number of active goldsmiths has declined considerably and many workshops have shut shop. The trend is likely to continue as the youth in the traditional goldsmith families shun the trade. Two decades back two tiered cities across the country had nearly 25,000 goldsmiths. In the last decade, approximately 1,500 are engaged in as many workshops, mostly on the narrow streets of various cities which were once dotted with small shops and workshops of goldsmiths.

What has proved to be the death-knell for the traditional craft is the popularity of machine-cut jewellery and digitalization of payments. Traditional goldsmiths have lost out to leading brands who have taken over the markets with eye-catching advertisements and huge showrooms. These showrooms offer easy installments of gold payments through attractive schemes which enable middle class to buy gold ornaments through monthly savings plans. Unremunerative wages have also affected the trade. For a long while, the wages remain at Rs 250- 400 for a work depending on the quality of workmanship. Jewellers instruct goldsmiths to reduce gold wastage and demand the highest quality at minimum cost. This is a big challenge and those persisting with the craft predict that traditional jewellery makers may not exist in the near future. Not a single family wants the younger generation to take up the trade. The typical job of a goldsmith involves cutting, polishing, soldering, forging and placing of stone studs. Traditionally, these skills had been passed down from one generation to another. All goldsmiths use the services of specialist craftsmen. The old lot is yet to come to terms with the demand for machine-made jewellery. Machine made jewellery have their own limitations as the jewellery made with advanced equipment and technology do not last long and tend to break within a few months of use. (Sekar C, goldsmith in Trichy, Tamilnadu, who is involved in cutting ornaments according to the design). This study aims at analysing the impact that digitalization and Corporate retail gold stores have had on the business and customer patronage of traditional goldsmiths.

## Objectives of the Study

1. To analyse the impact of Digitalization of gold purchase on customer base of traditional goldsmiths.

2. To evaluate the effect of increase in branded gold jewellery on the growth and survival of gold smiths.
3. To analyse the shift in customer preference for machine made gold jewellery from hand crafted ones.

## **Scope of the Study**

This study is restricted to the demand for gold ornaments only and to indigenous goldsmiths in Mangaluru City only.

## **Hypothesis of the Study**

The growth of branded gold showrooms has adversely affected traditional goldsmiths and has threatened their survival.

## **Research Methodology**

This study is based on both primary and secondary data. Primary data was collected from goldsmiths in Mangaluru City. In addition the information is also collected from magazines, research journals, books and from websites.

### *Sampling plan*

There are a total of 96 gold jewellery stores including corporate stores in Mangaluru City. A sample of 48 respondents were selected for this study. Convenience sampling technique was adopted and data was collected with the help of a structured questionnaires.

### *Statistical techniques employed*

- Chi square or Fishers Exact Test
- Correlation Analysis
- Friedman's Test
- Mann Whitney U Test

## **FINDINGS of THE STUDY**

### *Findings from Reviewed Papers*

In a study conducted by Dr. Aarti Deveshwar and Ms. Rajesh Kumari, titled “A study on customer preference towards branded jewellery” A comprehensive analysis was done for determining the preference of customers towards branded

jewellery. They found that the behavior of the consumer is changing and now they started to give preference to branded jewellery over traditional unbranded jewellery. This ratio is high in urban area as compared to rural area. (International Journal of Science, Technology and Management, Volume No 5, Issue 3, 2016)

According to Prof. Dr. Pankaj. K. Trivedi in his study “Consumer Preferences on Branded Jewellery in Rajkot – A Case Study “ states the following findings.

