Editorial

Dear Readers,

We are pleased to announce the publication of the 18th edition of the International Journal of Research in Business Studies, Volume 9, Issue 1 (June). This issue showcases our commitment to fostering sophisticated theoretical frameworks, diverse methodologies, and rigorous empirical research in business and management. Featuring nine articles from esteemed scholars and practitioners, the coverage spans marketing, strategic management, finance, human resource management, and innovative entrepreneurship, reflecting the breadth and complexity of contemporary business studies. This edition highlights the evolving landscape and challenges within the field.

We are extremely appreciative of the editorial board members, our thorough reviewers, and the committed administrative team whose unwavering assistance and knowledge continue to elevate the caliber of this scholarly publication.

We appreciate your continued support and dedication, which are essential to uphold the standard of academic integrity and rigor that characterizes this publication.

With regards,

Arun Kumar
Editor-in-Chief
IJRBS

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Human Capital Development Practices: A Strategy for Enhancing Workforce Capability

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Abstract

Purpose: This study investigates the role of human capital development (HCD) practices as a corporate strategy in enhancing workforce capability in Information Technology (IT) firms within the five main IT hubs in India, namely; Bengaluru, Hyderabad, Chennai, Mumbai, and Delhi.

Theoretical Framework: The study espouses the model of workforce capability by Tamkin Penny (2005) and an adapted version of the HCD Practices model by R. Indradevi (2011). The workforce capability model represents two key dimensions to the expression and enhancement of human capability at the workplace, notably: the development of capability at one end and its deployment at the other end. The second dimension looks at the roles of individuals at one end and organizations at the other end, and how the concept of capability depends on an appropriate partnership. Indradevi, on the other hand, identified recruitment, training, counseling and mentoring, empowerment, and performance appraisal as the perceived human capital development practices for the Indian software industry.

Design/Methodology/Approach: Responses from 527 employees from Hardware, ITES/BPO (IT-Enabled Services/Business Process Outsourcing), and Software industries in India was analyzed using Stepwise regression analysis.

Findings: The results of the study showed that HCD practices, namely training, performance appraisal, self-organized learning, talent management, employee engagement, and workplace health management, have a general significant positive impact on workforce capability in India's IT industry.

Research Practical and Social Implications: The study confirms that HCD practices are a beneficial strategy for enhancing workforce capability in organizations. The principal policy insinuation of the survey is the need for state officials and other government agencies in developing economies to support the use of HCD practices in all sectors of the economy.

Originality/Value: Other studies on HCD practices purport general outcomes, this study goes on to indicate specifically that HCD practices promote mainly the ability component (skills development opportunities) and the application component (readily available technological aides) of workforce capability.

Keywords

Information Technology (IT), IT industry, Human capital, Human Capital Development (HCD) practices, and Workforce capability.

1. Introduction

Capability refers to the ability to do work expected of employees as per desirable standards (Lindbom et al., 2015; Kusumasari et. al., 2010). According to Tamkin (2005), an employee's capability may be appraised by allusion to their competence, skill, talent, health, or any other mental or physical attribute related to the specific task or job. The perception of capability as viewed by Sen (1993) is found in the debates of welfare economics as applied in the standpoint of economic development. Sen's approach to capability looks at the expansion of freedom and well-being of individuals within any given workforce as an avenue for economic development. Human capital development has been largely discussed from the perspective of developed countries (Sakka & Ghadi, 2023). However, the foundation of one's human capital is widely accepted as being based on skills and knowledge acquired by individual learning activities. (Asante Darkwah et al., 2023; Boohene et al., 2017a; Baah-Boateng, 2013) explain that the accumulation of human capital through learning activities influences many sectors such as firm's productivity, incomes, and to a large extent the national economy. (Boohene et al., 2017; and Todaro et al., 2012) see the term human

capital as a key element in improving a firm's assets which obviously includes employees in order to increase productivity alongside development, capability, and growth prospects for organizations. Thus, human capital development practices in the form of talent management, performance management, education, personnel training, skill enhancement, and career development are crucial for the development and growth of employees (Ashmond et al., 2022; Channar et al., 2015; and Yaya 2016). In line with this, the Organization for Economic Co-operation and Development (2018) has defined human capital as the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being.

There are several human capital development practices that are employed in most corporations. For instance, Indradevi (2011) identified the following human capital development practices, namely recruitment, training, counseling and mentoring, empowerment, and performance appraisal as the perceived practices that impact employee capabilities with particular focus on India's Software industry. This study goes further to look at the impact of these practices on the Hardware, IT-Enabled-Business Processing Outsourcing (ITES-BPO) sector, and the Software sector in India. The IT Industry in India uses computers and other supporting equipment to share knowledge and information (Das et al., 2017; Dery et al., 2016). The industry has in time past been limited to only computers, nevertheless with the rapid advancement in various information Technology delivery systems such as Radio, TV, Telephone, Newspapers, Internet, Fax, and obviously Computers and computer Networks etc., (Khattak et al., 2012). The IT industry goes further now to encompass aspects such as machine learning, smarter devices, virtual reality and augmented reality, robotic process automation, and quantum computing among others (Ibeh et al., 2024). According to Oyekunle et al., (2024), there is the need to balance technological advancements with the protection of human dignity and fairness, exploring how IT's transformative potential can be harmonized with the core tenets of human rights. This has called for many developing economies to harness on the benefits of IT to invest in their human capital potential through training and continuous learning (Boohene et al. 2024; Boohene et al., 2023; Amita et al., 2023). The IT industry in India mainly comprises of ITES-BPO, Software, and Hardware segment. Software and services segment includes IT services and products, Engineering services, ITES-BPO, Research & Development, and Software products (Ministry of Electronics and Information Technology, 2016). India is the world's largest sourcing destination for the information technology (IT) industry and it accounts for approximately (67 percent) of the US$ 124-130 billion market (Darsana, 2019; National Association of Software and Service Companies, 2016).

The IT industry has led the economic revolution of India and appears to be going forward to alter the perception of India on the global outlook. The sector has increased its contribution world, economies (Shevchenko et al., 2023) and particularly with regards to India's GDP from 1.2 percent in 1998 to 7.7 percent in 2017. As of 2020, India's IT workforce accounted for 4.36 million employees (Jayswal, 2020). This calls for efforts to ensure that it remains productive.

The workforce capability model according to Tamkin (2005) represents two key dimensions to the expression and enhancement of human capability at the workplace. The first dimension includes the development of capability at one end and its deployment at the other. The second dimension looks at the roles of individuals at one end and organizations at the other end, and how the concept of capability depends on an appropriate partnership. That is, organizations generally desire a proactive working force to succeed but more often than not fail to equip their employees with the requisite knowledge, skills, ability and training to function. For example, although NASSCOM (2019) reveals that the adoption of digital technologies has seen significant growth in India with robotics and machines getting augmented with sensors and artificial intelligence solutions, yet the industry is also faced with challenges such as lack of talent, remote working, poor quality, high attrition, employee effectiveness, competition, dynamism, confidentiality, regulatory and time zone issues, cloud migration, cybersecurity threats, over-concentration of IT hubs at expense of other cities, etc (Javkhedkar et al., 2021; Ramasamy, 2020). In light of this, the present day's human resource personnel are performing various functions than before to rein in these lapses. To overcome these challenges, the industry must endeavor to go the extra mile through innumerable new business strategies. It is in this regard, that this study seeks to investigate the role of HCD Practices namely; employee engagement (EE), talent management (TM), performance appraisal (PA), self-organized learning (SL), training (T), and workplace health management (WHM) as a business strategy in enhancing workforce capability (WC) in the Indian IT industry.

2. Material and Methods

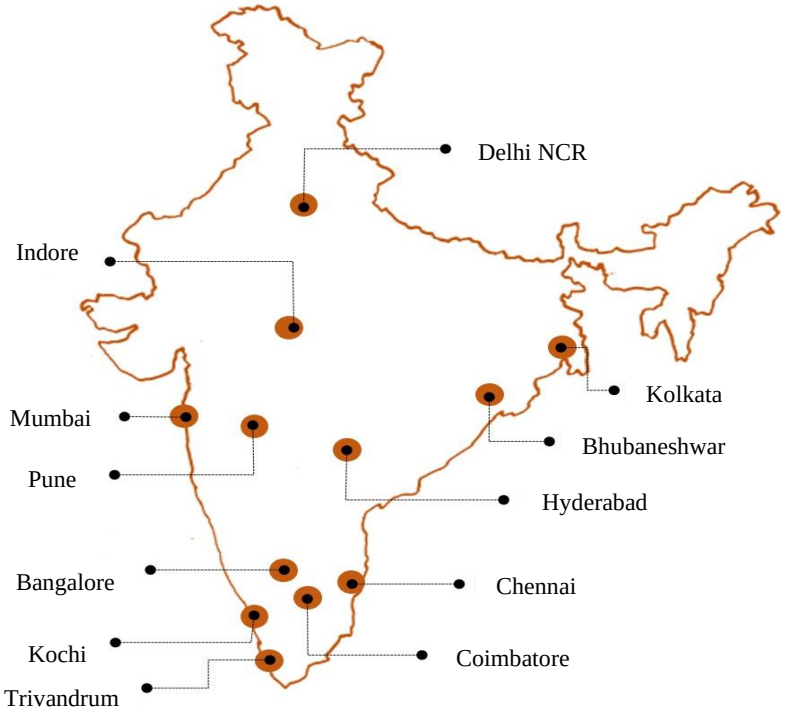
The study focuses on the five main IT hubs in India, namely Bengaluru, Hyderabad, Chennai, Mumbai, and Delhi. The IT sector in India has about six (6) categories, namely; Hardware, IT Services, Engineering/Electronics and R&D Services, Software Products, ITES/BPO, and E-commerce (Ministry of Electronics and Information Technology, 2016). This study however focuses on; the Hardware Sector, ITES/BPO (IT-Enabled Services/Business Process Outsourcing) and Software Industry. A sample size of five hundred and twenty-

seven (527) employees from the thirty-four selected firms in India's IT hub namely; Bengaluru, Hyderabad, Chennai, Mumbai and Delhi were relied on for quantitative analysis. Out of the five hundred and twenty-seven (527) respondents, one hundred and sixty-nine (169) were from Bengaluru. The residual three hundred and fifty-eight (358) employee respondents were from the remaining four cities.

2.1 Sample Size Development

The number of strata is two (2), namely**, N1 and N2**

N1-Stratum 1: Selection was done based on the concentration of IT Companies in order of ranking; the cities selected are Bangalore, Hyderabad, Chennai, Mumbai, and Delhi.



Source:- MaxHeap Technologies, 2017

Figure 1:- Indian Cities with Major IT Hubs

N2-Stratum 2: Selection was done using disproportionate allocation sampling based on concentration of companies in the selected IT hubs and total number of employees per each company as seen in Table 1

Table 1:- Strata Composition

IT hub	Number of IT Companies	Number of Respondents
Hyderabad	8	122
Chennai	6	90
Bengaluru	12	169
Delhi	4	69
Mumbai	4	76

Source:- Prepared by the authors (2023)

Table 1 reveals that the majority of respondents are from Bengaluru (about 40 percent of the Indian IT companies) located in that region (NASSCOM, 2016). This is followed by Hyderabad which has a relatively higher concentration of IT companies compared to Chennai, Mumbai, and Delhi.

Table 2:- Cross Tabulation

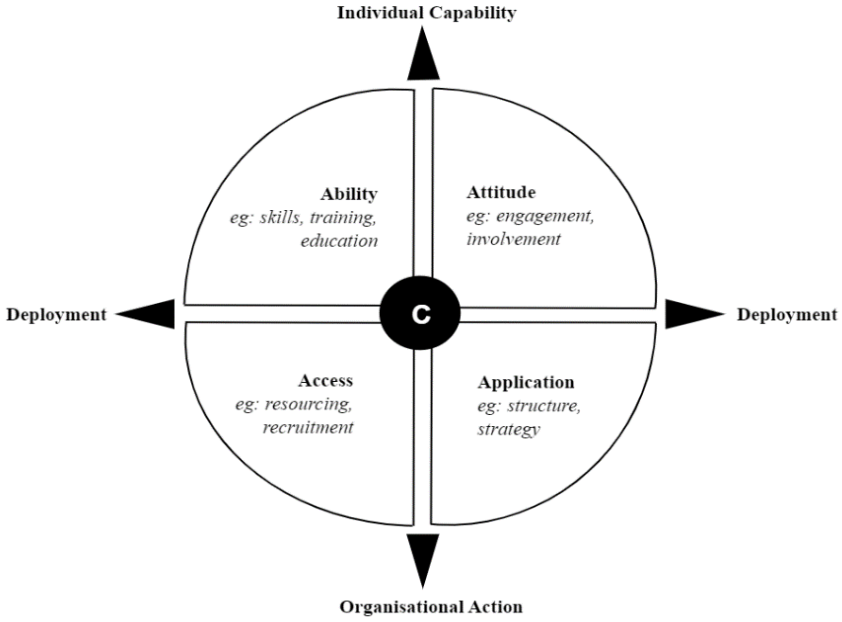
Count		IT Components			
		Software	Hardware	ITES-BPO	Total
Gender	Male	104	119	73	296
	Female	93	43	95	231
	Total	197	162	168	527

Source:- Prepared by the authors (2023)

Table 2 shows a cross tabulation of the demographic profile on the gender of the respondents and the IT component employed in presently. From the table, it is observed that there are relatively more females in the ITES-BPO sector, precisely (95), representing (56.5 percent) of the overall number of respondents (168) compared to the other sectors. This could be as a result of the burgeoning of several ancillary services in that sector. On the other hand, there are more men compared to women in the Hardware sector. The situation can be due to the robust nature of work related to the Hardware sector.

2.2 Tamkin's '4A' Model of Workforce Capability

Tamkin's workforce capability model constitutes four elements, namely Ability, Application, Attitude, and Access. The resulting four quadrants of activity form the model as illustrated in her '4A' model of workforce capability. The Tamkin's quadrants are;



Source:- Tamkin (2005)

Figure 2:- Tamkin's Workforce Capability

Based on Tamkin's '4A' Model of Workforce Capability and review of literature on HCD practices, the following hypothesis is tested to develop conceptual framework for the study.

H1: HCD Practices significantly impact workforce capability (Ability, Application, Attitude & Access)

There is a significant relationship between the HCD Practices and workforce capability.

X^2 (4, N=527) = 446.165, p= 0.00; $p < 0.05$ and X^2 is highly positive. The Phi and Cramer's V indicate a considerable effect size of (0.897) which is significant at a (0.000) confidence level. This indicates that HCD practices enhance workforce capability. Therefore, H1 is accepted.

H2: HCD Practices enhance employee ABILITY (Skills development opportunities)

There is a significant relationship between the HCD Practices and worker ability.

X^2 (4, N=527) =463. 165, p= 0.00; $p < 0.05$ and X^2 is highly positive. The Phi and Cramer's V indicate a considerable effect size of (0.937) which is significant at a (0.000) confidence level. This indicates that HCD practices enhance employee ability. Therefore, H2 is accepted.

H3: HCD Practices enhance employee APPLICATION (Readily available technological aides)

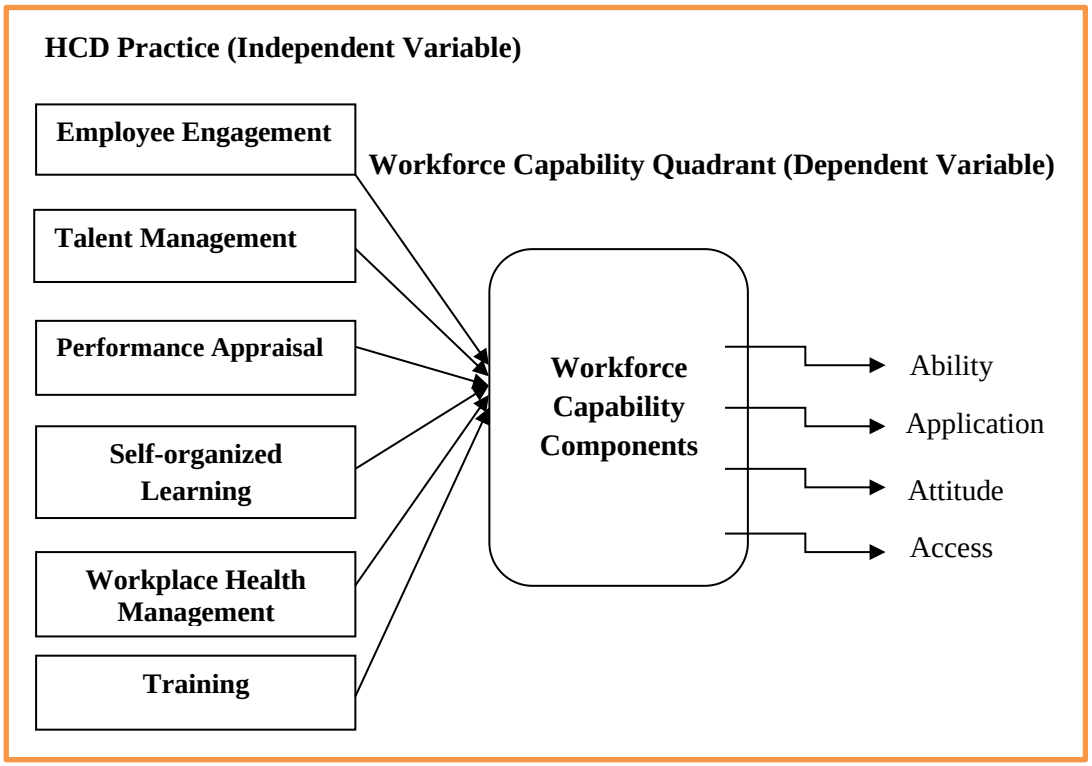
There is a significant relationship between the HCD Practices and worker application. X^2 (4, N=527) =415. 314, p=0.00; $p < 0.05$ and X^2 is highly positive. The Phi and Cramer's V indicates a considerable effect size of (0.888) which is significant at a (0.000) confidence level. This indicates that HCD practices enhance employee application. Therefore, H3 is accepted.

H4: HCD Practices enhance employee ATTITUDE (Job description and its related authority)

There is a significant relationship between the HCD Practices and worker attitude. This is seen from the Chi-Square test statistic, X^2 (4, N=527) = 374.562, p=0.00; $p < 0.05$ and X^2 is highly positive. The Phi and Cramer's V indicates a considerable effect size of (0.843) which is significant at a (0.000) confidence level. This indicates that HCD practices enhances employee attitude. Therefore, H4 is accepted.

H5: HCD Practices enhance employee ACCESS (Recruiting qualified personnel)

There is a significant relationship between the HCD Practices and worker access. This is seen from the Chi-Square test statistic, X^2 (4, N=527) = 388. 954, p= 0.00; $p < 0.05$ and X^2 is highly positive. The Phi and Cramer's V indicates a considerable effect size of 0.859 which is significant at a (0.000) confidence level. This indicates that HCD Practices enhance employee access. Therefore, H5 is accepted.



Source:- Prepared by the authors (2023)

Figure 3:- Conceptual Model for HCD Practices on Workforce Capability

Figure 3 presents the independent variable for the study as the human capital development practices with six varied components as well as the workforce capability which has four sub-components as its dependent variables.

The main hypothesis and other sub-hypotheses for the study are summarized below as;

Main Hypothesis

- H1: HCD Practices significantly impact workforce capability.

Sub Hypotheses

- H2: HCD Practices enhance employee ability.
- H3: HCD Practices enhance employee attitude.
- H4: HCD Practices enhance employee application.
- H5: HCD Practices enhance employee access.

3. Results

Table 3:- Stepwise Regression for Skills Development Opportunities (ABILITY)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.897[a]	.804	.803	.15101
2	.921[b]	.848	.848	.13301
3	.929[c]	.863	.862	.12651
4	.931[d]	.867	.866	.12487
5	.932[e]	.869	.868	.12384

Source:- Prepared by authors

a. Predictors: (Constant), Training
b. Predictors: (Constant), Training, PA
c. Predictors: (Constant), Training, PA, SL
d. Predictors: (Constant), Training, PA, SL, TM
e. Predictors: (Constant), Training, PA, SL, TM, EE

The predictor ability as explained by the R Square is (0.869) for the ability component of workforce capability. Five out of the six factors namely training, performance appraisal, self-organized learning, talent management, and employee engagement recorded relatively high predictor ability for the dependent variable. The remaining factor which is Workplace health management had a relatively less predicator ability and thus was omitted in the stepwise regression model summary.