According to him, the guiding factor behind purchasing jewellery is price, purity and design which score the maximum. Other factors are variety, the brand image, influence of family and friends. The least guiding factor for purchasing jewellery is the service and display. Hence when a customer goes to buy jewellery they do keep the price in mind followed by the purity and the design. Factors like service given in the shop or by the jeweller and the display do not have a very big impact on the customers. Branded jewellery is extremely popular since it has 100% awareness. This may be due to the wide spread publicity taken up by the various brands. Brands like Kalyan, PC Jewellers; Malabar and Tanishq are again the most popular brands. Trend Smith is a brand by P.C.Jewellers which is not very popular. There was a shift in consumer tastes: women were increasingly opting for fashionable and lightweight jewellery instead of traditional chunky jewellery. Their proved past literature review correct as respondents have selected fashion over investment while purchasing jewellery. Now jewellery is regarded as more of an accessory and less of an investment. Branded jewellery is bought by more than 3/4th of the population. Hence it can be said that the population is aware and has also tried these brands. (International Journal of Trend in Research and Development, Volume 3(6), ISSN: 2394-9333 [www.ijtrd.com](http://www.ijtrd.com) IJTRD | Nov-Dec 2016)

Another reason for choice of branded jewellery purchase is the new trend of gold savings schemes by big gold retail stores which enable digital payments of monthly installments. This by far is the greatest challenge faced by indigenous goldsmiths as they are not able to compete with the retail stores in digital payments. Traditional goldsmiths do over 90% of their transactions in cash and this has proved detrimental to their gold savings schemes as they do not have the facility of making online payments of monthly installments. Though many have

adopted digital payment systems, in order to improve volumes, they still have a long way to go.

### **Findings of Primary Data Survey**

In the survey conducted on goldsmiths in Mangaluru City, it was found that large gold retail stores place orders with traditional goldsmiths for hand crafted jewellery.

Table 1 Basis for Gold Crafting

	Percentage
Valid Direct Consumer orders	35
Orders from branded showrooms	61
Based on own skill/expertise of individual	4
Total	100

Source: Primary Data Survey

**Comments:** The above table it shows that 61% of the goldsmiths prepare jewellery on orders received from branded showrooms, 35% of the goldsmith prepare jewellery based on their customers' orders, 4% of the goldsmith prepare jewellery to be kept on display based on individual skill /expertise for immediate customer purchase.

Another advantage that traditional goldsmiths have over corporate gold retailers is the lower rate of making charges. Due to low overheads and direct selling to customers, their making charges are extremely competitive. Making charges or also known as 'wastages' are added to the final cost of the jewellery before Goods and Services Tax (GST) at the rate of 3 per cent is levied.

Remember jeweller may include wastage within the making charges or charge differently. Usually, gold jewellers charge making charges either at a flat rate per gram say Rs 199 per gram or as a percentage of the cost of gold jewellery which averages around 12% in big jewellery marts and goes upto 25% also in destination shops like Tanishq which start their making charges at the rate of 8%. The table below shows the making charges charged by traditional goldsmiths who were the respondents in the survey.

Table 2 Percentage of making charges levied on gold cost

		Percentage
Valid	below 2%	4
	2-4%	45
	4-6%	40
	6-8%	11
	Total	100

Source: Primary data survey

**Comments:** The above table shows that 45% of the goldsmith levy 2-4% of making charges, 40% of the goldsmith levy 4-6% of making charges, 11% of the goldsmith levy 6-8% of making charges, 4% of the goldsmith levy below 2 % of making charges. This indicates that traditional goldsmiths can attract customers through low making charges when compared to corporate gold retail shops.

Table 3: Mode of payment for gold purchase from traditional goldsmiths

		Percentage
Valid	Online	1
	Cash	97
	Cheque	2
	Total	100

Source: Primary Data Survey

**Comments:** The above table it shows that 97% of the customers use cash as the mode, only 1% of goldsmiths prefer online payment, 2% of goldsmiths accept the payments through cheques. It has been a tradition in gold purchase for customers to evade the tax on the purchase and goldsmiths do not have the practice of issuing a bill on purchase. Many customers with the objective of reducing the cost still follow the old practice of cash purchase of gold with no printed invoice and proof of purchase. This has worked out to the advantage of goldsmiths who are not registered dealers under GST and do not issue any proof except an unofficial handwritten paper with the quantity of gold purchased and the total amount received. This provides absolutely no evidence of purchase but many customers prefer this system as it has been handed to them through the generations as the accepted method of purchasing gold.