Table 4:- Stepwise Regression for Readily available Technological aides (APPLICATION)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.797[a]	.635	.634	.23750
2	.836[b]	.698	.697	.21613
3	.847[c]	.718	.716	.20912
4	.850[d]	.723	.721	.20759

Source:- Prepared by authors

a. Predictors: (Constant), Training
b. Predictors: (Constant), Training, SL
c. Predictors: (Constant), Training, SL, PA
d. Predictors: (Constant), Training, SL, PA, WHM
e. Dependent Variable: Readily available Technological aides (APPLICATION)
The predictor ability as explained by the R Square is (0.723) for the application component of workforce capability. Four out of the six factors namely training, self-organized learning, performance appraisal and workplace health management recorded relatively high predictor ability for the dependent variable. The remaining factors, namely; talent management, and employee engagement had a relatively less predictor ability and thus were omitted in the stepwise regression model summary.

Table 5:- Stepwise Regression for Job Description and its Related Authority (ATTITUDE)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.838[a]	.703	.702	.26094
2	.852[b]	.726	.725	.25064
3	.854[c]	.730	.728	.24933
4	.856[d]	.732	.730	.24849

Source:- Prepared by authors

a. Predictors: (Constant), Training
b. Predictors: (Constant), Training, SL
c. Predictors: (Constant), Training, SL, WHM
d. Predictors: (Constant), Training, SL, WHM, PA
e. Dependent Variable: Job description and its related authority (ATTITUDE)
The predictor ability as explained by the R Square is (0.732) for the attitude component of workforce capability. Four out of the six factors namely training, self-organized learning, workplace health management and performance appraisal recorded relatively high predictor ability for the dependent variable. The remaining factors, namely; talent management, and employee engagement had a relatively less predictor ability and thus were omitted in the stepwise regression model summary.

Table 6:- Model Summary for Recruiting Qualified Personnel (ACCESS)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.715[a]	.703	.702	.35804
2	.801[b]	.726	.725	.30729
3	.803[c]	.730	.728	.30596

Source:- Prepared by authors

a. Predictors: (Constant), Training

b. Predictors: (Constant), Training, SL

c. Predictors: (Constant), Training, SL, PL

d. Dependent Variable: Recruiting qualified personnel (ACCESS)

The predictor ability as explained by the R Square is (0.730) for the access component of workforce capability. Three out of the six factors namely training, self-organized learning, and performance appraisal recorded relatively high predictor ability for the dependent variable. The remaining factors, namely; talent management, employee engagement, and workplace health management had a relatively lower predictor ability and thus were omitted in the stepwise regression model summary.

4. Discussion

Thus, from the stepwise regression analysis as seen in Table 3-6, the ability of HCD practices to significantly impact each of the workforce capability elements is not the same. As a result, there is a significant difference in how employees perceive human capital development practices for improving workforce capability. As per the results, we find that the ability component of workforce capability has the potential to be more influenced by HCD practices. Tamkin (2005) views this ability component of workforce capability as the quality of people that an organization has at its disposal and the ongoing development activity of those individuals that maintains and further develops their capability. Further, in Table 3, we acknowledge that among the HCD practices under study, workplace health management has a relatively less effect on the ability component of workforce capability. On the other hand, training is the most influential, followed by performance appraisal and self-organized learning. This suggests that training the workforce improves worker abilities on a job that can bring productivity to the Indian IT industry.

Again, the application component of workforce capability is best explained as the opportunities, such as technology, made available to individuals to aid in their work. These opportunities have the potential to be influenced by HCD practices.

For instance, according to (Boohene et al. 2017c; Adayana, 2009), it is common for organizations to rely on technological components, namely, a learning management system (LMS), social networking (SN), web collaboration (WC), mobile communication (MC), management information systems (MIS), back-office integration (BOM), etc., either single-handedly or in different combinations to support a wide variety of HCD practices. Thus, the application component of capability recognizes and suggests that people need an appropriate working technological environment to flourish, which is provided through job design, organizational structure, information sharing, and business strategy. Conspicuously, as seen in Table 4, we find that, yet again, training remains the variable with the greatest predictor ability, followed by self-organized learning. Talent management and employee engagement had relatively lower predictor coefficient values for the application component of workforce capability. Yet with this established, training as a major contributing factor to workforce capability will be more useful when trainees are able to practice the theoretical aspects learned in training programs in their actual work environments (Bates & Davis 2010).

On the issue of attitude, which entails motivation, engagement, and morale of the workforce and the meaning they find in work, their beliefs about the workplace, and their readiness to put in extra effort, we realize that talent management and employee engagement had a relatively lower predictive ability and thus were omitted in the stepwise regression model summary. This suggests that the two variables among the six HCD practices were significant but not highly significant when compared to training, self-organized learning, workplace health management, and performance appraisal. Then again, we also find that training is the most significant determiner of the attitude component of capability.

Lastly, with regards to access, which refers to the effective resourcing of roles in the organization in terms of initial recruitment, ongoing job moves, and succession activity, the least predictor was workplace health management, whereas the most significant variable affected is training. Consequently, the center of attention here for training purposes is a premeditated organizational activity including policy and practice, as put by (Tamkin, 2005).

5. Conclusion

The present global financial crisis and the escalating interdependence of nations globally have resulted in heightened attention toward the HCD Practices paradigm and its enduring viability. Nations, whether they have advanced or emerging economies, give high importance to improving human capital as a crucial element for promoting economic advancement. This is accomplished by

dedicating the necessary amount of time and effort. Therefore, promoting the development of human resources becomes a vital option to successfully integrate into the global arena, particularly within the five primary IT centers in India. The aim of this research is to analyze the elements that contribute to the value of carefully planned and developed human resources in the global economy of the 21st century.

The study showed that HCD practices, namely training, performance appraisal, self-organized learning, talent management, employee engagement, and workplace health management, have a general impact on workforce capability in India's software, hardware, and ITES/BPO industries. Again, for the ability and application components of workforce capability, the HCD practices correlated significantly. Thus, the findings of this study are in line with previous studies conducted earlier (Channar et al., 2015; Sherine F.E., 2015; Khan et al., 2014; Josan, 2013; Indradevi, 2011) on the grounds that HCD practices have a considerable impact on the capability of the labor force and organizational performance as evidenced in the stepwise regression output. Thus, this study confirms that HCD practices can be used as a favorable strategy for enhancing workforce capability in India's IT industry as they positively affect the ability, attitude, application, and access components of workforce capability.

Accordingly, the following proposals are posited at the micro- and macro-levels within the framework of the study's limitations and conclusions. Firstly, at the micro level, employers and human resource practitioners can reinforce the conduct of periodic training for their employees. Also, the study proposes a planned company policy that seeks to address the development of its workers, especially at the entry stage when one is joining a firm as a new recruit. Periodic needs assessments should be conducted to ascertain the skill needs of employees. Employers should also pay keen attention to the benefits of their employees' performance appraisals. This will go a long way toward reducing the high attrition rate prevailing in the IT industry, as indicated by this study. Again, directors should endeavor to provide inexpensive periodic career planning and training opportunities for their staff, as effective employees will result in the individual and group effectiveness necessary for growth in the IT industry. Secondly, at the macro level, the principal policy insinuation of the survey is the need for state officials and other government agencies to support the use of HCD practices in all sectors of the economy. The government should ensure that organizations follow labor policies that promote employee human capital development. This is because the development of any workforce's capability indirectly creates the reliable human capital required for the development of growing economies. Additionally, policies such as tuition fee cuts, grants, or waivers for females can

be instituted by the local government to encourage more women to take up educational opportunities in IT. This will go a long way toward augmenting the somewhat lower employment of women in the hardware sector, as the study revealed a relatively lower number of females in that sector compared to the ITES-BPO and the software sectors of India's IT industry. Finally, the government in India should prepare for a possible next stage of revolution, which is the revolution of human capital development, despite the rising phase of automation as employees will constantly need to develop skills that will make them competent to be in charge of the era of machines and technology.

Declaration of Conflicting Interest

There is no conflict of interest.

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An Exploration of Emotional Intelligence Leadership by Harnessing the Head and Heart for High-Impact Medical Governance in India

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Abstract

Purpose

The goal of the study was to investigate the impact of emotional leadership on good medical governance. The study aimed to see if there was a link between nurse staff's emotional intelligence and their leadership effectiveness, as measured by the Bar-On Emotional Intelligence Inventory and the Kouzes and Posner Leadership Practices Inventory (LPI) for Self. The aim of the present paper was to explore the relationship between Emotional Intelligence and effective leadership to measure the tendency of emotional control of the working class both males and females at a managerial level in a private and public sector of India, namely, the medical sector.

Design/Methodology/Approach

The primary objective of this study was to examine the impact of various factors on effective leadership and emotional intelligence. A maximum of 750 participants were included in this original statistical sample. The study's instrument was responded to using the convenience sampling technique. The statistical analyses were performed using SPSS version 23.0 software employing descriptive statistics such as mean, standard deviation, and percentage. The validity and reliability of the research were assessed using a questionnaire. A structural equation model was used to evaluate the research hypothesis. According to the findings, Emotional Intelligence has a significant and substantial impact on management corporate governance effectiveness.

Results: The findings revealed a statistically significant link between emotional intelligence and leadership effectiveness (practices) among nurses. "Average - acceptable emotional capacity" was demonstrated by research administrators. Furthermore, the study discovered that total emotional intelligence and eight other components of emotional intelligence are substantially connected with Leadership Practices. This demonstrates that additional emotional intelligence training during the

course of a nursing education programme can be helpful when combined with extensive practical experience in health care.

Academic Discipline and Sub-disciplines: Business Management, Human Resource Management.

Subject Classification: Emotional Intelligence Leadership

Keywords

Emotional intelligence leadership, Effective governance, Self-awareness, Empathy, and Social skill.

1. Introduction

Nurses are now more than ever confronted with numerous, more tough challenges within the framework of their everyday work procedures in the COVID-19 epoch, among mutating viruses such as omicron as well as demilltron. Emotional Intelligence is a modern technique of effective management (Gilar et. al., 2019) that strives to enhance a leader's cognitive (Katsaros, 2015), emotional, and physical resources, and enables individuals to manage a wide range of employees who are frequently executing a diverse set of tasks. Additionally, emotion mining (Razali et. al, 2021) and personal competencies (Alfonso et. al, 2016) are two major determinants that have been established to be positively linked to job performance, making emotional intelligence identification and analysis essential for good transformation and the advancement of the organization's cultural capital. With tighter budgets, escalating expenditures, and increased competition.

Leadership (Sistad, 2020) with Emotional Intelligence is a vital contribution to human social capital. It elevates and alters the leader's and followers' human conduct and ethical aspirations (Allen & Meyer, 1990). Leaders pay such close attention to the emotional signals (O'Connor et. al., 2019) of the Emotional Intelligence constituency that they take deliberate action. Decision-making is arbitrary when it is not imbued with the wisdom of emotions, contrary to the classical approach (Goleman, 1995). Emotional Intelligence is a distinct essential characteristic that distinguishes ordinary management leadership from exceptional leadership (Ashkanasy & Daus, 2002). Emotions are cognitive inputs that people use as a guidance for logical decision-making. Many emotions are the result of evolutionary knowledge (Gardner, 2002), and they are closely linked to all forms of cognition. Leadership is important in the workplace.

Although reform encompasses two primary factors: Change and People, leadership plays an important role in its implementation. Leadership manifests itself through interpersonal ties and relationships, particularly in the medical field, where pleasant, appealing, gentle demeanor may work miracles in the treatment of unwell patients, particularly cancer patients. Patients can be motivated to think optimistically by good leaders. Despite the fact that medicine is an emotionally demanding profession and medical education is an emotional process, emotional experience has traditionally been regarded as a corollary of the fundamental task of acquiring and deploying practical skills. However, self-efficacy (Debeş, 2021) and sentiments are transforming. Knowledge and skills are more valuable when they can be applied in emotionally sensitive ways, as per neuroscience research.

Emotions impact how health professional learners identify, perceive, understand, and act on information, according to cognitive science. Medical students' academic performance has been found to be influenced by achievement feelings. Medical students' emotional highs and lows have been connected to their formation of a doctor's identity. Concerns about health care providers' unprofessional behaviour are fueling the professionalism movement, which emphasises the need for compassionate as well as safe, and effective care. EI appears to supply exactly what medical courses require on the basis that healthcare practitioners who communicate better and display higher degrees of professionalism are more emotionally intelligent. There's still some debate over whether it's independent of personality and fleeting emotional states, and if it can be assessed without being influenced by social desirability bias and students' desire to succeed. Commercial exploitation has made EI expensive to measure, despite the fact that competing theories and measurements describe the concept in diverse ways. Furthermore, there is presently no agreed-upon technique of assessing EI in a way that is connected to medical school achievement or patient outcomes, and such consensus appears less and less likely to develop as measurement methodologies diverge in the study literature. Emotional intelligence showed a distinct and substantial variation in the prediction of several health-related quality-of-life characteristics.

The potential utility of incorporating emotional intelligence into effective governance to supplement current psychoeducational techniques targeted at preserving or increasing the health-related quality of life of cancer patients. Emotional intelligence abilities can assist patients in dealing with life's ups and downs. Even if the patients have an awareness of emotional intelligence, they may lack the capacity to deal with the pain, resulting in physical and mental

anguish. Anxiety and despair levels among patients are likely to rise in this situation (Wechsler & Arbatani 2012). Emotional Intelligence leadership is about letting go of stifling energy and gaining abilities that help health leaders understand, motivate, and manage their people.

The emotional intelligence competency of the leader has a significant influence on the organization's real culture. Coping organisations are basically about altering people's behaviour, thus organisations undergoing transformation require leadership. Leaders who spread optimism throughout a company can help distribute and sustain new ideals relevant to public and private sector changes. In today's rapidly changing medical field, the capacity to rebuild relationships is largely required for leadership. It provides management and executives with a competitive advantage in managing their staff creatively and productively.

The trend to revitalise joints effort in health services necessitates mutual understanding and open communication, which may be encouraged when medical specialists and patients have a strong relationship. Cancer is incredibly taxing, both psychologically and physically, and normalcy is a time-consuming process. When medical workers or family members fail to communicate clearly about their sickness, cancer patients frequently experience disappointment and significant levels of worry (Payne, 1983). To be persuasive in this setting, doctors and their professional leaders must strive to improve their knowledge and use of emotional intelligence abilities. Unfortunately, the medical care profession has paid little attention to this subject when picking leaders. There is no medical research on Indian content.

2. Review of the Literature

The relevant literature review focused on four key areas: the theoretical rationale for studying emotional intelligence, the relationship between emotional intelligence and leadership effectiveness, effective leadership practices in the medical sector, and implications for emotional intelligence leadership. Emotional Intelligence facilitates and manages emotions efficiently by developing a mix of mental talents and personality qualities, where emotions pave the way for numerous dispositions for relevant functioning of optimism and empathy. There is a link between psychological suffering, maladaptive behaviour, and physical morbidity.

Analysis of Emotional Intelligence is very important because it enables individuals to react properly in complex instances. It acted as a defensive ability to examine one's own and others' feelings and emotions in order to differentiate them and utilise the information to influence one's thinking and actions (Solovey and Mayer 1990). Emotional Intelligence is an individual's ability to distinguish

and sculpt emotions in oneself, as well as perceive and then alter feelings in others (Goleman 1995). It has evolved over time as a complement to intellect and social intelligence, among other things. It consists of innate characteristics, personality traits, emotional, and sane capacities (Mayer and Solovey 1990). The many intelligences doctrine (Wechsler, 1940) separates emotional intelligence from intelligence intelligence and bestows a distinct personality. However, its face value is enhanced when it is performed in conjunction with leadership and the strengthening of particular groups and teams. However, its face value is enhanced when it is applied with leadership and improvement of individual groups, teams, and merely in the efficacy of the organisation (Tunnell 1980).

Given the competitive and dynamic corporate environment in which they operate, modern enterprises throughout the world are quickly adopting the emotional intelligence idea. Because effective leadership has been redefined to include an awareness of emotions and the talents associated with emotional intelligence, new expectations are being made on leadership training programmes to identify and develop emotional intelligence capabilities (Cooper and Sawaf, 1997; Goleman, 1998). As a result, emotional intelligence (Sosik and Megerian, 1999; Dulewicz, Young, and Dulewicz, 2005) may be a potential underlying feature of effective leadership.

Leadership has been defined as a highly valued trait in most businesses (Meindl, Ehrlich, and Dukerrich, 1987), and it is thought to decide whether or not an organisation will succeed. Burns (1978; Rollinson, 2005) defines a leader as someone who fulfills a job that requires them to follow a set of behavioural standards and expectations in exchange for a degree of authority that allows them to affect the behaviours of their followers. Leadership, according to Armstrong (2009), is "the process of motivating and convincing followers to attain desired goals." encouraging individuals and groups to put up their best efforts in order to achieve a desired result.

Barron and Greenberg (1990) define leadership as "the process by which one individual motivates other group members to attain defined group or organisational goals." These definitions imply that leadership entails more than simply taking a stance; it also entails engaging with others, organising supporters, and contributing productively to a common objective. The primary goal of leadership is to complete tasks (Bass, 1985).

According to Humphrey (2002), leadership is fundamentally an emotional process in which leaders identify their followers' emotional states, aim to elicit emotions in them, and then endeavour to regulate their emotional states appropriately. Emotional intelligence, according to Mayer, Salovey, and Caruso

(2000), is a crucial factor of effective leadership, and emotionally intelligent leaders have the power to encourage effectiveness at all levels of companies.

Among the various leadership styles, transformational leadership unquestionably encompasses modern leadership qualities. It is said that it improves subordinates' dedication, contentment, and trust in leadership, resulting in favourable outcomes (Hater and Bass, 1988; Bass and Avolio, 1994; Leban and Zaulaf, 2004). It also seeks for new methods of working (Senge, 1990), new possibilities, and promotes workplace effectiveness (Lowe and Kroeck, 1996). These characteristics suggest a link between transformative leadership and emotional intelligence.

Carulli (2003) used a sample of 160 managers in a global firm to perform a study on emotional intelligence and organisational leadership in Asia. They identified a positive and significant association between emotional intelligence components, transformational leadership style, and effective leadership outcomes, and Kelloway (2000) suggests that emotional intelligence may predispose leaders to utilise transformational behaviours. They claim that leaders with a high level of emotional intelligence are more likely to engage in transformative actions, regulate their emotions and act as role models for their followers, a signal of inspiration that improves followers' trust and admiration for their leaders would aid leaders in understanding their followers' expectations, empathising with employees, and efficiently managing relationships.

Ashkanasy and Tse (2000) identified leadership literature as a significant factor of good leadership (George, 2000). According to George (2000), emotionally savvy leaders may increase organisational performance at all levels. A leader's emotional intelligence also has a significant impact on the quality and efficacy of social interactions with others (House and Aditya, 1996; Alston, Dastor, and Sosa-Fey, 2010; Batool, 2013).

The emotional intelligence construct has been accepted by the business sector as a tool for organisational success and competitive advantage (Sparrow, Brewster, and Harris, 1994). Many businesses are realising that technical and intellectual abilities are only one half of the puzzle. They also believe that people's ability to recognise and control their emotions increases their performance, cooperation with coworkers, and customer contact.

There is mounting evidence that there is a link between emotional intelligence and work performance, with various research supporting this assumption. Nel (2001) investigated the connection between emotional intelligence and job performance among contact centre agents at a major life insurance firm in the Western Cape, South Africa. Several emotional intelligence abilities, notably in customer service and administration, were found to be linked to performance.

Salovey (2006) evaluated 44 analysts and administrators from a Fortune 400 insurance firm and discovered that emotional intelligence had a favourable impact on job performance as measured by a set of competencies. According to Bachman (1988), the most effective leaders in the US Navy are warmer, outgoing, emotionally expressive, and friendly. Higgs (2004) studied the relationship between emotional intelligence and performance in United Kingdom call centers and obtained data from two hundred and nine (209) respondents from three (3) organizations; the study showed a strong relationship between emotional intelligence and individual performance. Kumar (2014) also believes that emotional intelligence is important in obtaining job success.

Leaders who are emotionally knowledgeable are regarded to perform better in the workplace (Goleman, 1998), are happier, and show more dedication to their employers (Abraham, 2000), Instill a sense of belonging, enthusiasm, trust, and cooperation in employees through interpersonal relations (Miller, 1999), use positive emotions to envision improvements in the organization's functioning, and use positive emotions to envision improvements in the organization's functioning (Miller, 1999); George (2000) claimed that there is a correlation between emotional intelligence and workplace performance.

Emotional intelligence enables leaders to engage and relate with employees on both an intellectual and emotional level. Many powerful sentiments that may be expressed during times of organisational transition can be addressed in an appropriate manner by an emotionally savvy leader (Viewpoint, 2004). It's also crucial for tasks like decision-making, dispute resolution, and negotiation (Leban and Zaulauf, 2004). Paying attention to one's own and others' emotions saves time, opens up new possibilities, and directs energy into performance (Johnson and Indvik, 1999).

However, not all management experts think that emotional intelligence is a feature that may help firms become more productive. Antonakis (2003) challenges whether emotional intelligence is necessary for effective leadership. According to him, emotional intelligence is more of a part of regular psychological functioning than a distinct entity. He warns against becoming too excited about the application of emotional intelligence in the workplace. Emotional intelligence, according to Woodruffe (2001), is an untested idea that contributes nothing to the equation.

An effective approach is used to assess people's worry, irritation, stranded behaviour, melancholy, and boredom. It usually instills real habits in leaders and determines their leadership effectiveness in critical situations. Effective leaders utilise emotional intelligence to deal with themselves and to successfully deal

with and prepare the way for others in the organisation. Emotional intelligence is the ability to recognise and understand your own and others' emotions, as well as the messages that emotions send about relationships. It also includes the ability to control your own and others' emotions. It does not necessarily include characteristics like optimism, initiative, and self-confidence that some conventional definitions ascribe to it. Not only is it critical to categorise what exactly constitutes Emotional Intelligence, but it's also important since people's emotional intelligence is so important in leadership.

Due to its recent economic prosperity, India has not lagged behind in adopting new medical discoveries and technologies. However, in most regions of the nation, particularly in rural India, there has been a continual demand-supply mismatch of medical personnel and health care resources due to overpopulation and a high illness load, as well as inadequate resources and legislation. To explain why some people are better than others at absorbing emotional information and using it to guide their behaviour, Salovey and Mayer presented a social interaction model of EI.

2.1 Need of the Study

There is mounting evidence that psychological dimensions such as emotional intelligence, as well as leadership behaviour, play a key role in organisations. Emotional intelligence and leadership behaviour have emerged as study tools, rather than speculative notions, affecting many organisational parameters such as work satisfaction, employee effectiveness, organisational performance, pay satisfaction, and so on. The current study sought to investigate the relationship between emotional intelligence and leadership behaviour among nurses in government and commercial hospitals. Emotional intelligence is a critical component in enhancing leadership behaviour.

2.2 Scope of Research

By identifying the present knowledge gap concerning Emotional Intelligence leadership behavior in effective governance, the research analysis can underline the significance related to Emotional Intelligence which is associated with leadership behavior in the field of medical sector. This research can be helpful in ways viz., Emotional Intelligence leadership behavior and effective governance.

2.3 Significance of the Study

Emotional intelligence traits such as emotion observation and control, as well as assessment of negative and good emotions, can increase employee loyalty

to the firm. Expanding emotional intelligence among employees may thus be beneficial to the firm. The current study looked into the possible links between emotional intelligence and leadership behaviour among hospital nurses. The findings of this study may contribute to a better understanding of emotion-related characteristics that influence work procedures in order to improve service quality.

2.4 Relevance of the Study

To attain service excellence and delight consumers, a new patient-centered care model must be devised, which demands hospitals to be more transparent and accountable. To meet the difficulties of today's healthcare environment, the business needs emotionally aware leaders that are capable of more than simply traditional management abilities. Patient and family distress, emerging evidence-based practises and treatments, and regulatory difficulties all influence healthcare personnel. Employee unhappiness might, however, be caused by obsolete management techniques. When individuals are dissatisfied with their jobs, for example, burnout and work-related stress can worsen an already strained healthcare system (Mosadeghrad, Ferlie, Rosenberg, 2008). Workers who are stressed due to a lack of emotional support from management may become low achievers who lack the necessary empathy and caring attributes (Mosadeghrad et al., 2008). Emotional intelligence (EI)-rich leaders may be crucial to the performance of all members of the healthcare team, from caregivers to CEOs.

3. Objectives of the Study

Emotions have a role in the medical care process in three ways: (i) both physicians and patients have emotions, and their emotions are impacted by their past experiences; (ii) they experience in their current relationship with each other; and (iii) emotions they anticipate having in the future. Emotions have a significant impact on experiences, cognition, and behaviour, such as prosocial behaviours, recollection, decision-making, persuasion, information processing, and interpersonal attitudes. The following are the goals of this study article, as stated below:

- To examine the phenomena associated with Emotional Intelligence leadership among leadership in the public and private health sectors of India for effective governance.
- To study the awareness related to Emotional Intelligence and effective governance in the medical sector in India.

- To probe the extent of Emotional Intelligence factors required in developing leadership behavior.
- To evaluate the impact of different Emotional Intelligence dimensions on leadership behavior for effective governance empirically.

3.1 Hypotheses

In this research paper two hypotheses were developed to determine the impact of Emotional Intelligence with respect to leadership behavior in effective governance in the medical sector in India.

- Hypothesis H_0: Emotional Intelligence is positively associated with developing leadership for effective governance.
- Hypothesis H_a: Emotional Intelligence has an impact of independent variables on dependent variables.

4. Research Methodology

Both primary and secondary data were collected in this investigation. Questionnaires were sent out to 750 people from two institutions in the medical sector (one public, AIIMS, Delhi, and one private, Medanta, Gurugram), primarily nurses, managers, and physicians in the cancer section, but only 739 people responded. To answer the study's instrument, a convenience sample approach is employed. It's employed because of the researcher's close proximity and easy accessibility. Each hospital received a total of 750 surveys. The remaining eleven questionnaires were filled out incorrectly and were thus rejected and excluded from the study. A normal scale is used to describe the respondent's demographic profile, while a Likert scale is used to assess the impact of leadership behaviour on governance in India's medical sector. As a result, the questionnaire's dependability was deemed adequate. The sample size for this research study was 739. To examine the influence of Emotional Intelligence on leadership behaviour for successful governance, descriptive statistics, Pearson's correlation, and regression analysis were used with SPSS software version 23.0.

4.1. Sampling Technique

The sample study participants are chosen by convenience sampling technique the criteria chosen for selection of the sample is (1) each manager or doctor or nurse having an experience of 3 years or more (2) whereas demographic evidence is collected, related to gender, age, experience, marital status, and qualification.

4.2. Instrument Selection

This study has used different questionnaires that were already developed. Emotional Intelligence is measured by 6 emotional and social competency inventory- version 3.0 (the Hay Group) which was developed by Dr. Daniel Goleman (2007) in collaboration with the Hay Group. This instrument is paired on the 5 Likert scale. The Goleman scale is divided into two parts i.e., social competencies and personal competencies. (Two variables: empathy and social skills) (self-awareness, self-regulation, and motivation).

5. Data Analysis and Findings

5.1 Demographic Profile

The total respondents for this study were 739 on the basis of gender, age, experience and marital status. As illustrated in Table 1.

Table1:- Demographic Profile of Respondents

Demographics	Description	Number of Participants	Percentage
Age	20-30 years	307	41.54
	30-40 years	236	31.93
	40-55 years	196	26.52
Gender	Male	230	31.12
	Female	509	68.87
Experience	Less than 3 years	356	48.17
	3 to 5 years	140	18.94
	5 years and more	243	32.88
Marital status	Single	384	51.96
	Married	355	48.03

Source:- Author's compilation

5.2 Descriptive Analysis

All factors of Emotional Intelligence and successful governance are subjected to descriptive analysis. All of the factors have a favourable mean value, but social skills has the greatest mean and standard deviation of 4.48 and .463, respectively. From strongly disagree to strongly agree, the likert scale is divided into five groups. The minimum number in this study is three, which denotes a neutral association, while the maximum value is five, which denotes a highly agreed relationship.

Table 2:- Descriptive Analysis

Particulars	N	Minimum	Maximum	Mean	Std. Deviation
Self-awareness	739	3.40	5.00	4.4088	.40800
Self-regulation	739	3.50	5.00	4.4955	.43969
Empathy	739	3.60	5.00	4.3798	.41317
Self-motivation	739	3.50	5.00	4.3731	.39651
Social skills	739	3.50	5.00	4.4883	.46311
Effective governance	739	3.20	5.00	4.4026	.38233

Source:- Author's compilation

5.3. Reliability

A reliability test is performed to ensure that the variables are consistent. These variables have an overall reliability of 0.814. Cronbach's Alpha was used to test the questionnaire's reliability. The reliability of emotional intelligence and effective governance variables was determined to be 0.814, which was higher than 0.7, indicating that it was good.

Table 3:- Reliability Statistics for Emotional Intelligence Leadership and Effective Governance

Variables	Number of Items	Cronbach's Alpha
Emotional Intelligence Leadership plus Effective Governance	30	0.814

Source:- Author's compilation

Table 4:- Reliability

Constructs	Cronbach's Alpha	No. of items
Self-awareness	0.716	5
Self-regulation	0.780	4
Empathy	0.700	5
Self-motivation	0.707	4
Social skill	0.781	4

Source:- Author's compilation

5.4. Correlation

Pearson Product Correlation was used to test the strength of the linear relationship between the variables (Saunders et al., 2009). The correlation value is indicated by the letter r, and it ranges between +1 and -1. When the correlation between the variables is larger, it is regarded as significant, implying that the link is stronger. The lesser the p-value, the more significant the result. Pearson's correlation test is used to discover the high, moderate, and weak connection among the variables in order to assess the link between all of the dimensions of emotional intelligence and successful governance. Emotional intelligence and successful governance have a positive relationship. Correlation analysis is used to assess the link between total emotional intelligence and good governance. Pearson's correlation test is used to discover the high, moderate, and weak connection among the variables in order to assess the link between all of the dimensions of emotional intelligence and successful governance. Emotional intelligence and successful governance have a positive relationship. Correlation analysis is used to assess the link between total emotional intelligence and good governance. The result reveals that there is a positive association between the two variables and the correlation is significant at the significance level of 0.01 i.e. $r = 0.599$, ($p<0.01$). This shows a positive and moderate relation between the two variables (Refer Table No. 5).

Table 5:- Correlation Analysis

		Emotional Intelligence	Effective Governance
Emotional Intelligence	Pearson correlation	1	.599
	Sig. (2-tailed)		.000
	N	739	739
Effective Governance	Pearson correlation	.599	1
	Sig.(2-tailed)	.000	
	N	739	739

Source:- Author's compilation

5.5. Regression Analysis

The coefficient of determination is as essential as the correlation coefficient. It determines the strength of association among the dependent and independent variables. The value for the coefficient of determination must lie in a range of +1 and -1. It justifies casual relationship among the constructs as well as the variance. The study is done on 5 independent variables and 1 dependent variable which means that multiple regression models are used to check the regression of this data.

Table 6:- Regression Analysis

R square	Adjusted R square	F	Sig.
.647	.643	139.54	.000

Source:- Author's compilation

The above model captured 65 percent variation of Effective Governance which is supported by F statistic of 139.54 at P=.000

Table 7:- Regression Coefficients

Model	Beta coefficient	T	Sig.
(constant)	.844	4.716	.000
Self-awareness	.439	3.466	.001
Self-aegulation	.132	4.132	.000
Empathy	.658	9.146	.000
Motivation	.449	3.006	.003
Social Skills	.276	10.455	.000

Source:- Author's compilation

In this study all the constructs are having a positive impact on Effective Governance. This means that one percent in one construct of Emotional Intelligence will increase one percent in Effective Governance. In the case of social skill it has a value of 0.334 which is supported by a t-statistic of 10.45.

In the case of self-awareness and self-regulation, both have a moderate correlation of .43, a significant relationship. While, self-awareness has a strong correlation with empathy of .86, and self-regulation is a weak correlation with empathy having a value of .22. In the case of motivation, it has a strong relation with self-regulation and empathy at .96 and .91 respectively but a weak correlation with self-regulation of .34. A social skill is having a weak correlation with all the variables. In the case of Effective Governance, it has a moderate relation with self-awareness, self-regulation, empathy, and motivation. Empathy and Effective Governance have a significant relationship. The result of regression analysis in the case of empathy and Effective Governance has a value of .711 and is supported by a t-statistic of 9.14, which means that it is statistically significant. The higher the motivation, higher is the Effective Governance. The regression analysis is performed to check the strength among the two variables. The results reveal that it has a value of .499, and is supported by a t-statistic of 3.06 which means that it is statistically significant.

Table 8:- Correlation Analysis

	Self-awareness	Self-regulation	Empathy	Self-motivation	Social Skills	Effective Governance
Self-awareness Pearson correlation	1					
Sig. (2-tailed)						
Self-regulation Pearson correlation	.430	1				
Sig. (2-tailed)	.000					
Empathy Pearson correlation	.866	.220	1			
Sig. (2-tailed)	.000	.000	.000			
Self-motivation Pearson correlation	.969	.349	.913	1		
Sig. (2-tailed)	.000	.000	.000			
Social Skills Pearson correlation	.181	.271	.301	.132	1	
Sig. (2-tailed)	.000	.000	.074	.010		
Effective Governance Pearson correlation	.595	.506	.728	.653	.335	1
Sig. (2-tailed)	.000	.268	.000	.000	.000	

Source:- Author's compilation

6. Findings and Recommendations

The following section discusses summary of the research findings and conclusions drawn from the results:

6.1 High emotional intelligence among hospital nurses: The descriptive analysis results lead us to believe that the majority of nurses have a high degree of emotional intelligence. They are capable of overcoming unpleasant feelings such as stress, tension, and despair that they face on a regular basis.

6.2 Hospital nurses with high emotional intelligence: The descriptive analysis results lead us to conclude that the majority of nurses have a high level of emotional intelligence. They are capable of overcoming stressful, tense, and depressing sensations that they encounter on a daily basis.

6.3 High levels of leadership behaviour among hospital nurses: The descriptive analysis results also reveal high levels of leadership behaviour, which indicates individuals take the initiative to assist other employees with work-related issues and willingly participate in various activities that benefit others.

6.4 Organizational citizenship behaviour is influenced by emotional intelligence, as is leadership behaviour. Employees with greater degrees of emotional intelligence will also have higher levels of citizenship behaviour.

7. Conclusion

Emotional Intelligence is one of the important skills that may help a leader analyse people more clearly and carefully, as well as develop connections between individuals. It also fosters sensitivity, a sense of balance, and a diverse set of cognitive abilities (logical, conceptual, and creative thinking), as well as interpersonal skills (Interpersonal skills, influence skills, and communication skills). This research has made significant contributions to our knowledge of the link between Emotional Intelligence leadership and good governance. This study was established to explore the efficacy of emotional intelligence leadership for effective governance and also to check the relationship and correlation of emotional intelligence constructs with effective governance. The dictum of this study probes into the positive relationship between emotional intelligence leadership for effective governance. The significant values of these two variables show that if the emotional intelligence leadership increases then the levels of effective governance also increase. These variables have a direct relationship which shows that employees who have strong emotional intelligence are more

satisfied and deal with the patients as compared to those who are less emotionally intelligent.

The Goleman theory of competence, which was applied in this study, combines emotional, social, and cognitive intelligence capabilities, resulting in a theoretically cohesive framework for assessing and developing talent in the workplace (Emmerling and Boyatzis 2012). It promotes the capacity to recognise, analyse, and develop awareness in the analysis of knowledge and settings by combining emotional intelligence, social intelligence competency, and cognitive intelligence (Goleman and Boyatzis 2008). The performance and EI in this model are driven by Goleman's (1995) theory, which is able to anticipate behavioural patterns in work and life, as well as the results that are produced from these patterns (Boyatzis 2001).

Employees that are self-regulated in terms of emotional intelligence are more content with their jobs, empathic toward patients, and ready to continue. This picture is also reflected in the outcomes. Similar results may be seen in other variables such as motivation, which has a direct link with effective governance, i.e., both variables are proportionate to each other. Results of self-regulation, motivation, empathy, self-awareness, and social skills have positive connections with effective governance, and these factors have an impact on effective governance, which is the study's dependent variable.

Emotional intelligence has emerged as a useful tool that enables a leader to judge people more vividly and closely, to build a bond between people, and to develop a sense of sensitivity, balanced feeling, and a strong mix of cognitive capacity (logical, conceptual, and creative thinking), people skills, and a sense of sensitivity, balanced feeling, and a strong mix of cognitive capacity (logical, conceptual, and creative thinking) (interpersonal skills, influence skill and communication skills). This study has taken some brave strides toward understanding emotional intelligence leadership for effective governance and highlighted the critical significance of affective elements in enhancing the quality of effective governance in organisations. Emotional intelligence has emerged as a useful tool that helps a leader judge people more vividly and closely, build a bond between people, and develops a sense of sensitivity, balanced feeling, and a strong mix of cognitive capacity (logical, conceptual, and creative thinking), people skills, and a sense of sensitivity, balanced feeling, and a strong mix of cognitive capacity (logical, conceptual, and creative thinking) (interpersonal skills, influence skill, and communication skills). This research has made some brave moves toward better understanding emotional intelligence leadership for

effective governance and highlighted the important role affective elements play in enhancing the quality of effective governance in organisations.

8. Limitations of the Study

In a quantitative investigation, simple random sampling would have been the chosen way of sampling. However, because the researcher was situated in New Delhi at the time of the study, he didn't have direct access to the new RNs, which may have resulted in lesser recruitment. In addition, the researcher was unable to identify suitable subjects, making recruiting even more challenging. Because of the study's geographic location, only one government and private healthcare sector was used. As a result, the findings are restricted to two hospitals in the Capital City and its environs and cannot be generalised. A few constraints may have influenced the findings and consequences of this investigation. Some of the constraints were identified throughout the design and organisation stages. This inclination was described by DeVaus (2002) as the proclivity to show respect rather than a true reaction to a specific interview or review topic. Study that isn't exhaustive: The employees in this research were solely employed by Indian banks. If the sample size is big, the results may differ. A larger number of people may have been considered. Due to time and budget restrictions, the sample size for the structured questionnaire was restricted to 190 people, limiting the generalizability of the results. In addition, the poll was not done based on the job title. Employees with various job titles have varying levels of emotional intelligence and organisational citizenship. Because it was a cross-sectional study, hence, completed in less time. By enabling individuals to be monitored at work, a longitudinal study needing a longer period may enhance or provide different results. Second, the researchers were unable to get the names of the five ministries, as well as the distribution of responses from each ministry, due to time restrictions and confidentiality. Finally, because the data was acquired by a questionnaire survey, respondents' replies may have been cautious or conservative.

Implications for Future Research

Finally, while this study takes into account particular aspects of EI based on Goleman et al. (2002)'s definition, it does not take into consideration features of EI highlighted by Bar-On (2012), Petrides and Furnham (2000, 2006), and other writers. The ability test, on the other hand, is a useful tool for research into attitudes such as work satisfaction and performance (O'Boyle et al. 2010; Miao et al. 2017), which might be a potential area for future research.

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Institutional Review Board Statement: Ethical review and approval were waived for this study, as the survey is not linked to any risks to participants, did not entail a collection of sensitive data, and did not involve vulnerable populations.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets generated and analysed in the current study are not publicly available due to further, ongoing research projects but are available from the corresponding author upon reasonable requests.

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Conflicts of Interest: The author declares no conflict of interest. The author affirms that the piece is their original work, that it has not been published before, and that it is not being considered for publication anywhere. This study has not been submitted for publication, and it has not been published in its entirety or in sections.

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India's Pharmaceutical Industry: A Firm Level Analysis Post Trade-Related Aspects of Intellectual Property Rights (TRIPS)

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Abstract

The World Trade Organization's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) asks for global coordination of intellectual property rights (IPRs) legislation. All WTO member nations are required under the TRIPS Agreement to implement and enforce basic intellectual property rules. The establishment of pharmaceutical product patents was expected to stifle the growth of the Indian pharmaceutical industry. However, contrary to popular belief, the Indian pharmaceutical business has grown in the post-TRIPS period. In the present study, an attempt has been made to explore the post-TRIPS scenario regarding the Indian pharmaceutical industry, specifically a comprehensive firm-level analysis has been done. The period taken into consideration is from 2006-2023. The TRIPS Agreement shifted Indian pharmaceutical companies' R&D priorities, resulting in higher R&D investments. Since the TRIPS agreement came into force, the Indian pharma industry has tried to upgrade itself in terms of state-of-the-art technology.

Keywords

TRIPS, Indian pharmaceutical industry, Regulatory filings, Patents, and R&D expenditure.