## Analysis of Growth & Future Prospects of Traditional Goldsmiths

The onslaught of branded hallmark jewellery has greatly affected the family business of the goldsmiths which have been handed down to them through the generations. The survey examined the future prospects of the business and assessed the willingness and attitude of the respondents to handover their businesses to their children and the generations to follow. The following is an analysis of responses

### **Friedman's Test**

Hypothesis: There is no significant difference in the mean ranking for the variables related to jewelry businesses.

**Table 4: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
Satisfied with their occupation	48	3.5700 (DA)	1.34281	1.00	5.00
Planning to expand business	48	4.0300	1.21817	1.00	5.00
Willing to train children to continue the same profession	48	4.6300	.71992	1.00	5.00
Future growth and development	48	4.7100	.70058	1.00	5.00
Completely dependence on this trade	48	2.2100(Agree)	1.20851	1.00	5.00

Factors related to Jewellery business	Mean Rank	Rank	
Satisfied with their occupation	2.59	2	Friedman's Test value = 201.451
Planning to expand business	3.13	3	d.f=4
Children to continue the same profession	3.83	4	p value =
Future growth and development	3.93	5	0.000 < 0.01
Completely dependence on this job	1.53	1	

The calculated Chi square value is 201.451. The significance value for 4 degrees of freedom is 0.000 which is less than 0.01. Hence we infer that there is

significant difference in the mean ranking between the variables. From the above table it is inferred that compared with other indicators as far as **Factors related to Jewellery business** is concerned “completely dependent on this job” with mean rank 1.53 is a very important factor as far as ranking for **Factors related to Jewellery business** is concerned “satisfied with your occupation” with mean rank 2.59 is having a significant effect on the ranking for **Factors related to Jewellery business** next to “completely dependent on this job.” “planning to expand business” (3.13) “are having significant impact on the respondents as far as ranking for **Factors related to Jewellery business** is concerned . The most influencing indicators compared with other significant indicators are tested with Friedman test. Since asymptotic significance (sig.) is less than 0.01 (1% level of significance), the hypothesis is rejected and the hypothesis that there is significant difference in the mean ranking for **Factors related to Jewellery business** is supported.

Hypothesis: There is no significant difference in the mean ranking for the variables related to feelings of jewelry business men

**Table 5: Descriptive Statistics**

Tensions & opinions of goldsmiths	N	Mean	Std. Deviation	Minimum	Maximum
Better to switch job	48	2.3434 (Agree)	1.04160	1.00	5.00
Increase in branded gold showroom has affected business negatively	48	2.1919	1.08493	1.00	5.00
Change in customer trend	48	2.1515	1.00370	1.00	5.00
Hallmark /branded jewellery has affected their work	48	3.7172 (Dis Agree)	1.44307	1.00	5.00

Attitude of goldsmiths	Mean Rank	Rank	
Better to switch job	2.42	3	Friedman's Test value = 58.254 d.f=2 p value = 0.000 < 0.01
Increase in branded gold showroom has had detrimental effect	2.17	2	
Change in customer trend has reduced demand for handmade jewellery	2.16	1	
Hallmark/916 branded jewellery has affected their work	3.25	4	

The calculated Chi square value is 58.254 .The significance value for 2 degrees of freedom is 0.000 which is less than 0.01. Hence we infer that there is significant difference in the mean ranking between the variables. From the above table it is inferred that compared with other indicators as far as feelings of jewelry business men is concerned “change in customer trend” with mean rank 2.16 is a very important factor as far as ranking for feelings of jewelry business men is concerned. ” increase in branded gold showroom has effected” with mean rank 2.17 is having a significant effect on the ranking for feelings of jewelry business men next to “change in customer trend. “ better to switch job” (2.42) “ are having significant impact on the respondents as far as ranking for feelings of jewelry business men is concerned . The most influencing indicators compared with other significant indicators are tested with Friedman test. Since asymptotic significance (sig.) is less than 0.01 (1% level of significance), the hypothesis is rejected and the hypothesis that there is significant difference in the variables that influence the jewelers to carry on the trade.