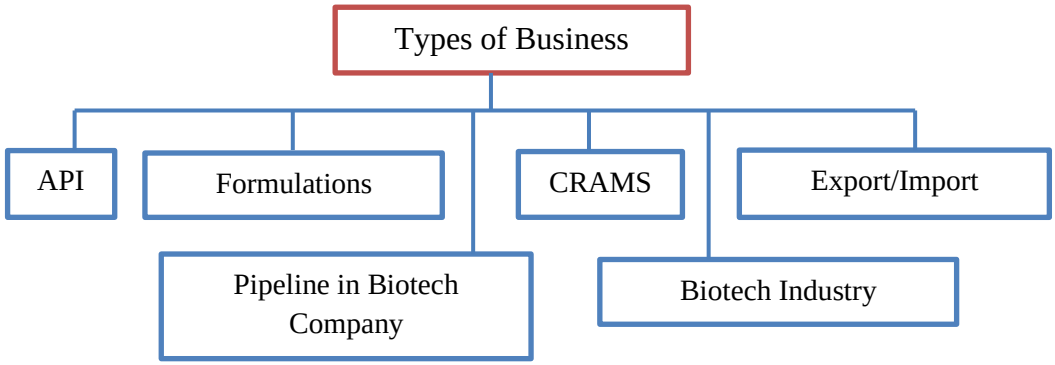
1. Introduction

Since the late 1980s, the Indian pharmaceutical sector has become one of the top medication exporters in the world and has reached production self-sufficiency. Additionally, its worldwide competitiveness has been encouraging. The pharmaceutical market in India is still growing on a global scale. This accomplishment has been credited to the industry's capacity to carry out research and development (R&D) and to create generic medications that were acquired and enhanced during the lax patent protection system made possible by the Patent Act, of 1970 from the 1970s to the 1990s. The Patent Act opened the door for improvements in indigenous Indian R&D because it recognized process patents but not product patents.

Indian pharmaceutical sector supplies over 50 percent of the global demand for various vaccines, 40 percent of the generic demand for the US, and 25 percent of all medicines for the UK. India contributes the second-largest share of pharmaceutical and biotech workforce in the world. India's domestic pharmaceutical market is estimated at US$ 41 billion in 2021 and likely to reach US$ 65 billion by 2024 and further expand to reach ~US$ 120-130 billion by 2030. (Indian Economic Survey 2021).

Globally, India ranks 3rd in terms of pharmaceutical production by volume and 14th by value (IBEF). The domestic pharmaceutical industry includes a network of 3,000 drug companies and ~10,500 manufacturing units. Indian drugs are exported to various countries in the world, with the US being the key market. Generic drugs account for 20 percent of the global export in terms of volume, making the country the largest provider of generic medicines globally. It is expected to expand even further in the coming years.

In order to comply with the World Trade Organization's (WTO) TRIPS agreement, which established universal basic requirements for the protection of intellectual property, India revised the Patent Act in March 2005. Along with patents, other IPRs including copyright, trademarks, industrial designs, geographical indications, and secret information are also covered under the TRIPS Agreement. Members of the WTO are required to abide by the TRIPS Agreement's rules. The TRIPS Agreement mandated the implementation of pharmaceutical product patents as well as a minimum 20-year patent protection duration.



Source:- Author's compilation

Figure 1:- Segments of the Indian Pharmaceutical Sector

1.1. Active Pharmaceutical Ingredients (APIs)

The Active Pharmaceutical Ingredient, or API, is the main component in medications. The primary drug used to treat ailments is known as the active pharmaceutical ingredient or API. Many companies only concentrate on developing APIs. Companies typically sell three main categories of APIs: cancer, steroids, and hormones. The primary revenue stream is the oncology industry. This is primarily due to the high setup costs associated with these streams typically five or six times more than average.

1.2. Formulations

In the field of pharmaceutics, pharmaceutical formulation refers to the process of combining various compounds, including the active component, to create a final pharmaceutical product. Another common addition to the idea of formulation is the dosing form. There are two classifications for pharmaceutical formulations:

1.2.1. Oral Formulation

1.2.2. Topical Medication Form

1.3. Contract Research and Manufacturing (CRAM)

The greatest scalable business potential for Indian players is provided by contract manufacturing or CRAMS. This is because Custom Chemical Synthesis (CCS) typically uses resources at the gram or kilogram level, whereas CRAMS typically requires supplies in considerably bigger numbers, often in tons. Because CCS supplies rely on the success of the partner's research and development process, they can be somewhat unpredictable. On the other hand, CRAMS supplies depend on how well a product performs after it is commercialized.

1.4. Export/Import

With the largest number of approved pharmaceutical production facilities and a large assortment of export-ready drugs, India is well-positioned to lead the world in pharmaceutical exports. Several internal factors affect the pharmaceutical industry's growth in India. Since 2008, there has been consistent annual growth, with an additional $1–1.5 billion in income each year. India's top two export destinations for pharmaceuticals are the US and the UK. A significant portion of the industry's revenue comes from exports; India exports pharmaceutical products to more than 200 countries.

1.5. Pipelines in Biotech Companies

A drug's position in the pipeline indicates the stage of clinical trials it is either conducting or must go through to be licensed for sale or use by the general public. The pipeline as a whole displays the range of unique products or procedures that a company has either produced or is working on. An FDA (Food and Drug Administration) approved medication that has begun clinical testing is referred to as "in the pipeline."

1.6. Biotech Industry

Based on the products and services provided, the Indian biotechnology industry is currently divided into five segments. Among these are the bio-pharmaceuticals, bio-services, bio-agriculture, bio-industrial, and bio-informatics sectors.

1.7. The Rationale behind Trade-Related Aspects of Intellectual Property Rights (TRIPS)

The TRIPS agreement, which is currently the most extensive international agreement on intellectual property, marked the integration of intellectual property law within the framework of multilateral trade. Concerns from developing nations over wealthy nations' endorsement of an excessively restrictive interpretation of TRIPS sparked a series of discussions that started in 2001 and produced the Doha Declaration. Clarification on the scope of TRIPS is provided by this WTO statement, which emphasizes the significance of, among other things, interpreting TRIPS in line with the objective of "promoting access to medicines for all."

There were already several agreements in place in the field of intellectual property for the protection of intellectual property internationally, such as the Berne Convention about copyright and the Paris Convention related to industrial property rights, including patents and trademarks. But since the trade-related aspects of intellectual property have gained more attention, it has become imperative to reach a global agreement within the framework of the GATT, involving as many countries as possible, on the standards of protection for trade-related intellectual property.

The results of intellectual creativity today include inventions, designs, know-how, and artistic works. To encourage this kind of creative activity, trade secrets, industrial designs, literary and artistic works, integrated circuit layout designs, and other products are protected. Moreover, trademarks and similar symbols are safeguarded to maintain the confidence earned through commercial endeavors, safeguard customers, and guarantee equitable competition.

As a result, during the Uruguay Round of the GATT in 1986, trade-related aspects of intellectual property rights (TRIPS) talks emerged as one of the major new topics of discussion.

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) of the World Trade Organization (WTO) mandates that all WTO member nations' intellectual property rights (IPRs) laws be harmonized. All WTO members are required by the TRIPS Agreement to establish and uphold basic standards for intellectual property.

2. Review of the Literature

Enough literature is not available where all the parameters have been simultaneously covered. The researcher has tried to do a rigorous review in order to study how different parameters taken for the study play out regarding the Indian pharmaceutical industry. Mitsumori, Y., et al., 2023, the Indian pharmaceutical industry grew quickly as the Patents Act of 1970 did not protect product patents. India restored pharmaceutical industry product patents following the implementation of TRIPS in 2005. The data shows that these large Indian firms have contributed actively to the construction of NCEs and boosted their investment in research and development (R&D). Even so, R&D expenditures are still significantly lower than those of the biggest pharmaceutical companies in the world and the leading Japanese companies. The restricted pursuit of product patents by Indian pharmaceutical businesses gives rise to stringent limits.

Pai, R., 2023 in his article provides an overview of how the TRIPS Agreement affects generic pharmaceutical availability and affordability in India, as well as how India's regulatory framework conforms to international standards. It also considered the challenges the Indian pharmaceutical industry faced and the country's ratification of the TRIPS agreement. The research delineated the diverse regulations that oversee the pharmaceutical sector and concluded that the TRIPS Agreement has provided Indian pharmaceutical enterprises with supplementary expansion opportunities and facilitated technology transfer and upgrading.

Singh, K., & Azhar, N. 2022, attempted to investigate the effects of the nation's patent rules on the sales, exports, R&D investments, and profitability of the Indian pharmaceutical business. The findings show that, among other crucial factors, a firm's R&D activities are influenced by its marketing intensity, market share, export intensity, profitability, import of products intensity, and capital intensity, albeit in different directions and to varying degrees.

Festa, G., et al.,2022, due to recent corporate and institutional reforms in the pharmaceutical business, India is currently leading the world market; yet, there are a number of dangers and vulnerabilities that could impede its progress. This study provides an international perspective on the pharmaceutical sector's potential for growth and development in India by comparing it with both internal trends and external competition. The research's most important contribution is the necessity for Indian businesses to switch from manufacturing only generic drugs to developing original ones; appropriate industrial marketing tactics are crucial in this regard.

Sharmiladevi, J. C., 2020, the author analyzes the export intensity of Indian pharmaceutical companies by comparing their revenue from royalties, R&D expenses, and merchandise exports to that of foreign companies. The study makes the intriguing claim that, when the variables were taken into account, domestic businesses were performing better than their international peers. The primary cause of this is that domestic companies are investing more in research and development than multinational companies. The study by Manju & Sharma, 2020, explored the trends in the export and import of pharmaceutical products during the pre and post-TRIPS period. The study came to a conclusion that the exports of formulations are more than the imports of pharmaceutical products.

Kamiike, 2020, in his paper attempted to identify how the TRIPS agreement is influencing the Indian pharmaceutical industry and further discusses the industry's growth factors in the post-TRIPS period within the GVC framework. He concluded that the TRIPS agreement led to a change in the R&D orientation which further encouraged the increase of R&D investments and also promoted the industry to upgrade itself by adopting state of the art technologies by being part of the Global Value Chain (GVC). The paper by Chawra, 2020 studied the current scenario and opportunities on global pharma and the Indian pharma market. It stated that Indian pharma market will emerge much stronger in the transitionary phase as it has been successful in driving generics penetration globally and implementation of good policies, regulations, and low cost of labor are the key parameters that influence the industry.

Motkuri & Mishra, 2020, examine the structure and performance of the domestic pharmaceutical industry and the market's pricing policy regarding drugs. Researchers found that the changes in the recent pricing policy have a certain leverage for the industry rather than affecting it. In the interest of social welfare, government intervention through price control of essential and lifesaving drugs is a necessity for India.

Ray et al., 2019, building on the previous discussion the authors made an effort to investigate the development of the Thai and Indian pharmaceutical industries' markets and exports. It is believed that the government must create an action plan for establishing the pharmaceutical industry's brand. Additionally, as new sectors of the business have emerged, including contract manufacturing, contract research services, bio-pharmaceuticals, and Indian medical systems, a "brand India" has progressively developed around the Indian pharmaceutical sector.

Rentala et al., 2017, expanding on this theme it is necessary to consider a study in which the authors tried to use export efficiency as a metric of firm performance to assess the export efficiency of the Indian pharmaceutical industry during the temporary TRIPS and post-TRIPS periods. The findings showed that once India joined the WTO, the export efficiency of the sector increased, and that the industry's efficiency peaked during the post-TRIPS era. This has been made feasible by the industry's ability to provide premium goods at affordable costs.

The study by Khurana, 2017, investigated the role and impact of FDI in India and specifically studied the pharmaceutical sector. The study concluded that FDI has positively impacted the Indian pharmaceutical industry and has not only made India self-reliant but also a net exporter of generic medicines.

Lajipathirai & Sekhar, 2017, their study, identified various strategies that would fit in pharmaceuticals to market they are Over the Counter (OTC) products and to make an in-depth analysis of OTC product's potency, safety, and availability. They came at a conclusion to organize the pharma industry, and those manufacturing OTC drugs.

Regarding the impact of R&D expenditure, regulatory filings and patents granted, the study by Banerji & Suri, 2017, concluded that Indian pharmaceutical exports are driven collectively by regulatory filings as well as total patent granted. It implied that in post-TRIPS era and after the start of the product patent regime; the Indian pharmaceutical firms have increased their R&D expenditure in order to enhance patenting activity and at the same time leveraged the opportunity of supplying generics to lucrative generic markets like the USA and Europe.

Abrol & Singh, 2016, analyzed the post-TRIPS scenario in India and focused on the impact of the approach adopted by the government for the formulation of post-TRIPS innovation policy to address the steering and coordination of policies for upgrading in-house R&D, publicly funded R&D, intellectual property, domestic industry, and health system. Results indicated that the link between domestic firms and public sector research organizations is the weakest link of the domestic pharmaceutical innovation system in India.

Rentala et.al, 2014, to estimate the export competitiveness of the Indian pharmaceutical industry, the researchers attempted to comprehend the significance of various technological capabilities and other business resources in this work. By contrasting the outcomes of the fixed effects model and random effects model, the ordinary least squares (OLS) regression approach was used for study analysis. According to the findings, R&D spending by Indian pharmaceutical companies still has to rise to significantly affect export performance. Improvements in technology will make it easier for Indian pharmaceutical companies to launch novel research compounds on foreign markets and will render the Indian pharmaceutical sector more competitive worldwide.

Goldar, B., 2013, the study's underlying hypothesis is that the export competitiveness of the Indian pharmaceutical sector increases with R&D expenditure. The author developed a number of factors for the analysis, such as companies started after 1995, multinational firms, foreign equity, machinery age, R&D intensity, technology imports, bulk medication producers, and exports. The results demonstrate that export performance rose after 1995, or when the patent laws were modified. Furthermore, the question of whether bulk medication makers exported more than other producers was looked into.

Akhtar, 2013, attempted to analyze the balance of trade, bulk drugs, and TRIPS in the context of the Indian pharmaceutical industry. Results showed that 70 percent of the bulk drugs requirement is fulfilled by the domestic industry. In addition to catering to the needs of domestic demand, it is also the leading supplier of bulk drugs and formulations globally.

The study by Bedi et al., 2013, studied the impact of a restructured patent regime on the R&D expenditure and the patenting activity of Indian pharmaceutical companies. The results witnessed that there has been patenting activity after the advent of TRIPS.

Abrol et al., 2011, Considered the tactics used to foster learning, innovation, and the development of competencies as well as to forge connections and synergies within the Indian pharmaceutical sector in the aftermath of Trade Related Intellectual Property Rights (TRIPs). The study concluded that businesses and the Indian government have selected globalization routes that have particular consequences for innovation. The results of their R&D investment operations show a considerable shift in pharmaceutical companies, both domestic and foreign.

3. Objectives of the Study

3.1 To explore the performance of the Indian pharmaceutical industry after the implementation of TRIPS.

3.2 To analyze the performance of leading pharmaceutical firms of India during the post-TRIPS period based on selected parameters (sales, net profit, R&D expenditure, regulatory filings).

4. Significance of the Study

There have been many previous studies that have envisaged the performance of the Indian pharmaceutical industry based on different parameters but on a firm level, there has not been any comprehensive study taking many parameters together. Hence, this paper attempts to shed light on the performance of leading firms in the Indian pharmaceutical industry in the form of a comprehensive firm-level analysis.

5. Research Methodology

The overall structure of the study involves descriptive analysis of the research problem and the nature of the study is such that it requires secondary data. The data was mainly retrieved from the annual reports of the companies taken for the study. The parameters considered to evaluate the performance of the firms are sales, net profit, R&D expenditure, and patents granted in terms of ANDA and DMF filings. The time period taken for the study is from the F.Y 2006-07 to 2022-23. The basis of the selection of the duration of study is that in India, TRIPS formally came into force in 2005.

6. Data Analysis

Data has been collected through various government organizations like the Dept. of Pharmaceuticals, India Brand Equity Foundation (IBEF), newspapers such as Pharmabiz and Pharmaexcil. The annual reports of selected companies have a major share in data collection and accordingly, growth has been calculated and the rest of the study has been descriptively analyzed.

Up until the middle of the 1990s, the Indian pharmaceutical industry's R&D efforts were concentrated on the creation of novel methods for producing drugs. Changed by the TRIPS Agreement. The TRIPS Agreement has altered the R&D priorities of the Indian pharmaceutical business in addition to raising R&D spending levels. Pharmaceutical businesses in India are expanding their R&D spending to develop new products.

The pharmaceutical sector is very focused on R&D. Continuous R&D for the creation of novel medications and technology is necessary for the pharmaceutical industry to experience sustainable growth under the TRIPS Agreement's pro-patent framework. In order to compete against fierce competition in the international pharmaceutical industry, Indian businesses have upped their R&D spending. R&D is becoming more of a focus for the businesses. The new R&D priorities include R&D for bio-pharmaceuticals, NDDS (novel drug delivery systems), and NDDR (new drug development research).

In the years following TRIPS, Indian pharmaceutical firms not only boosted their R&D spending, but also became more intensely focused on R&D. As their R&D experience grows, Indian pharmaceutical businesses' technological capabilities have been continuously rising. Strong R&D technology is helping Indian pharmaceutical businesses expand their foothold in the global pharmaceutical industry. In the post-TRIPS era, India's pharmaceutical sector is climbing the value chain.

The current study has taken into consideration key parameters such as-

6.1 Sales

6.2 Net profit

6.3 R&D Expenditure

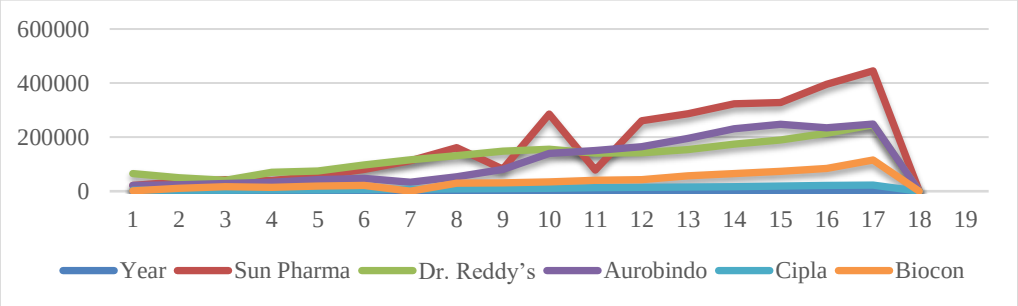
6.4 Patents granted in terms of ANDA and DMF filings

6.1. Sales

Table 1:- Sales (In millions)

Year	Sun Pharma	Dr. Reddy's	Aurobindo	Cipla	Biocon
2006-07	21,320.5	65,095	21,722.3	3207.95	990
2007-08	34605.6	50,006	24,092.8	4338.21	10,902
2008-09	42,723	40,419	28,852.5	4010.38	16,732
2009-10	39,040	70,277	33,196	4960.60	14,931
2010-11	57214	74,693	42,299.9	5,359.52	18,576
2011-12	80195	96,737	47250	6,323.84	21,483
2012-13	112,999	116,266	33,872	7,020.7	25.380
2013-14	160,804	132,170	53,785	8,279.33	29,332
2014-15	82,287.7	148,189	80,951	10,173.39	31,429
2015-16	285,177	154,708	139,552	11,345.44	34,602
2016-17	78,636.9	140,809	150,899	13,790.10	40,787
2017-18	261,000	142,028	164,998	14,630.24	43,359
2018-19	287,000	153,851	195,636	15,219.25	56,588
2019-20	323,000	174,600	230,985	16,362.41	65,286
2020-21	3,28,375	1,89,722	2,47,746	19,160	73,603
2021-22	3,95,760	2,14,391	2,34,555	21,763	83,967
2022-23	4,45,202	2,45,879	2,48,554	22,753	1,15,501
Compounded Annual Growth Rate	**17.31%**	**10.47%**	**15.70%**	**10.91%**	**15.90%**

Source:- Annual Report of the Selected Companies



Source:- Annual Report of the Selected Companies

Figure 1:- Sales

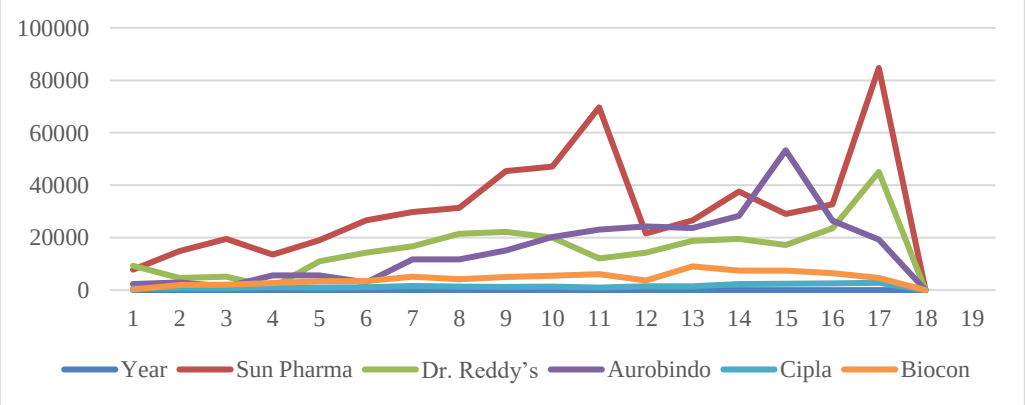
In the above table/graph, it is evident that the sales growth rate of Sun Pharma has surpassed by a whopping 17.31 percent as compared to other selected firms. Following Sun Pharma, Biocon has a growth rate of 15.90 percent. That has been followed by Aurobindo (15.70 percent), Cipla (10.91 percent), and Dr. Reddy's (10.47 percent). The reason for Sun Pharma to have topped the charts is that it continues to focus on improving manufacturing efficiencies and optimizing costs.