#### Mann Whitney U Test

Hypothesis: There is no significant difference in the selected factors between traditional and modern jewelers

Table 6: Analysis

	Satisfied with your occupation	Planning to expand business	Willing to train children to continue the same profession	Future growth and development	Completely dependent on this job
Mann-Whitney U	754.500	952.000	1016.500	855.500	1017.000
Wilcoxon W	3310.500	3508.000	3572.500	3411.500	3573.000
Z	-2.180	-.631	-.129	-1.935	-.100
Assump. Sig. (2-tailed)	.029*	.528	.898	.053	.920

\* - Significant at 5% level of significance

From Mann Whitney U Test we can observe that there is significant difference as far as satisfaction in occupation is concerned between traditional and modern jewellers at 5%level of significance as the p value is less than 0.05. From the mean rank it is evident that modern jewellers are more satisfied than traditional jewelers

Table 7: Analysis

	Better to switch job	Increase branded showroom has effected	Change in customer trend	Hallmark has effected your work
Mann-Whitney U	921.500	680.000	883.500	897.000
Wilcoxon W	1356.500	3236.000	3439.500	3382.000
Z	-.857	-2.776	-1.160	-.953
Assump. Sig. (2-tailed)	.391	.006**	.246	.341

From Mann Whitney U Test we can observe that there is significant difference in the opinion that “increase in branded gold showroom has effected” between traditional andmodern jewellers at 1% level of significance as the p value is less than 0.01. From the mean rank it is evident that modern jewellers are more of the opinion that increase in branded gold showrooms have affected their business than traditional jewellers. Increase in branded gold showrooms has affected big jewellers as well as traditional goldsmiths.

### Conclusion & Suggestions

Digitalization has caused customers to move towards Corporate branded jewellery stores to a large extent due to convenience in gold purchase through monthly

schemes and instalments, ready availability of plenty of patterns and types of gold ornaments facilitating immediate purchase rather than the order and wait method, online payments for monthly schemes, aggressive marketing of gold schemes, special discounts and offers for scheme purchasers, festival offers, birthday and anniversary discounts, additional discounts on diamonds etc are the marketing strategies employed by Corporate retailers of gold to draw customers away from traditional goldsmiths. Another important cause for the shift is that the customer is more conscious of quality of gold purchased and insists on the 916 brand of purity. Many goldsmiths are unable to provide this purity standard to their customers and thus have lost out on customers.

However there is still scope for traditional gold smiths to compete well with branded jewellery stores due to the following reasons -

1. When jewellery is bought for gifting purpose the population still wants to buy it from their family jewellers.
2. Flexibility in payment, availability of credit on gold purchase by family goldsmiths who accept part payments from old customers ensure that even if a customer buys part of his or her gold in branded showrooms, some amount of jewellery will be bought regularly from the family goldsmith.
3. These jewellers will continue to serve their customers because of the trust that they have with their customers and also because they charge reasonable making charges.
4. These family jewellers are also popular for traditional designs hence when a customer is specifically looking out for traditional jewellery they approach these jewellers.
5. Traditional jewellers have personal contact with the customers as they have been associated with them for generations. This provides them an advantage over retail shops which cannot boast of personal touch in sale of jewellery.
6. Traditional goldsmiths provide customization in making jewellery. Branded stores only try to push the products that are already available on their shelves.
7. Customization of gold jewellery and the concept of ordering gold according to one's own choice and preference help in maintaining good relationship with the customers.
8. Jewellers should try to provide better quality of jewellery to customers at reasonable price. Transparency in charges charged by traditional goldsmiths helps

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in maintaining trust in customer relationships.

Finally jewellers should focus on all the factors which motivate a customer to buy branded jewellery over unbranded jewellery.