6.2 Net Profit

Table 2:- Net Profit (In millions)

Year	Sun Pharma	Dr. Reddy's	Aurobindo	Cipla	Biocon
2006-07	7843	9,327	2290.8	607.64	200
2007-08	14,869	4,678	2,907.8	701.04	1956
2008-09	19,491.7	5,168	1,285.4	771.02	2038
2009-10	13,511	1,068	5634	1082.59	2,696
2010-11	19074	11,040	5635	989.57	3,399
2011-12	26567	14,262	2,938.6	1144.24	3,384
2012-13	29,831	16,776	11,728.5	1544.85	5,089
2013-14	31,414	21,512	11,720.9	1388.41	4,138
2014-15	45,394	22,179	15,163.5	1,181	4,974
2015-16	47,159	20,013	20,251	1,360	5,504
2016-17	69,644	12,039	23,017	1,006	6,121
2017-18	21,616	14,341	24,232	1,411	3,724
2018-19	26,654	18,795	23,647	1,528	9,053
2019-20	37,649	19,498	28,310	2318.17	7482
2020-21	29,038	17,238	53,338	2,405	7,405
2021-22	32,727	23,568	26,471	2,517	6,484
2022-23	84,736	45,067	19,277	2,802	4,627
Compounded Annual Growth Rate	**11.49%**	**15.21%**	**12.55%**	**9.05%**	**5.53%**

Source:- Annual Report of the Selected Companies



Source:- Annual Report of the Selected Companies

Figure 2:- Net Profit

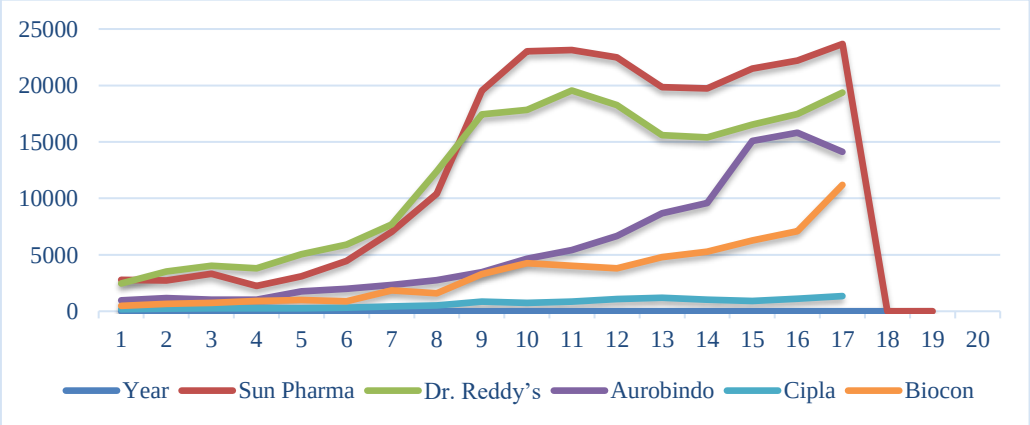
In terms of Net profit, the highest growth rate has been recorded by Dr. Reddy's (15.21 percent), Followed by Aurobindo (12.55 percent), Sun Pharma (11.49 percent), Cipla (9.05 percent) and the lowest is by Biocon (5.53 percent).

6.3. R&D Expenditure

Table 3:- R&D Expenditure (In millions)

Year	Sun Pharma	Dr. Reddy's	Aurobindo	Cipla	Biocon
2006-07	2,787	2,463	967.1	175.73	479
2007-08	2,725.2	3,533	1175.1	234.01	646
2008-09	3,320	4,037	1032.3	251.50	744
2009-10	2,242	3,793	1014.8	250.69	915
2010-11	3096	5,060	1757.2	259.79	995
2011-12	4449	5,911	1989	323.83	879
2012-13	7,042	7,674	2333.4	425.14	1860
2013-14	10,418	12,402	2,753.2	517.51	1580
2014-15	19,550	17,449	3,465.5	844.14	3,284
2015-16	23,025	17,834	4,644	741.46	4,267
2016-17	23,138	19,551	5,428	859.91	4,019
2017-18	22,489	18,265	6,665	1074	3,804
2018-19	19,847	15,607	8,683	1204	4,796
2019-20	19,736	15,410	9,580	1,013.35	5271
2020-21	21,499	16,541	15,096	924	6,270
2021-22	22,194	17,482	15,814	1,122	7,105
2022-23	23,676	19,381	14,115	1,344	11,194
Compounded Annual Growth Rate	**14.47%**	**11.22%**	**16.81%**	**11.54%**	**19.51%**

Source:- Annual Report of the Selected Companies



Source:- Annual Report of the Selected Companies

Figure 3:- R&D Expenditure

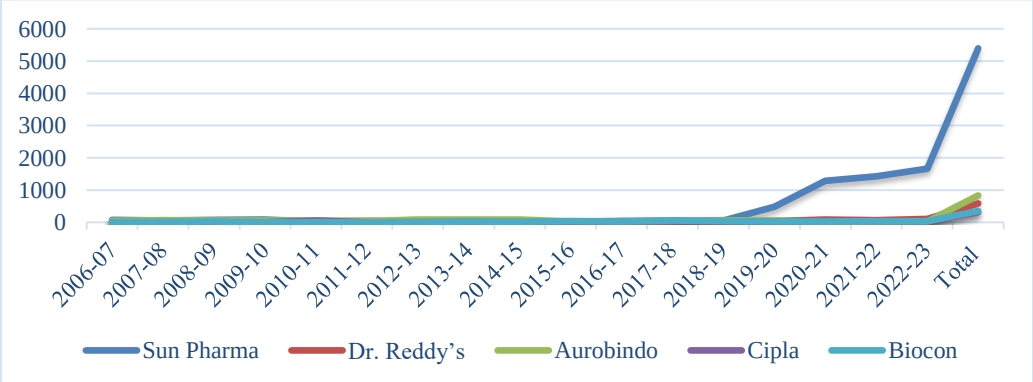
The highest expenditure on R&D from the year 2006-07 to 2022-23 has been done by Biocon (19.51 percent). Followed by Aurobindo (16.81 percent), Sun Pharma (14.47 percent), Cipla (11.54 percent) and, Dr. Reddy's (11.22 percent).

6.4. Patents in terms of ANDA and DMF Filings

Table 4:- Patents in Terms of ANDA and DMF Filings

Year	Sun Pharma	Dr. Reddy's	Aurobindo	Cipla	Biocon
2006-07	70	14	40	0	0
2007-08	59	13	69	0	14
2008-09	76	31	55	0	25
2009-10	81	25	52	0	0
2010-11	18	21	57	59	0
2011-12	22	41	36	0	0
2012-13	20	27	81	7	0
2013-14	26	21	84	14	23
2014-15	20	13	87	8	17
2015-16	22	18	21	5	34
2016-17	33	21	30	32	27
2017-18	40	31	46	34	57
2018-19	51	34	63	32	33
2019-20	483	30	55	20	28
2020-21	1287	81	18	42	25
2021-22	1420	63	19	33	34
2022-23	1665	100	20	23	32
Total	**5393**	**584**	**833**	**309**	**349**

Source:- Annual Report of the Selected Companies



Source:- Annual Report of the Selected Companies

Figure 3:- Patents Granted

In terms of patenting activity, Sun Pharma has the largest basket of patents with 5393 DMF and ANDA filings in all these years. Followed by Aurobindo (833), Dr. Reddy's (584), Biocon (349), and Cipla (309).

6. Conclusion

The pharmaceutical sector grew globalized as a result of the TRIPS Agreement. The pharmaceutical value chain has been regrouped and expanded into new markets such as India. After the introduction of the TRIPS agreement in India, companies have adopted newer and sustainable methods of R&D. India already has a reputable position globally when it comes to generics and formulations so the key was to encourage R&D so that more can be contributed to this field. By increasing their R&D expenditure and ANDA/DMF filings, they were able to make quality products and as a result, patents were granted. TRIPS agreement opened a world of opportunities for India and helped it to maintain its reputable position globally.

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Exploring Ethical Marketing Practices through Real-life Cases in the Business World using Insights from Utilitarian and Kantian Perspectives

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Abstract

In contemporary business environments, ethical considerations play a pivotal role in shaping consumer trust and organizational reputation. This research paper delves into the intricacies of ethical issues within business and professions, analyzing them through the lenses of Utilitarian and Kantian ethical frameworks. The paper commences by elucidating the theoretical foundations of Utilitarianism and Kantian ethics, providing a comprehensive understanding of their principles and implications in business contexts. Subsequently, it delves into the domain of ethical marketing practices, emphasizing the importance of transparency in fostering consumer trust and loyalty. Drawing upon four case studies, namely Patagonia's "Don't Buy This Jacket" Campaign, Dove's "Real Beauty" Campaign, Everlane's Radical Transparency, and Chipotle's Ingredient Transparency, the paper evaluates the efficacy of ethical marketing strategies in enhancing brand reputation and consumer perception. Through critical analysis and comparison, the research highlights the varying approaches adopted by these companies in aligning their marketing practices with ethical standards. Moreover, it explores the impact of transparency on consumer behavior and the long-term sustainability of businesses. This paper contributes to the scholarly discourse on ethical marketing by offering insights into the practical implementation of ethical principles in business operations. It underscores the significance of ethical considerations not only in mitigating risks but also in fostering sustainable relationships with consumers, thereby paving the way for enhanced brand reputation and organizational success.

Keywords

Kantian ethical framework, Utilitarian ethical framework, Consumer Trust, Transparency in marketing, and Ethical marketing practices in the real world.

1. Introduction

In the dynamic landscape of contemporary business, ethical considerations have emerged as fundamental pillars that underpin organizational success and consumer trust. The intersection of ethics and marketing practices has garnered increasing attention, as businesses strive to navigate the complexities of a global marketplace while adhering to moral principles. Central to this discourse are the contrasting perspectives offered by Utilitarianism and Kantian ethics, which provide distinct frameworks for evaluating the ethical implications of business decisions.

Ethical marketing practices, characterized by transparency and authenticity, have become imperative for companies seeking to establish enduring relationships with consumers. This paper embarks on a comprehensive exploration of ethical issues in business and professions, with a specific focus on ethical marketing, to discern the multifaceted dynamics at play. By examining case studies of renowned companies such as Patagonia, Dove, Everlane, and Chipotle, we delve into the practical applications of ethical marketing strategies and their impact on consumer trust and brand reputation.

The significance of transparency in ethical marketing cannot be overstated, as it serves as a cornerstone for building consumer confidence and fostering long-term loyalty. Through an analysis of real-world examples, we elucidate the role of transparency in shaping consumer perceptions and driving ethical consumption behaviors. Moreover, we interrogate the ethical implications of marketing practices through the juxtaposition of Utilitarian and Kantian perspectives, unraveling the ethical dilemmas inherent in decision-making processes.

As ethical considerations continue to occupy a central position in contemporary discourse, this research endeavors to contribute to a deeper understanding of ethical issues in business and professions, particularly within the realm of marketing. By synthesizing theoretical frameworks with practical insights, we aim to offer valuable perspectives for businesses seeking to navigate the ethical terrain while simultaneously cultivating consumer trust and organizational integrity.

2. Understanding Ethical Issues in Business and Professions through Utilitarian and Kantian Perspectives

At the heart of ethical discourse lie contrasting philosophical frameworks, each offering unique insights into moral reasoning and decision-making (Fieser & Dowden, 2017, p. 71). Through the lens of Immanuel Kant's deontological ethics and Jeremy Bentham's utilitarianism, we embark on a journey to decipher the ethical underpinnings of business and professional conduct. By juxtaposing these contrasting perspectives, we aim to elucidate the complexities inherent in navigating moral dilemmas within organizational settings.

Kantianism and Utilitarianism are two prominent ethical theories that offer distinct perspectives on moral decision-making (Shaw & Barry, 2021, p. 60). Understanding these perspectives is essential for analyzing ethical issues in business and professions.

Kantianism, rooted in the philosophy of Immanuel Kant, emphasizes the importance of duty, moral principles, and respect for individuals (Shafer-Landau, 2020, p. 88). According to Kantian ethics, an action is morally right if it follows a universal moral law derived from reason, known as the categorical imperative. This principle requires individuals to act in a way that they would want everyone else to act in similar circumstances, regardless of personal desires or consequences. Kantian ethics prioritizes intentions and motives over outcomes, asserting that ethical behavior is intrinsically valuable and not contingent on achieving favorable results.

Kantian ethics, while emphasizing duty and moral principles, delve deeper into the complexities of human motivation and intentionality. Immanuel Kant's notion of the categorical imperative provides a robust framework for ethical decision-making, urging individuals to act in accordance with universalizable maxims. However, the application of Kantian principles in real-world scenarios often presents challenges, particularly in the context of business and professions.

One aspect to consider in expanding the Kantian perspective is the concept of autonomy and its implications for ethical conduct within organizations. Autonomy, as emphasized by Kant, entails the capacity for individuals to govern themselves according to rational principles. In business settings, promoting autonomy among employees can foster a culture of ethical responsibility, wherein individuals take ownership of their actions and adhere to moral principles independent of external pressures.

Moreover, exploring the notion of human dignity within the Kantian framework sheds light on the ethical treatment of stakeholders in business contexts. Recognizing the inherent worth and dignity of all individuals, irrespective of their roles or status within organizations, underscores the importance of fair and equitable practices. This entails not only respecting the rights and autonomy of employees but also considering the broader societal impact of business decisions on stakeholders such as customers, suppliers, and communities.

Furthermore, expanding the Kantian perspective involves examining the role of moral education and character development in cultivating ethical leadership within organizations. Kantian ethics emphasizes the cultivation of virtuous traits, such as honesty, integrity, and empathy, which are essential for ethical decision-making. Integrating ethical training programs and fostering a culture of ethical reflection can empower professionals to navigate moral dilemmas with integrity and principled judgment.

Utilitarianism, on the other hand, stems from the works of philosophers like Jeremy Bentham and John Stuart Mill, and it focuses on maximizing overall happiness or utility (Singer, 2011, p. 123). According to Utilitarianism, an action is morally right if it produces the greatest good for the greatest number of people. In Utilitarian ethics, consequences matter the most, and decisions are evaluated based on their outcomes in terms of pleasure and pain. This perspective often involves calculating the consequences of different courses of action and choosing the one that maximizes utility.

Utilitarianism, with its focus on maximizing overall happiness or utility, provides a pragmatic framework for assessing the consequences of actions in business and professional contexts (Mill, 2002, p. 11). Expanding the Utilitarian perspective entails a nuanced analysis of the factors influencing utility maximization and the trade-offs involved in decision-making.

One aspect to consider is the role of stakeholder analysis in Utilitarian ethics, whereby the interests and well-being of various stakeholders are weighed to determine the course of action that maximizes overall utility (Ferrell et al., 2019, p. 80). Expanding on this perspective involves identifying and prioritizing stakeholders based on their relevance and impact on the outcomes of decisions. This requires a comprehensive understanding of stakeholder expectations, preferences, and concerns, ensuring that decisions align with the broader interests of affected parties.

Moreover, exploring the concept of utility beyond economic considerations broadens the scope of Utilitarian ethics in business and professions (Harsanyi, 1982, p. 19). Utility encompasses not only material well-being but also factors such as social justice, environmental sustainability, and long-term societal benefits. Expanding the Utilitarian perspective involves incorporating these multi-dimensional aspects of utility into decision-making processes, thereby promoting holistic and sustainable outcomes.

Furthermore, expanding the Utilitarian perspective entails addressing the challenges of quantifying and comparing utility across different stakeholders and time horizons (Kelman, 2010, p. 45). The subjective nature of utility poses difficulties in objectively assessing the impacts of decisions on diverse stakeholders and evaluating trade-offs between short-term gains and long-term benefits. This necessitates the development of robust methodologies and decision-making frameworks that account for the complexities of utility assessment and prioritize the welfare of all relevant stakeholders.

In analyzing ethical issues in business and professions, both Kantianism and Utilitarianism offer valuable insights:

Kantian Perspective: Kantian ethics provide a framework for assessing the motives behind actions and ensuring that decisions are made from a sense of duty and respect for moral principles. In business and professions, this perspective emphasizes integrity, honesty, and treating others with dignity and fairness. For example, a Kantian approach might condemn deceptive marketing tactics or unethical treatment of employees, as these actions violate the principles of honesty and respect for individuals.

Utilitarian Perspective: Utilitarianism offers a consequentialist approach to ethical decision-making, focusing on maximizing positive outcomes and minimizing harm. In business and professions, this perspective can help evaluate the consequences of different actions on various stakeholders and choose the course of action that leads to the greatest overall well-being. For instance, in corporate decision-making, Utilitarianism might prioritize decisions that enhance social welfare, promote employee well-being, and minimize environmental harm, even if it means sacrificing certain individual interests or profits in the short term.

By integrating both Kantian and Utilitarian perspectives, analysts can comprehensively evaluate ethical issues in business and professions. Kantianism provides a foundation for principled decision-making and upholding moral values, while Utilitarianism offers a pragmatic approach to considering the broader consequences of actions. Ultimately, a balanced understanding of these

ethical perspectives can guide individuals and organizations toward ethical behavior that promotes both individual rights and the common good.

By expanding both the Kantian and Utilitarian perspectives, analysts can gain deeper insights into the ethical dimensions of business and professional conduct, enabling them to navigate complex moral dilemmas with clarity and integrity. Integrating these expanded perspectives into organizational practices fosters a culture of ethical awareness and responsibility, ultimately contributing to the promotion of individual rights and societal well-being within the business landscape.

3. Ethical Marketing Practices and Consumer Trust

In today's increasingly competitive and interconnected market, the relationship between ethical marketing practices and consumer trust has never been more important. This chapter delves into the critical role that ethics plays in marketing strategies and the profound impact it has on building and maintaining consumer trust. As consumers become more informed and aware of their choices, businesses face a growing demand not only for transparency but also for accountability in their marketing operations (Crane & Matten, 2016, p. 142).

The landscape of ethical marketing encompasses a broad spectrum of practices—from truthful advertising and respect for customer privacy to commitments to sustainability and social responsibility (Murphy, Laczniak, & Bowie, 2017, p. 91). Each of these elements contributes significantly to how consumers perceive a brand and, ultimately, to their willingness to engage with it. The trust consumers place in a brand is not merely reflective of the product or service offered but also of the company's moral alignment and its adherence to ethical practices.

This chapter will explore various dimensions of ethical marketing, providing insights into how ethical considerations influence marketing strategies and the mechanisms through which these practices foster consumer trust. Through a blend of theoretical discussion, practical examples, and analysis, we aim to equip readers with a comprehensive understanding of why ethical marketing is not just good practice but essential for any business striving to succeed in the modern marketplace.

3.1 Importance of Transparency in Ethical Marketing

Transparency in marketing serves as a cornerstone of ethical business practices, facilitating open and honest communication between companies and consumers (Beltramini, Peterson, & Kozmetsky, 1984, p. 315). It entails disclosing information pertaining to various aspects of a company's operations, including product sourcing, labor practices, environmental impact, and corporate governance. By providing consumers with comprehensive and accurate information, transparency enables them to make informed decisions about the products and services they choose to support. Here's an elaboration on why transparency is crucial:

3.1.1 Building Trust and Credibility: Transparency breeds trust. When companies openly share information about their products, practices, and policies, consumers perceive them as trustworthy and credible (Smith, 2015, p. 208). By demonstrating a commitment to honesty and openness, companies can establish a strong foundation of trust with their customer base. This trust forms the basis of long-term relationships, leading to increased customer loyalty and repeat business.

3.1.2 Empowering Informed Decision-making: Consumers today are more conscientious and socially aware than ever before. They want to know not only what they are buying but also the ethical and environmental implications of their purchases (Carrigan & Attalla, 2001, p. 143). Transparency empowers consumers to make informed decisions aligned with their values and beliefs. When companies disclose information about their sourcing practices, manufacturing processes, and environmental impact, consumers can assess whether a product aligns with their ethical standards and make purchases accordingly.

3.1.3 Fostering Accountability: Transparency holds companies accountable for their actions. When companies commit to open communication and disclose information about their operations, they are more likely to adhere to ethical standards and act responsibly (Mele, 2008, p. 98). Transparency encourages companies to uphold high standards of integrity and ethics, knowing that their actions are subject to public scrutiny. This accountability benefits not only consumers but also stakeholders such as employees, investors, and regulatory bodies.

3.1.4 Enhancing Brand Reputation: A commitment to transparency can significantly enhance a company's brand reputation (Economist Intelligence Unit, 2008, p. 6). Consumers are more likely to support companies that are transparent about their practices and demonstrate a genuine commitment to ethical and sustainable business practices. Transparency can differentiate a brand in a competitive market, positioning it as a trusted and socially responsible choice. A positive brand reputation built on transparency can attract new customers, retain existing ones, and ultimately drive business growth.

3.1.5 Promoting Social and Environmental Responsibility: Transparency plays a crucial role in promoting social and environmental responsibility (Goodman & Hirschman, 2012, p. 208). By openly sharing information about their supply chains, labor practices, and environmental impact, companies can identify areas for improvement and take proactive steps to address issues such as labor exploitation, environmental degradation, and supply chain sustainability. Transparency encourages companies to be accountable for their social and environmental footprint, driving positive change within industries and contributing to a more sustainable future.

4. Ethical Marketing Practices in Four Real-life Cases in the Business World

Case Study 1: Patagonia's "Don't Buy This Jacket" Campaign

Situation: In an era marked by rampant consumerism, Patagonia's 2011 "Don't Buy This Jacket" campaign was a paradoxical yet bold statement that challenged traditional marketing norms (Ferrell & Fraedrich, 2015, p. 82). Launched in The New York Times during the height of Black Friday, a day synonymous with excessive buying, the campaign urged consumers to reconsider the environmental costs of their purchases. This initiative was part of Patagonia's broader environmental and social responsibility ethos, emphasizing product durability and the company's commitment to sustainability. Despite its ostensibly counterintuitive appeal, the campaign not only heightened consumer awareness about environmental issues but paradoxically increased Patagonia's sales and strengthened its brand loyalty.

Kantian Analysis: From a Kantian perspective, the campaign exemplifies

adherence to Immanuel Kant's categorical imperative, particularly the formula that requires actions to be treated as ends in themselves, not merely as means to an end (Wood, 2002, p. 102). Patagonia's campaign is a notable application of this principle in business ethics. It focuses on respecting the rationality of consumers by providing them with truthful information about the environmental impacts of products, empowering them to make informed decisions. This approach respects and uplifts the dignity of consumers, treating them as morally autonomous agents rather than passive targets of marketing strategies.

Furthermore, the campaign can be seen as an application of Kant's principle of universalizability: the idea that one should only act according to maxims that could be universalized without contradiction (Rawls, 1999, p. 47). In advocating for less consumption, Patagonia applies a sustainable model that, if adopted universally, could lead to significant environmental benefits without undermining the company's integrity or consumer trust.

Utilitarian Analysis: Utilitarianism evaluates actions based on the outcomes they produce, focusing on maximizing overall happiness or utility (Mill, 2002, p. 11). Patagonia's campaign, by promoting sustainability and responsible consumerism, potentially reduces the negative environmental impacts associated with overproduction and excessive consumption. This leads to long-term benefits for society, including the conservation of resources and reduction of waste and pollution, which align with utilitarian principles of maximizing societal welfare.

Moreover, the campaign's impact on sales and brand loyalty illustrates a positive utilitarian outcome. The increased sales not only support Patagonia's sustainable business model but also spread environmentally conscious practices among other companies and consumers. The campaign's success in enhancing brand loyalty reflects a win-win scenario: consumers feel aligned with a brand that shares their values, and Patagonia gains a loyal customer base committed to ethical consumption practices.

Broader Implications: This campaign serves as a case study of how ethical marketing can align with both moral philosophy and business success. It challenges the traditional view that ethical business practices are often at odds with financial goals. Instead, Patagonia demonstrates that companies can excel economically by steadfastly adhering to ethical principles and by genuinely considering the welfare of their customers and the planet. This approach not only differentiates the brand in a crowded market but also builds a strong, enduring relationship with consumers, who increasingly favor companies with

strong ethical commitments.

Thus, Patagonia's "Don't Buy This Jacket" campaign stands as a pioneering example of how integrating Kantian ethics and utilitarian benefits into business strategies can lead to success both in terms of moral integrity and bottom-line results.

Case Study 2: Dove's "Real Beauty" Campaign

Situation: Dove's "Real Beauty" campaign, launched in 2004, marked a significant departure from traditional beauty advertising, which often emphasized idealized, often unattainable standards of physical appearance (Elliott & Percy, 2007, p. 112). Dove chose to feature women of various body types, ages, and ethnic backgrounds, promoting a more inclusive notion of beauty. The campaign was not only a marketing strategy but also an effort to engage in a broader cultural conversation about beauty norms and self-esteem.

Kantian Analysis: Through the lens of Kantian ethics, Dove's "Real Beauty" campaign can be viewed as highly ethical (Shaw & Barry, 2021, p. 60). Kantian philosophy stresses the importance of treating individuals as ends in themselves and respecting their intrinsic dignity. By choosing to portray real, diverse women, Dove recognized the value and dignity of its audience, moving away from manipulating consumer insecurities about physical appearance — a common critique of the beauty industry.

This approach aligns with Kant's categorical imperative, particularly the formulation that requires us to act in such a way that we treat humanity, whether in our own person or in that of another, always as an end and never as a means only (Shafer-Landau, 2020, p. 88). The campaign's focus on encouraging women to appreciate their natural beauty rather than striving to meet an external standard treats consumers with respect and dignity, fostering a positive self-image.

Utilitarian Analysis: From a utilitarian standpoint, the "Real Beauty" campaign is seen as beneficial due to its positive impacts on a wide scale (Singer, 2011, p. 123). The campaign likely improved self-esteem among women by challenging the narrow definitions of beauty prevalent in society and the media. By promoting a healthier body image, Dove contributed to the psychological well-being of its audience, which is a significant aspect of overall happiness.

Moreover, the campaign's positive reception could increase Dove's sales and customer loyalty, demonstrating a successful alignment of ethical marketing with business success. The happiness derived from higher self-esteem among

consumers and the commercial success enjoyed by Dove suggest a win-win scenario — the hallmark of a utilitarian outcome.

Broader Implications: Dove's "Real Beauty" campaign has set a precedent in the advertising world, influencing how beauty is marketed and prompting competitors to rethink their advertising strategies. This shift towards more ethical marketing practices can potentially lead to a broader societal impact, encouraging other brands to adopt similar approaches and thus contributing to a more inclusive and psychologically healthy society.

Furthermore, the campaign's success shows that ethical marketing can also be effective marketing. By resonating deeply with consumers' values and aspirations, Dove has not only enhanced its brand image but also reinforced customer loyalty. This case demonstrates that companies can do well by doing good and aligning their marketing strategies with ethical principles that respect and uplift their consumers.

Case Study 3: Everlane's "Radical Transparency"

Situation: Everlane, an online clothing retailer, has built its brand around the concept of "Radical Transparency" (Fieser & Dowden, 2017, p. 71). The company provides detailed information about the cost and production process of its items. Everlane discloses the factories where clothes are made and offers insights into the true costs behind their products, including materials, labor, duties, and transport.

Kantian Analysis: In Kantian ethics, actions are judged not by their outcomes but by whether they fulfill a duty dictated by a universal moral law (Shaw & Barry, 2021, p. 60). For Everlane, the duty lies in being truthful and transparent, respecting the consumer's right to know the origins and costs of the products they purchase. This duty to inform respects the consumer as an end in itself not merely as a means to achieve profits. Everlane's model involves a commitment to honesty that transcends the typical profit-maximizing motives seen in many corporate strategies.

Moreover, Kant's notion of autonomy is critical here (Shafer-Landau, 2020, p. 88). Autonomy refers to the capacity of rational beings to make informed decisions for them. By disclosing detailed information about sourcing, labor conditions, and pricing, everlane empowers consumers to make choices that align with their personal values and ethics. This empowerment is a form of respecting consumer autonomy, which Kantian ethics holds in high regard.

Utilitarian Analysis: Utilitarianism assesses an action based on its consequences for the happiness or well-being of the greatest number (Singer,

2011, p. 123). Everlane's transparency likely enhances consumer trust and satisfaction, contributing positively to the consumer's experience and perception of the brand. These aspects potentially lead to greater consumer happiness, not just by meeting the desires of customers who value ethical sourcing, but also by setting a standard that may improve industry practices overall.

On a broader scale, Everlane's transparency may set a benchmark in the industry, prompting other companies to adopt similar practices. This ripple effect can lead to improved industry standards, better working conditions in factories, and more ethically produced goods available in the market. All these factors contribute to a greater overall utility, fulfilling the utilitarian principle of maximizing happiness and minimizing harm.

Broader Implications: The long-term benefits of Everlane's radical transparency can be profound (Shaw & Barry, 2021, p. 60). From a Kantian perspective, the practice fosters a business culture that prioritizes ethical considerations over mere compliance or profit. It encourages other businesses to view transparency not as a regulatory hurdle but as an integral part of ethical business conduct.

From the utilitarian viewpoint, the adoption of transparency by more companies could lead to significant improvements in global trade practices. If transparency leads to more ethical sourcing and production methods, the overall societal welfare increases not just for consumers in developed nations but also for workers in developing countries, who are often the most vulnerable in the global supply chain.

Case Study 4: Chipotle's Ingredient Transparency

Situation: Chipotle Mexican Grill has positioned itself as a leader in ethical fast food with a commitment to using fresh, locally sourced ingredients without genetically modified organisms (GMOs) (Ferrell et al., 2019, p. 80). The company markets itself on the basis of food transparency, openly sharing information about its ingredients and their sourcing.

Kantian Analysis: Kantian ethics emphasizes actions that respect the moral law and the autonomy of individuals (Shafer-Landau, 2020, p. 88). In marketing, this translates to respecting consumers as rational agents who are capable of making informed decisions. Chipotle's transparency about its ingredients aligns with this perspective because it does not manipulate or withhold information that could influence consumer choice. By being open

about where its ingredients come from and ensuring they are GMO-free, Chipotle treats its customers as ends in themselves individuals capable of making decisions that align with their personal values and health concerns.
This approach can be seen as an application of Kant's categorical imperative, specifically the formulation that requires us to treat humanity, whether in our own person or in that of another, always as an end and never as a means only (Wood, 2002, p. 102). By providing full disclosure, Chipotle ensures that customers are not merely meant to profit but are respected as partners in ethical consumption.

Utilitarian Analysis: Utilitarianism assesses the moral worth of an action based on its consequences, particularly in terms of promoting happiness or reducing suffering (Mill, 2002, p. 11). Chipotle's strategy of using ethically sourced, non-GMO ingredients and being transparent about these practices likely increases customer satisfaction and trust. These factors contribute to consumer happiness, not just by meeting the desires of customers who value ethical sourcing, but also by setting a standard that may improve industry practices overall.
Furthermore, the ripple effects of Chipotle's transparency can lead to broader societal benefits (Singer, 2011, p. 123). Other companies, observing Chipotle's success and customer loyalty, may be motivated to adopt similar practices. This industry-wide shift could lead to improvements in how food is produced and sourced globally, potentially leading to better environmental practices and animal welfare standards. All these factors contribute to a greater overall utility, fulfilling the utilitarian principle of maximizing happiness and minimizing harm.
Broader Implications: Chipotle's approach not only benefits the company in terms of brand loyalty and differentiation but also positions it as a leader in ethical fast food (Ferrell et al., 2019, p. 80). This leadership can extend its influence beyond the marketplace into public discussions about food safety, environmental responsibility, and ethical sourcing, potentially affecting policy and consumer behavior broadly.

5. Conclusion

In conclusion, this research paper has provided a nuanced exploration of ethical issues in business and professions, with a particular emphasis on ethical marketing practices viewed through the lenses of Utilitarianism and Kantian ethics. Through the analysis of case studies including Patagonia's "Don't Buy This Jacket" Campaign, Dove's "Real Beauty" Campaign, Everlane's Radical

Transparency, and Chipotle's Ingredient Transparency, we have observed the diverse approaches adopted by companies in aligning their marketing strategies with ethical principles.

The importance of transparency has emerged as a common thread, underscoring its pivotal role in fostering consumer trust and brand credibility. Transparency not only serves as a mechanism for accountability but also as a means to empower consumers to make informed decisions, thereby promoting ethical consumption behaviors. Moreover, the juxtaposition of Utilitarian and Kantian perspectives has shed light on the ethical dilemmas inherent in marketing practices, offering insights into the complex interplay between moral principles and business objectives.

As businesses continue to navigate an increasingly complex ethical landscape, the findings of this research paper carry significant implications for organizational practices. By embracing ethical marketing principles grounded in transparency and authenticity, companies can not only enhance consumer trust and loyalty but also contribute to broader societal well-being. Furthermore, by integrating ethical considerations into decision-making processes, businesses can cultivate a culture of responsible corporate citizenship, thereby fostering sustainable relationships with stakeholders and securing long-term organizational success.

In essence, ethical marketing practices serve as a conduit for bridging the gap between business objectives and societal expectations, offering a pathway towards harmonizing economic prosperity with ethical integrity. As we look towards the future, it is imperative for businesses to recognize the inherent value of ethical considerations in shaping organizational identity and fostering stakeholder trust. Through a concerted commitment to ethical principles, businesses can aspire towards a more equitable and sustainable future, where ethical conduct serves as the cornerstone of organizational excellence.

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A Study on Impact of Inflation on NIFTY 50 Index

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Abstract

In the current state of the global financial market, nearly every nation appears to have a stock exchange that represents the financial stability of its own economy. Inflation is the process by which prices grow over time and reduce buying power. Inflation is a multidimensional beast that can have both beneficial and bad impacts. The National Stock Exchange of India Ltd.'s flagship index is the NIFTY 50. It is an index that shows the mean of the top 50 Indian businesses that are listed on the National Stock Exchange. The main purpose of this study is to determine the effect of inflation on NIFTY 50 index. The study is descriptive in nature. Various sources, including books, articles, journals, and websites of different government agencies, are used to obtain secondary information. The influence of inflation on the NIFTY 50 is intricate and subject to change based on several variables. Investors who want to manage the possible effects of inflation on their NIFTY 50 investments should take into account these different factors and use a diversified approach.

Keywords

NIFTY 50, Inflation, Investments, Stock, and Economic.

1. Introduction

Inflation is defined as a sustained increase in the average price of goods and services over time in an economy. Inflation is a measure of a reduction in purchasing power per unit of money since rising prices allow each unit of currency to purchase fewer products and services. The inflation rate, defined as the annualized percentage change in an overall cost over time (usually the CPI), is a major indication of price inflation. Most economists now advise for a mild and stable pace of inflation. Low inflation, which is comparable to zero or negative inflation, reduces the likelihood that monetary policy and liquidity would prevent the economy from stabilizing and mitigates the severity of

economic downturns, allowing the labor market to respond more swiftly. The monetary authorities are normally tasked with keeping inflation low and stable.

The National Stock Exchange (NSE), founded in 1992 as a tax-paying company, was officially recognized as a stock exchange in 1993 under the Securities Contracts (Regulation) Act, 1956, which was enacted during the tenures of P. V. Narasimha Rao as Prime Minister of India and Manmohan Singh as Finance Minister. In June 1994, NSE began operations in the Wholesale Debt Market (WDM) sector. The National Stock Exchange of India Ltd.'s main index is the NIFTY 50. It is an index that represents the average of the top 50 Indian businesses listed on the National Stock Exchange. Inflation is the rate at which general prices for goods and services rise, and it has the potential to alter monetary policy as well as reduce buying power. In the context of equities markets such as the NIFTY 50, inflation is often seen unfavourable since it raises corporate input prices, reduces profit margins, and eventually lowers earnings (Modigliani & Cohn, 1979). However, the impacts are complex and vary depending on the industry and business.

1.1. How Inflation Directly Affects the NIFTY 50

1.1.1. Cost of Borrowing: In response to inflation, the Reserve Bank of India (RBI), the nation's central bank, often raises interest rates to mitigate rising prices (Mishkin, 2007). This uptick in interest rates leads to heightened borrowing expenses for businesses, impacting their expansion and growth plans. Such circumstances pose a negative factor for NIFTY 50 companies, predominantly comprising large enterprises necessitating significant capital expenditures.

1.1.2. Corporate Profits: NIFTY 50 entities operating under fixed-price contracts or those unable to adjust customer charges may experience a reduction in profit margins. Sectors with limited pricing power, such as consumer goods or utilities, are particularly susceptible (Fama & Schwert, 1977).

1.1.3. Stock Valuations: Inflation exerts an influence on stock values. Typically, higher inflation correlates with lower price-to-earnings ratios (P/E ratios). This tendency stems from investors anticipating elevated discount rates applied to future company earnings and demanding a higher risk premium amidst an economically unstable climate (Barro, 1990).

2. Review of the Literature

- Luthra and Mahajan (2014) In their study, investigated how macroeconomic factors such as GDP growth rate, gold prices, inflation, and exchange rates affected BSE Bankex. They found through their regression research that the banking index was positively impacted by GDP growth rate, inflation, and exchange rates, but negatively impacted by gold prices on BSE Bankex. On bank stock prices, these factors had negligible effects.
- Gurloveleen & Bhatia (2015) examined the effects of a number of economic factors, including trade balance, foreign institutional investors (FIIs), call money rates, inflation, foreign currency reserves, and gross fiscal deficit. The results of their multiple regression, Granger Causality, and ADF tests revealed that FIIs and currency rates had the biggest effects.
- Ms. Aanchal (2017) identified links of causality between macroeconomic variables and stock indexes. The study found no causal relationship between stock exchange indices and the macroeconomic variables it looked at using the Unit Root Test, ADF Test, Granger Causality Test, and correlation analysis. Furthermore, CNX Nifty 50 was found to positively correlate with other macroeconomic measures, including GDP, imports, exports, inflation, and investment.
- Garg and Kalra (2018) investigated how macroeconomic factors affected the Indian stock market between 1991 and 2017. With the exception of unemployment and inflation, they found a positive association between GDP, gold prices, foreign exchange rates, and the Sensex.
- Megaravalli and Sampagnaro (2018) examined the connections, both immediate and long-term, between major macroeconomic indicators like inflation and exchange rates and the securities exchanges in China, Japan, and India. Monthly series data from January 2008 to November 2016 were used in the study. Based on the pooled assessed consequences of the three ASEAN countries, the swapping scale, or exchange rate, has a favourable and considerable long-term impact on securities exchanges. On the other hand, the long-term effects of inflation are negative and insignificant. There isn't an objectively substantial association between macroeconomic indicators and securities exchanges for the foreseeable future.
- Krishna Gadasandula (2019) examined the connection between the Indian stock market and macroeconomic factors. The augmented Dickey Fuller (ADF) unit root tests, Zivot-Andrews (ZA), Philips-Perron (PP), Granger and Geweke causality tests, and the Johansen-Julius co-integration test are

employed. The findings demonstrate that there are one-way causal links in the situations of GDP and inflation, bank rate and GDP, exchange rate and GDP, NIFTY Index and GDP, exchange rate and inflation, and bank rate and NIFTY Index, respectively.

- Sahoo, Patnaik, & Satpathy (2020) investigated the links between and effects of a few macroeconomic variables on the American and Indian stock markets. The ANNOVA, t-test, and regression models were applied. The research shows that GDP and GDP per capita have statistically significant effects on the BSE SENSEX, while inflation and interest rates have no effect. On the other hand, all of the macroeconomic variables have statistically significant individual correlations with the stock markets of both nations.
- Ashoka and Hamid (2021) explored how the exchange rate and inflation affected the macroeconomic factors, namely the National Stock Exchange's (NSE) Nifty 50 index, and the Indian stock market. A model of linear regression has been applied. The study's regression results show that the Indian stock market and inflation have a statistically significant negative association, whereas the growth of the Indian stock market is positively correlated with the GDP growth rate and the price of oil.

3. Objectives of the Study

The primary objectives of the study are:

3.1. The main purpose of this study is to understand the direct impact of inflation on the NIFTY 50 index.

3.2. To understand how through various channels, inflation affects the NIFTY 50 index.

4. Research Methodology

The present study is descriptive in nature. Various sources, including books, articles, journals, and websites of different government agencies, are used to obtain secondary information. This papers primary goal is to compile and combine existing knowledge in order to create a thorough understanding of the topic.

5. Discussion

Through a number of channels, inflation affects stock indices such as the NIFTY 50, influencing economic policy responses, company earnings, and investor sentiment. This is a thorough explanation of how inflation affects the NIFTY 50 Index, which serves as the primary performance benchmark for the Indian equities market:

5.1 Interest Rate and Discount Rate

Interest rates are the main mechanism via which inflation influences stock indexes. In order to prevent economic overheating and stabilize prices, inflation usually forces the central bank, in this case, the Reserve Bank of India (RBI) of India, to modify interest rates. A rise in interest rates by the RBI to fight inflation drives up the cost of borrowing for businesses. Reduced capital expenditure and lower profit margins can result from higher borrowing costs, especially for businesses with high levels of leverage or those operating in capital-intensive industries. Furthermore, the discount rates utilized in stock valuation models like the Discounted Cash Flow model also rise in tandem with higher interest rates. Stock prices may decline as a result of a rise in the discount rate since it lowers the present value of future cash flows. Since a wide variety of companies make up the NIFTY 50, an increase in discount rates across the board could cause the index as a whole to decline.