## References

1. Deveshwar Aarti, Kumari, Rajesh (2016). A study on customer preference towards branded jewellery. *International Journal of Science, Technology and Management*, 5(3), 179-187.
2. Trivedi Pankaj. K,(2016). Consumer preferences on branded jewellery in Rajkot – A case study. *International Journal of Trend in Research and Development*, 3(6), 448-452
3. Zaveri Samrat (2003) Branded & Gold jewellery market in India
4. Rncos (2006) Indian customers showing interest in branded jewellery
5. Kumar Vinoj P .C., (2008) Indian goldsmiths face a doomed future
6. Ekanayake (2010) Entrepreneurial Strategic Innovation Model for Attaining Premium Value for the Sri Lankan Gem and Jewellery Industry.
7. Valerie Haapalainen Nan Skog (2011) Growth strategies of Multinational companies in Jewellery retail industry
8. Diana DaSilva (2013) Global Value Chain Analysis of the Gold Jewellery Industry: Upgrading Trajectories for Guyana
9. Agarwal, D. P., Devgun, M. R., & Bhatnagar, D. J. (april 2017). A Study on Problems Faced By Exporters of Gems and Jewellery Industry. *IOSR Journal of Business and Management (IOSR-JBM)*, 01-07.
10. Asha, K., & Christopher, D. S. (October (2014)). A study on buying behaviour of customers. *International Journal of Management (IJM)*, 105-114.
11. K.K.Ramachandran, D., & DayanaSajjanan. (June (2014)). Perception of consumers towards branded jewellery. *International Journal of Management (IJM)*, ISSN 0976 – 6502(Print), ISSN 0976 - 6510(Online),, 10-20.
12. Khadekar, S. G., Wanjari, M. T., & Kohad, R. R. (2016). Study of Consumer Buying Behavior between Branded & Non-Branded Gold Jewellery in Vidarbha Area of Maharashtra State. *Journal of Research in Business and Management*, 94-98.

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**Book Review**

**How to Win Friends & Influence, People: The Only Book You Need to Lead You to Success by Dale Carnegie, New Delhi: Finger Print Classics, 2021(Reprint), Pages 278, Paperback US\$ 5.99**

Recently, my student gifted me the book, *How to win friends and influence people* by Dale Carnegie. With curiosity, I started reading it, and when I completed reading, I found that it is a must-read book in the present age, where people forget to communicate in person due to text messages and social media communication. This book proved wrong the saying of Dale Carnegie himself that ‘it was easier to make a million dollars than to put a phrase into the English language’ as ‘How to Win Friends and Influence People became such a phrase: quoted, paraphrased, parodied; used in innumerable contexts, from political cartoons to novels. The book focuses on human relations and guides us to look into consciousness and a means of understanding both ourselves and those around us. We will experience some change in our thinking after reading this book and become more conscious of our interpersonal abilities as we work with people.

The book holds good for communication on both a personal and professional level. Sensible and fascinating suggestions in the book lead us to foster successful relationships in our personal and professional lives. The author says that he collected the material for his book through personal interviews with successful people. The list includes some of the world-famous—inventors like Marconi and Edison; political leaders like Franklin D. Roosevelt and James Farley; business leaders like Owen D. Young; movie stars like Clark Gable and Mary Pickford; and explorers like Martin Johnson—and tried to discover the techniques they used in human relations. The book took its birth after fifteen years of experiment and research work of the author.

The book explains 30 principles in four parts. Part one explains the Fundamental Techniques for Handling People with the help of three rules. In part two, the author applies six principles to describe Six Ways to Make People Like You. Part three says about How to Win People to Your Way of Thinking. In this part, the author discusses 12 principles. Be a Leader: How to Change People Without Giving Offense or Arousing Resentment constitutes part four. Here the author discusses nine principles. Simplicity and clarity of ideas are the main features of Carnegie’s writings. Overall the book teaches us the best strategies to use in having a great relationship with people surrounding us, think about our self-centered nature, and improve the quality of our interactions with people.

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