5.2 Sectoral Specific Impacts

Not every sector included in the NIFTY 50 is equally affected by inflation. For example:

Table 1:- Impact of Inflation on Different Sectors

Sector	Impact of Inflation	Key Factors	Sources
Agriculture and Food	Elevated food prices with double-digit increases in pulses, fruits, vegetables, and spices. Cereals and sugar prices increased by more than 6%.	Supply constraints, Weather disruptions, Harvest outcomes	RBI- Source 1, KPMG- Source 2
Manufacturing	Rising input costs with some expectations of decline. Higher selling prices are anticipated to offset costs.	Cost of raw materials, Supply chain issues	RBI- Source 1, RBI- Source 3
Services	Increased input costs lead to higher service charges. Persistent inflationary pressures.	Higher operational costs, Increased demand	RBI- Source 1, KPMG- Source 2
Construction and Real Estate	Rising material and labor costs impacting housing prices and construction expenses.	Cost of materials, Labor expenses	PwC- Source 4, KPMG- Source 2

Sector	Impact of Inflation	Key Factors	Sources
Financial Services	Higher borrowing costs due to elevated repo rate. Financial market stability challenges.	Tight monetary policy, Interest rate hikes	RBI- Source 1, RBI- Source 3
Consumer Goods	Price adjustments to manage input costs. Balancing market share and margins.	Input cost management, Competitive pricing	RBI- Source 3, KPMG- Source 2

Source:- Prepared by authors

Source 1: https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=57366

Source 2: https://kpmg.com/in/en/home/services/tax/india-interim-budget-2024/post-budget-sectoral-povs.html

Source 3: https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21343

Source 4: https://www.pwc.in/publications/ceo-survey/27th-annual-global-ceo-survey-india-perspective.html

5.3 Inflation Expectations and Market Sentiments

The way the market acts can be significantly influenced by inflation expectations. Proactive selling may result from investors anticipating monetary tightening and higher interest rates if they believe inflation will increase. On the other hand, the response could be mild if the inflation is thought to be temporary. The NIFTY 50 can experience notable short-term fluctuations due to market psychology, which is separate from the underlying economic principles.

5.4 Global Economic Interactions

The NIFTY 50 comprises companies with substantial international business, so foreign exchange rates and worldwide inflation trends are also relevant. Companies with substantial import requirements may find that the cost of imported goods and services increases due to a weaker rupee during inflationary times. On the other hand, exporters stand to gain from a declining rupee since it will lower the cost of their products abroad.

Through a number of intricate pathways, inflation affects the NIFTY 50 in a variety of ways, affecting everything from investor sentiment and global economic interactions to company earnings and sector performance. Investors who want to manage the opportunities and volatility brought about by inflationary times in the economy must comprehend these dynamics. Furthermore, a sophisticated strategy that takes into account both sector-

specific effects and general economic trends can support well-informed investment choices.

6. Conclusion

A multifaceted beast, inflation can have both positive and negative effects. The desirable aspect is that businessmen receive more value for their goods at high prices, which encourages them to produce more. The adverse outlook is that people are compelled to limit their purchases when prices soar, which may trigger a recession. Fears about inflation have the potential to affect investor sentiment towards stocks, particularly the NIFTY 50, and add to market volatility. Fears of inflation could fuel negative sentiment, which would encourage selling pressure on stocks, while positive sentiment would encourage buying. A certain threshold of inflation is necessary to encourage producers and businesses, even though absurdly high inflation can severely affect purchasing power. Value stocks are generally more appealing investments when inflation and interest rates rise because they typically have more stable fundamentals, pay higher dividends, and are less rate sensitive. In general, moderate inflation indicates a strong economy and boosts stock markets. To sum up, the influence of inflation on the NIFTY 50 is intricate and subject to change based on several variables. The index's performance during inflationary times is influenced by a number of factors, including sector dynamics, currency movements, and the outlook for economic growth, even though high inflation rates and tighter monetary policy may present difficulties. Investors who want to manage the possible effects of inflation on their NIFTY 50 investments should take into account these different factors and use a diversified approach.

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Lost in the Validations: Examining Studies on Social Media Addiction and its Impact on Students

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Abstract

The mainstay of the paper is to identify and provide an in-depth analysis of the literature on Social Media Addiction in students. The filtration of the research papers selected for the detailed analysis is the papers based on their citations. The top ten most cited papers in the field enlisted in Scopus have been analyzed. The focus of the study is to present the findings and methodology of the most respected papers in the field in a crux. Future work in the field can take the way forward directions from the paper. The paper also encapsulates the most prolific authors, collaborations, and countries contributing to the research on Social Media Addiction in students.

Keywords

Social media addiction, Students, Youth, Internet addiction, and Research.

1. Introduction

Social Media is a phenomenon that has changed the way society interacts, entertains, and even earns. It provides entertainment, connection, and information, but there is growing concern over its addictive potential. Social Media Addiction is defined as a form of behavioral addiction generally understood to be compulsive use of social media platforms to the point where it seriously impairs a user's ability to function in key areas of their lives, including relationships with others, performance at work or in school, and physical health. (Andreassen, 2015). Online gaming has been categorized as an addiction by the medical fraternity, Social Media though known to have addictive properties (Bányai et al., 2017; Hawi & Samaha, 2017; Hou et al., 2019) and researchers are making a case for it to be included as an addiction.

Covid-19 caused a lot of damage to the world, as we know it but in the background, mental space was being marred by the prevalence of social media

usage, which increased due to the mandate of physical distancing. This aspect has been finding a lot of traction with the researchers in the field. The effects of excessive social media usage is not limited to any specific age group, gender to geographic location. The impact on the younger generation is of a prime concern since their attention span has reduced due to excessive use of social media (Nussenbaum, 2023), lower self-esteem has been reported ((Abi-Jaoude et al., 2020; El-Khoury et al., 2021), with reduced academic performance, (Hou et al., 2019), etc.

Various studies have been conducted in the field of social media addiction and its impact on the students and this paper delves into the intricacies of the research done in the field, discussing the features, psychological foundations, and possible repercussions of social media addiction. The paper tends to suggest future research in the area.

2. Objectives of the Study

The paper takes the research at a deeper level, by assimilating the work done in the field of Social Media Addiction in the case of students. The following two research objectives are analyzed in the paper

2.1 To analyze top-cited research in the field of SMA in students.

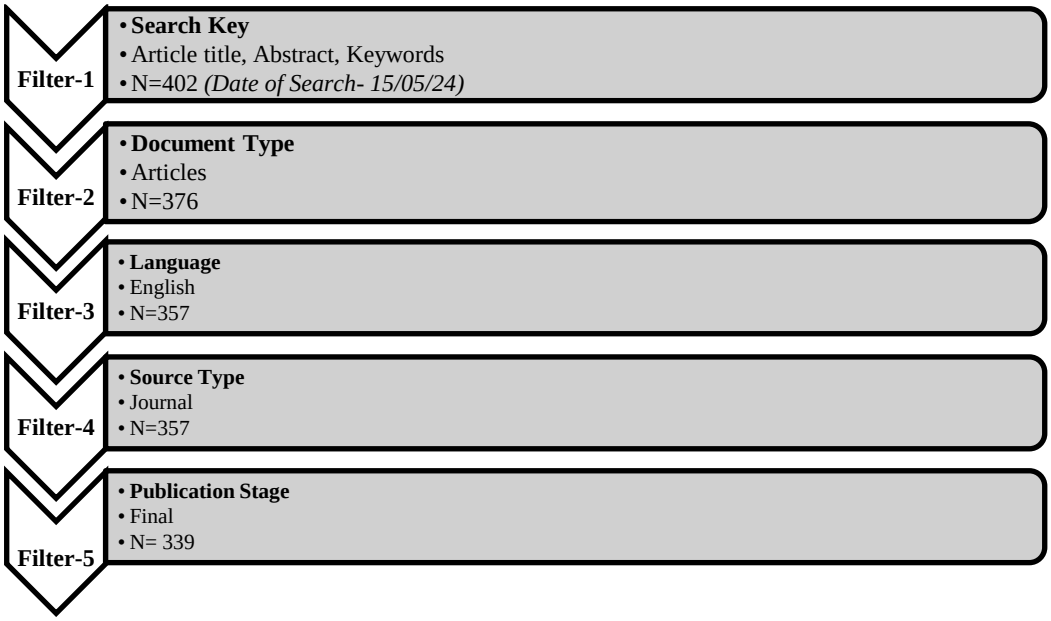
2.2 To suggest venues for the researchers to collaborate for research with specific reference to the publication trend and the prolific authors in the field.

These two objectives are framed to help future researchers in the area of SMA in students, to further the research and not duplicate it; to build on the research already conducted, and to identify the prolific authors in the field for guidance and collaborations.

3. Research Methodology

In this study, the Scopus dataset (developed by Elsevier) is analyzed using a quantitative exploration with bibliometric analysis that identifies and analyzes the literature on SMA in students to provide a map of knowledge structure (Álvarez-García et al., 2018). The bibliometric analysis provides an insight into the research that has been conducted in the area of interest. A total of 339 documents from 190 different sources between 2014-2024 were analyzed. The findings from Bibliometric analysis aid in terms of citations of the papers, contributing authors, their collaborations, identifying the universities or organizations pursuing research in the area and which countries are more interested in conducting research in the given area, and many more. The papers indexed in the Scopus

database go through a rigorous quality review by applying filters (Figure 1) and hence the findings of the papers can help understand the research done and also help the future researchers bridge the gaps as indicated by the analysis.



Source:- Prepared by Authors

Figure 1:- Search Strategy

4. Findings and Discussion

4.1 Research Objective (RO1)

To analyze top-cited research in the field of SMA in students.

The Scopus search of the papers with the criteria as laid down and discussed in the methodology section, The top cited papers have been extracted and their analysis along with their findings and methodology is given in detail. The research is discussed in descending order of the citations.

- Andreassen (2017) in their paper "The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey" with 649 citations discusses the association between narcissistic tendencies, self-esteem, and addictive use of social media is examined in the paper. Based on a broad nationwide survey with 23,532 participants, the study finds that those with lower self-esteem and higher degrees of narcissism are

more likely to engage in addictive behavior on social networking sites. Also, addictive use of social media may result in further lower self-esteem. The results point to a possible vicious cycle in which people with high levels of narcissism are lured to social media, but over time, their excessive use may have a detrimental effect on their self-esteem.

The study employs three scales to measure the three traits,

Bergen Social Media Addiction Scale (BSMAS): The scale is used extensively to measure the social media addiction severity.

Narcissistic Personality Inventory-16 (NPI-16): The NPI-16 psychometric scale was employed to study the narcissistic personality traits.

Rosenberg Self-esteem Scale (RSES): The scale has been used in the study to the assess level of self-esteem of the respondents.

The results point to a complicated interaction between these variables, suggesting that underlying psychological characteristics like narcissism and self-esteem may have an impact on social media addiction.

- Hawi (2017) in their study "The Relations among Social Media Addiction, Self-esteem, and Life Satisfaction in University Students" with 225 citations explore the relationship between social media addiction, self-esteem, and life satisfaction in university students. The sample collected was of 364 university students, through systematic random sampling. The study employed three scales on the three parameters viz., **Social Media Addiction Questionnaire for SMA, Rosenberg's Self-esteem Scale** for analyzing level of self-esteem, and the Satisfaction with Life Scale to measure life satisfaction in the representative sample. Data analysis was done using Pearson correlations between the variables, regression analysis, and structural equation modelling. The research suggests that social media addiction is negatively linked to self-esteem. In other words, students who struggle with social media addiction tend to have lower self-esteem. There was not a direct effect of social media addiction on life satisfaction. But according to the research, there is probably a mediation effect of self-esteem in the association between life happiness and social media addiction. This implies that social media addiction may have an indirect detrimental effect on life satisfaction through lowering self-esteem.
- The paper "Social media addiction: Its impact, mediation, and intervention" Hou (2019) with 218 citations delves into the effects of social media addiction

and explore potential interventions. The paper discusses how excessive use of social media can lead to addiction, which in turn can have negative impacts on individuals' mental health, relationships, and overall well-being. The study employed the 6 item **Bergen Social Media Addiction Scale (BSMAS) (Andreassen,2017); A 20-item questionnaire that Li and Kam (2002) modified from the 30-item General Health Questionnaire (GHQ-30; Goldberg, 1972)** was used to measure mental health.

The participants' self-reported ranking in relation to their individual classmates was used to gauge their academic success because they were from a variety of grades with different majors. Self-esteem was measured using the **10-item Chinese version of the Self-esteem Scale**, which was modified from Rosenberg (1965).

It also examines how factors such as personality traits, social influences, and environmental factors can mediate the development of social media addiction. The study has been conducted in two parts, with part 1 conducted as a survey approach with a sample of 232 college students. The part of the study discovered that social media addiction was correlated with poor mental health and academic performance, with self-esteem acting as a mediating factor in this relationship. In step 2, a two-stage self-help intervention program was administered. In order to provide the intervention, a sample of 38 college students were taken who satisfied the criteria for social media addiction. The students' mental health and academic performance improved, and their social media addiction decreased as a result of the intervention, according to the findings implying that various interventions, including cognitive-behavioural therapy, mindfulness-based interventions, and educational programs, would help individuals overcome social media addiction and improve their mental health.

- Karadag (2015) paper titled, "Determinants of Phubbing, Which is the Sum of Many Virtual Addictions: A Structural Equation Model" has 217 citations. The study investigates the factors influencing phubbing, which is the act of snubbing others in favour of one's phone. The study uses a correlational design to look at the cause-and-effect relationships between the variables in the theoretical model. 409 college students that were chosen at random served as participants. The Phubbing scale was analyzed through the use of scales that included the following: internet addiction, social media addiction, game addiction, SMS addiction, and mobile phone addiction. The analysis was done through the Structural Equation Model, Correlation, and Regression. It also identified other factors, including fear of missing out and predictors of

phubbing. The findings suggest that phubbing is a multifaceted issue influenced by several factors related to technology use and individual characteristics. According to the study, the most reliable indicator of phubbing behavior was mobile phone addiction. The study also discovered a significant association between phubbing and addictions to particular virtual activities, such as social media, text messaging, and internet use.

- Wong's (2020) paper titled, "Relationships between Severity of Internet Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress" has a citation of 214. The study analyses the relationship between problematic online gaming and severity of problematic social media usage on sleep quality and psychological distress. The impact of severity of Internet Gaming Disorder (IGD) and Social Media Addiction (SMA) on daily life is negative. Daily life is measured in terms of sleep quality and mental health. The cross-sectional study was conducted on 300 participants who were students in the age group of 18-24 years, through google forms. Four scales have been employed to study all aspects

Internet Gaming Disorder (IGD): To gauge the intensity of IGD symptoms, a measure similar to the Internet Gaming Disorder Scale-Short Form (IGDS-SF9) may have been employed.

Problematic Social Media Use (PSMU): The degree of social media addiction might have been assessed using a scale similar to the Bergen Social Media Addiction Scale (BSMAS).

Sleep Quality: The patterns and quality of sleep may have been evaluated using a technique such as the **Pittsburgh Sleep Quality Index (PSQI).**

Psychological Distress: Depression, anxiety, and stress symptoms might have been measured using a scale similar to the **Depression Anxiety Stress Scales (DASS-21).**

Correlation and regression analysis were employed and the research findings indicate that the level of problematic social media use (SMA) may have a more detrimental effect on sleep quality than internet gaming disorder (IGD). Conversely, there appeared to be a comparable correlation between psychological distress and the severity of both SMA and IGD.

- Van Den Eijden (2018), "The impact of heavy and disordered use of games and social media on adolescents' psychological, social, and school function" with 146 citations is an interesting take on the impact of excessive and

disordered use of online games and social media on social, psychological, and school functioning. According to the paper, a pattern of behavior that resembles an addiction and has detrimental effects on day-to-day functioning is referred to as "disordered use." The study discovered that social media and gaming addiction symptoms have a detrimental impact on teenagers' mental health and academic achievement. This leads to reduced contentment with life and a reduction in the sense of social competence. Fascinatingly, extensive usage of social media and games also revealed some beneficial correlations i.e. elevated sense of social competence but extensive usage of social media was also connected to lower ranking.

The study used a longitudinal research methodology design to determine the effects of social media usage and online gaming on the well-being of adolescents'. In the context of the University of Utrecht's Digital Youth Project, a three-wave longitudinal sample of adolescents aged 12 to 15 (N = 538) was used. The data collected through the questionnaires was analyzed applying correlation and regression analysis. correlation analysis to find connections between the outcome variables (psychological, social, and school functioning) and gaming and social media use.

To find out how well changes in gaming and social media use forecast changes in the outcome variables over time, regression analysis is used.

The findings of the study were that the adolescent symptoms of anxiety, depression, and low life satisfaction have been connected to disordered gaming and social media use. Also, overuse of screens can have a detrimental effect on interpersonal connections and social growth. Adolescents may struggle to make friends in the real world or feel socially isolated.

Research proved that the academic performance suffers as it points to a link between excessive usage of social media and poorer academic achievement. This might be the result of things like having trouble focusing or procrastinating schoolwork in favor of social media.

- Throuvala (2019), “Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study”, with 143 citations is an exemplary study of the adolescents analyzing the contributing factors towards social media use and its problematic usage. The two aspects of social media usage i.e. what are the motivators of usage as well as the problematic or dysfunctional mechanism of social media usage.

The motivators were identified as an urge to:

- **Gathering Information:** The adolescents use social media for all the information including news and related knowledge about the issues.
- **Social Connections** i.e. connecting with family and friends with no geographical constraints.
- **Comparison:** Adolescents use social media to share their achievements in order to compare their lives which may be positive and negative.
- **Passive and Active usage**
    - Passive usage of social media i.e. content viewing for entertainment is another motivator. It also keeps them entertained.
    - Active Usage- Creation of content by adolescents to express themselves is yet another reason to use social media.

The dysfunctional mechanism i.e. the reasons for overuse or addiction have been pointed out as (the pointers are presented not in any specific order)

- **Distraction:** Social media usage serves as a distractor from all productive activities mainly studying and leads to procrastinating as well.
- **FOMO i.e. the Fear of Missing Out:** FOMO resulting from missing out on updates and also FOMO in life about missing out on various events being posted by their friends online.
- **Validation:** Another causative reason for excessive social media usage is an urge to constantly seek social validation from the users in terms of likes, or subscription.
- **Coping Mechanism:** It is sometimes used as a mechanism to cope with their mood swings or a distraction from the existing problems.
- **Beyond Control:** It has been observed that in-spite of the realization that it is causing problems, the users find the urge of using social media beyond tiger control.

The methodology used in the paper is a qualitative approach that uses small focus groups of adolescents to discuss usage of social media habits and the challenges that they face. A semi-structured interview questions were monitored by a trained facilitators and all discussions were audio-recorded (with the consent of the

participants). Thematic analysis was done on the transcribed discussions. Thematic analysis pointed to the patterns and themes in the data collected. Themes were identified to point at their core motivations and expected challenges.

- Yam (2019), "Psychometric Testing of Three Chinese Online-Related Addictive Behavior Instruments among Hong Kong University Students" study is instrumental in helping the researchers use various scales which have proven themselves in Chinese versions specifically in HongKong university students viz., **Bergen Social Media Addiction Scale (BSMAS); Nine-item Internet Gaming Disorder Scales - Short Form (IGDS-SF9) and Smartphone Application-Based Addiction Scale (SABAS).** Confirmatory Factor Analysis was used to prove the effectiveness of the scales. The paper makes it convenient for researchers in the field to use these scales since they have demonstrated evident psychometric acumen to measure the online social media addiction among students of their respective countries. The study also suggests that it leaves the area of studying different age groups to measure the efficacy of these scales in the researches.
- Balakrishnan (2017), "Social Media Addiction-What is the role of content in YouTube?" with 124 citations is an interesting analysis of 410 Indian students on specific SMA addiction of YouTube usage in terms of viewing as well as content creation. YouTube has 467 million users as of July 2023, as compared to 246 million in the United States of America. 410 Indian students were studied to analyze the relationship between content creation, viewing and addiction to YouTube.

The findings of the study are Content Creation is known to be more addictive than just watching the content passively. Social Validation in terms of views, likes and subscriptions are causative agents of addiction. Personal Gratification in terms of enjoying the content creation process (process gratification) along with social gratification are also found to be addictive.
The paper uses the UG (Uses and Gratification) theory to analyse YouTube addiction and has already been established as working well to study Facebook and Myspace addiction. (Joo, J., & Sang, Y. (2013). Exploring Koreans'smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory.

Table 1:- Most Cited 9 Papers

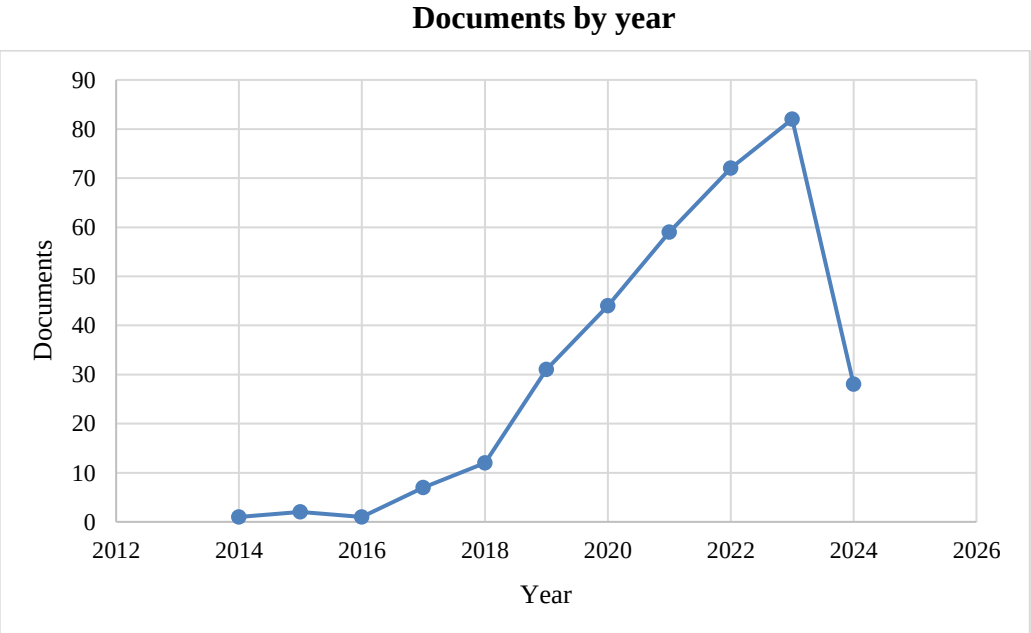
S. No.	Title of Paper	Author & DOI	Source & Year	Total Citation	Total Citation / Year
1.	The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey.	Andreassen, C. S., Pallesen, S., & Griffiths, M. D. https://doi.org/10.1016/j.addbeh.2016.03.006.	Addictive behaviors 2017	649	81.13
2.	The Relations Among Social Media Addiction, Self-Esteem, and Life Satisfaction in University Students	Hawi, N. S., & Samaha, M https://doi.org/10.1177/0894439316660340.	Social Science Computer Review 2017	225	28.13
3.	Social media addiction: Its impact, mediation, and intervention	Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. https://doi.org/10.5817/CP2019-1-4.	Cyberpsychology: Journal of Psychosocial Research on Cyberspace 2019	218	36.33
4.	Determinants of phubbing, which is the sum of many virtual addictions: a structural equation model	Karadağ, E., Tosuntaş, Ş. B., Erzen, E., Duru, P., Bostan, N., Şahin, B. M., Çulha, İ., & Babadağ, B https://doi.org/10.1556/2006.4.2015.005.	Journal of behavioral addictions 2015	217	21.70
5.	Relationships between Severity of Internet Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress	Wong HY, Mo HY, Potenza MN, Chan MNM, Lau WM, Chui TK, Pakpour AH, Lin C-Y. https://doi.org/10.3390/ijerph17061879.	International Journal of Environmental Research and Public Health. *2020*	214	42.80
6.	The impact of heavy and disordered use of games and social media on adolescents' psychological, social, and school functioning	Van den Eijnden, R., Koning, I., Doornwaard, S., van Gurp, F., & ter Bogt, T https://doi.org/10.1556/2006.7.2018.65	Journal of Behavioral Addictions 2018	146	20.86
7.	Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study	Throuvala, M. A., Griffiths, M. D., Rennoldson, M., & Kuss, D. J https://doi.org/10.1556/2006.7.2018.65.	Computers in Human Behavior 2019	143	23.83

S. No	Title of Paper	Author & DOI	Source & Year	Total Citation	Total Citation / Year
8.	Psychometric Testing of Three Chinese Online-Related Addictive Behavior Instruments among Hong Kong University Students	Yam, C.-W., Pakpour, A. H., Griffiths, M. D., Yau, W.-Y., Lo, C.-L. M., Ng, J. M. T., Lin, C.-Y., & Leung, H https://doi.org/10.1007/s 1126-018-9610-7	Psychiatric Quarterly 2019	126	21.00
9.	Social media addiction: What is the role of content in YouTube?	Balakrishnan, J., & Griffiths, M. D https://doi.org/10.1556/2006. 6.2017.058	Journal of Behavioral Addictions 2017	124	15.50

Source:- Author's own compilation

4.2. Research Objective (RO2)

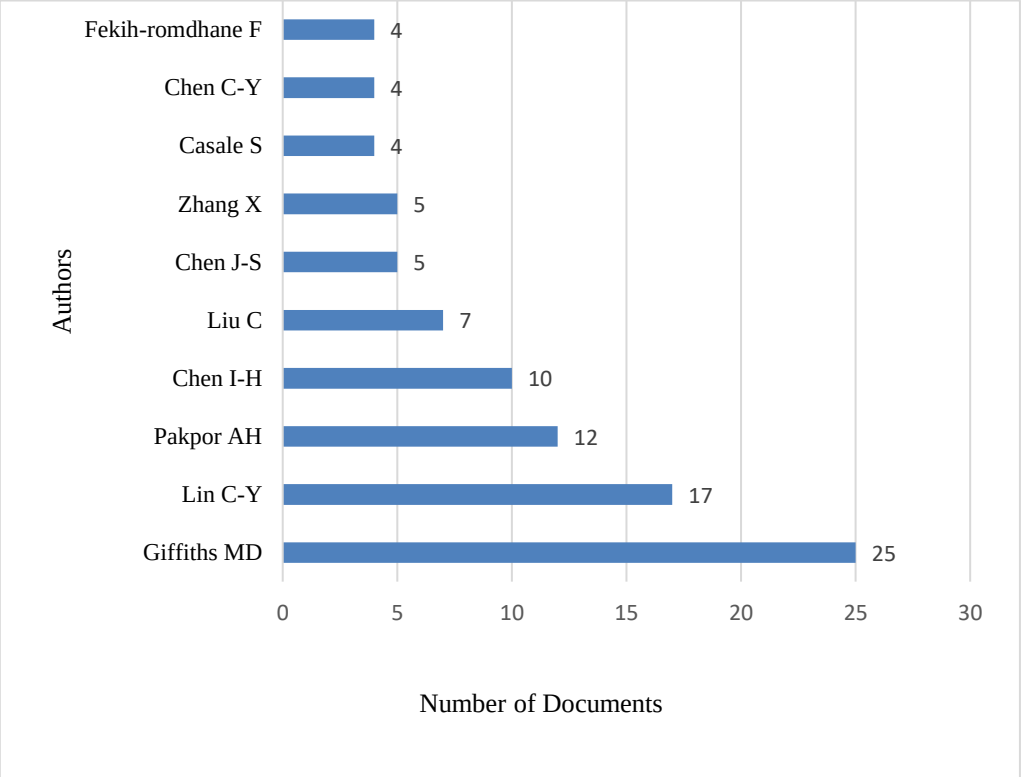
To suggest the venues to the researchers to collaborate for research with specific reference to the publication trend and the prolific authors in the field.



Source:- Author's own compilation

Figure 2:- Publication Trend

Figure-2 elaborates on the fact that research in the field of social media addiction among students has been on the rise since 2014 (10 years after Facebook was launched in 2004). 2023 saw 80 publications which is the highest, indicating that the interest in the addictive nature of social media research has been increasing. Till May 15, 2024, 28 publications have already been reported in Scopus.



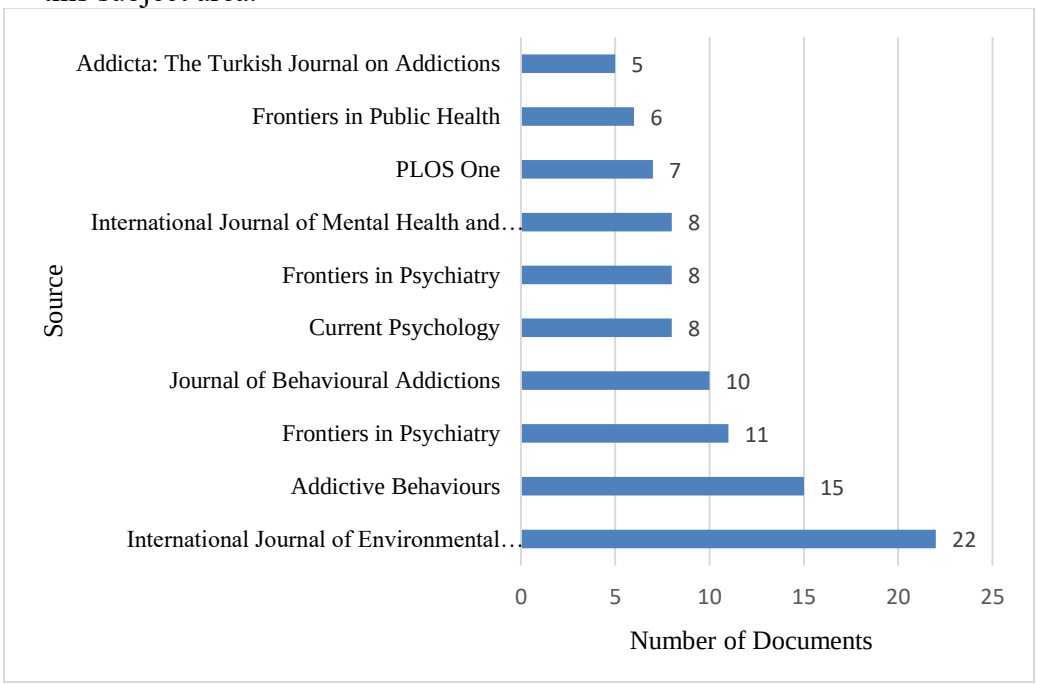
Source:- Author's own compilation

Figure 3:- 10 Prolific Authors

The figure 3. shows 10 authors with their number of publications, M.D. Griffiths has the maximum publications in the niche area of SMA in students (25); followed by C.Y. Lin with 16 publications. The least are 4 publications by Fioravanti.

Figure 4 displays the 10 most relevant sources. 22 Research articles in the area of in Social Media addiction in students have been published in International Journal of environmental research and public health followed by Addictive behaviors (15), Frontiers in Psychiatry (11) and Journal of Behavioral Addictions (10) these figures will help the researchers undertaking research in this subject area to target these journals to showcase their work.

The publication sources, trend, and the most prolific author analysis is helpful in gaining insights into whether the research interest is persisting, who is leading the quality research and which journals are promoting publication in this subject area.



Source:- Author's own compilation

Figure 4:- 10 Most Relevant Sources

5. Conclusion

The increase in the publications since 2014 and with a maximum in 2023 (80) are an indication that the research topic is gaining traction since the impact of SMA on students is real and impacting their quality of life and the negatives outweigh the positives due to the addiction-inducing nature of Social Media.

M.D. Griffiths and C.Y.L. in with 25 and 16 publications respectively are the lead authors.

Research suggests that social media can be used to compensate for low self-esteem or feed narcissistic tendencies. (Andreassen et.al, 2017). Social media addiction can indirectly harm students' well-being by lowering their self-esteem, which then leads to decreased life satisfaction. (Hawi, N.S.et.al.,2017). Another most cited paper suggests that self-esteem plays a mediating role. In simpler terms, students struggling with social media addiction tend to have lower self-esteem, which in turn contributes to poorer mental health and academic performance. (Hou, Y., et.al, 2019. The research found that people with stronger addictions to their phones in general (including texting, social media, internet, and games) are more likely to phub.

Wong et al.'s research (2020) finding point to a dual relationship between young people's psychological discomfort, problematic social media use (SMA), internet gaming disorder (IGD), and sleep quality. The study discovered that among young adults, psychological distress (symptoms of depression, anxiety, and stress) and lower sleep quality were linked to both IGD and problematic social media use. The research points to a partial moderating role for sleep quality in the association between psychological discomfort and problematic internet use. This suggests that part of the detrimental effects of excessive internet use (gaming, social media) on mental health can be attributed to poor sleep quality.

A longitudinal study of adolescents by Van Den Eijnden (2018) to analyze the impact of online gaming and social media practices on their well-being. It's interesting to note that excessive gaming and social media use demonstrated a favorable correlation with perceived social ability without ever approaching the threshold of disordered use. However frequent usage of social media also indicated a decline in academic achievement. According to the study, teens who displayed symptoms of compulsive gaming and social media use reported lower levels of perceived social competence and life happiness.

A focus group study of adolescents (Throuvala et al., 2019) presents the findings through thematic analysis. The research highlights the multi layered approach and nature of indulgence in social media usage by adolescents which is driven by emotional, practical, and social needs.

Specific Social Media channels like YouTube have been studied and it has been established by the study that content creators are more susceptible to addiction as compared to passive viewers. Social and personal gratification are causative of addiction. (Balakrishnan & Griffiths, 2017)

Bergen Social Media Addiction Scale (BSMAS); Nine-item Internet Gaming Disorder Scales- Short Form (IGDS-SF9) and Smartphone Application-based Addiction Scale (SABAS) have been established for university students in Hong Kong. The study implies that the established tools can be used in other countries as well but their efficacy has been tested only on the students. For other age groups, the same study can be used as a basis and Confirmatory Factor analysis performed to prove their efficacy. (Yam et al., 2019).

6. Scope of Further Research

The analysis of the most trending or cited papers in the field of SMA in students can be used for further research in any of the following ways.

- The researchers can do the same analysis on a similar data set in different geographical locations, thereby analyzing that though global phenomena, is the impact on different geographic locations same or different. In a study by Karadag (2015), Turkish university students participated in the study; the findings' potential applicability to different populations and cultural contexts can be explored.
- The researchers can take up the research gaps as explicitly mentioned in the most cited papers as the case for their research.
- Future research can also be done on the same parameters in the present timeline (if the study is not longitudinal and was done 5-10 years back). This would help the policymakers in taking decisions around SMA in students in real-time.
- The analysis can be used for using the established and accepted scales of addiction viz., BSMAS, Narcissism scale, Self-esteem scale, etc.
- It is suggested that in addition to focus groups, in-depth interviews or surveys can be added to get a better understanding of the phenomena. Focus groups can be used to identify the themes and surveys to consolidate the themes and develop sub-themes.
- In the case of focus group studies, the researchers can take forward the study of the same group of people over time to see the studied aspect e.g. how their motivations, usage, and addictive behavior pans over time with the help of a longitudinal study.
- Online gaming needs to be studied in more depth since the research has highlighted the negative impact on the mental health of the users.

- Some highly cited studies like Andreassen (2017) are based on correlation, which does not measure or prove the cause-and-effect relationship. Some detailed studies can be done to analyzing the mechanism for these associations or correlations between addictive use of social media, narcissism, and self-esteem. This can entail promoting healthy social media habits.
- Given the negative aspects of SMA, phubbing, low self-esteem, narcissism, etc research on developing interventions to reduce the addictive and harmful behavior would be valuable. This could involve many aspects including mindfulness training, promoting healthy phone use habits, or social awareness campaigns and many more.

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Historic Account and Underlying Factors of FDI Inflows to Sub-Saharan Africa: An OLI Theory Approach

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Abstract

This study examines how FDI is evolving in recent times in Sub-Saharan Africa (SSA) and other developing countries by employing the Dunnings Ownership, Location and Internalization (OLI) theory. The questions of importance as per the study are; how FDI inflow started; its effect on the SSA region and what to expect in the future. The paper starts with the operations of FDI in Africa from the 1960s. It then skews to the OLI theory and how its motives (seekers) influence three variables (technology transfer, economic reforms, and environmental degradation). The direct content analysis is adopted and to be precise the thematic approach to answer the questions raised by the researchers. A total of 212 preliminary literature is gathered and by forward and backward review, as well as in-duplication methods, a final 49 papers are arrived carefully selected to steer the research. The study revealed that technology transfer is possible through the "local content" policy in developing countries. Also, infrastructure and labour reforms have been influenced by market-seeking, efficiency-seeking, the resource-seeking, and the strategic asset FDIs. In addition, natural

resource-seeking FDI which concentrates on mining is the greatest source of environmental pollution in developing countries.

Keywords

Thematic approach, OLI theory, Technology transfer, Economic and Business reforms, Environmental degradation, and Sub-Saharan Africa (SSA).

1. Introduction

Foreign direct investment is envisaged as the manner in which an investing economy exercises de facto or de jure power of 10 percent at least or more interest in an enterprise voting rights (Jhingan, 2012). It is sometimes also seen as an investment that involves a long-term relationship, interest and management influenced by a resident of one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate) (Nyoni and OECD).

The current research on FDI focuses on environmental factors like carbon emissions and energy efficiency (Xu, Zhao, et al. 2021 and JinRu & Qamruzzaman 2022, Boohene & Darkwah, 2023a; Boohene & Darkwah, 2023b; Asante Darkwah et al. 2023). With new and modern models more analyses around the topic are becoming more possible than it has been in the earlier days of research (Agbokah et al. 2022; Agrawal et al., 2018). Again, because it's basically a subject that touches on behavioural finance, it's important to note that outputs from recent data may not tally with that of old data because human behaviour and response is not static (Bolton et al. 2020 and Hutchison 2018). A case that will sway people to the left in the 60s will do vice versa in our today's world.

Owing to this, FDI has also been going through some changes in the form of FDI regulations, adjustments in FDI regulatory framework and environmental laws which have been empirically stated (Borga & Caliandro 2018; Gokmenoglu et al. 2019 and da Motta Veiga & Rios 2019). These changes could be gearing toward a better environmental concern practices which never was on the table for their earlier operations (da Motta Veiga & Rios 2019). Again, some of these variables to guesstimate causal effects of foreign investment in the region is either inadequate or absolutely unavailable, making them immeasurable as compared to other regions (Nhemachena et al. 2018; Dinku 2019 and Kephe et al. 2021). To this end, it is important to investigate how FDI has evolved in recent times using past and present research articles done in the SSA and other developing countries.

The questions of importance include the origin of FDI in the region, thus, how it started; its effect on the region and what to expect in the future? To achieve this, the authors set out three variables with scanty research on the region (technology transfer, economic reforms, and environmental degradation). The authors dive into the literature on how FDI has impacted these variables in other developing countries and predict what the future holds for SSA. With this background, it is believed that it will open doors for further studies on the topic and will ignite more versatile analysis in the future.

1.1 FDI into Africa (1970-2000)

Data availability on FDI inflow stock to Africa pinpoints to the early 70s although it might have started earlier than that. Data from IMF databases and UNCTAD indicates the operations on African soil started from 1970. However, the accumulation of foreign direct investment unto the African continent augmented notably amid 1980 and 2000, raising from a little above thirty-two million dollars in 1980 to over a hundred and forty-eight million dollars in the year 2000 (Table 1).

Table 1:- FDI Inward Stock by Host Region

FDI Inward Stock by Host Region, 1980-2000 (Millions of US $)						
Region	**1980**	**1985**	**1990**	**1995**	**1999**	**2000**
World	615,805	893,567	1,888,672	2,937,539	5,196,046	6,314,271
Developed countries 1/	358,449	537,257	1,388,762	2,036,723	3,301,924	4,157,640
Developing countries 2/	257,357	356,262	496,915	864,392	1,792,154	2,031,916
Africa	32,714	33,854	48,648	75,914	1,40,548	148,035
Latin America and the Caribbean	49,990	79,673	116,678	201,616	520,282	606,907
Developing Europe	156	286	1,131	3,262	9,455	11,461
Asia	193,347	241,266	328,232	580,697	1,118,416	1,261,776
The Pacific	1,180	1,183	2,226	2,903	3,453	3,737
Central and Eastern Europe	0	0	2,996	36,424	101,968	124,715

Source:- World Investment Report (WIR), 2001

FDI inflows to the African region gained impetus in the second part of the 90s. In 1999, the inflow of foreign investment augmented to a record of US$10.5 billion, and decreased the subsequent year to US$9.1 billion (Table 2). These dimensions correspond to a momentous raise comparatively to the inflows that averaged about US$3 billion per year at the start of the decade.

Although the region recorded astonishing increments in the inflow, data mining from share of global foreign direct inflow suggest the increase was at a decreasing rate, thus from 2 percent in the late 80s, it decreased to 1.7 percent in 1996 but raised a bit to 2.3 percent in 1997 and dwindled again to 0.7 percent in the year 2000 (Tab.2).

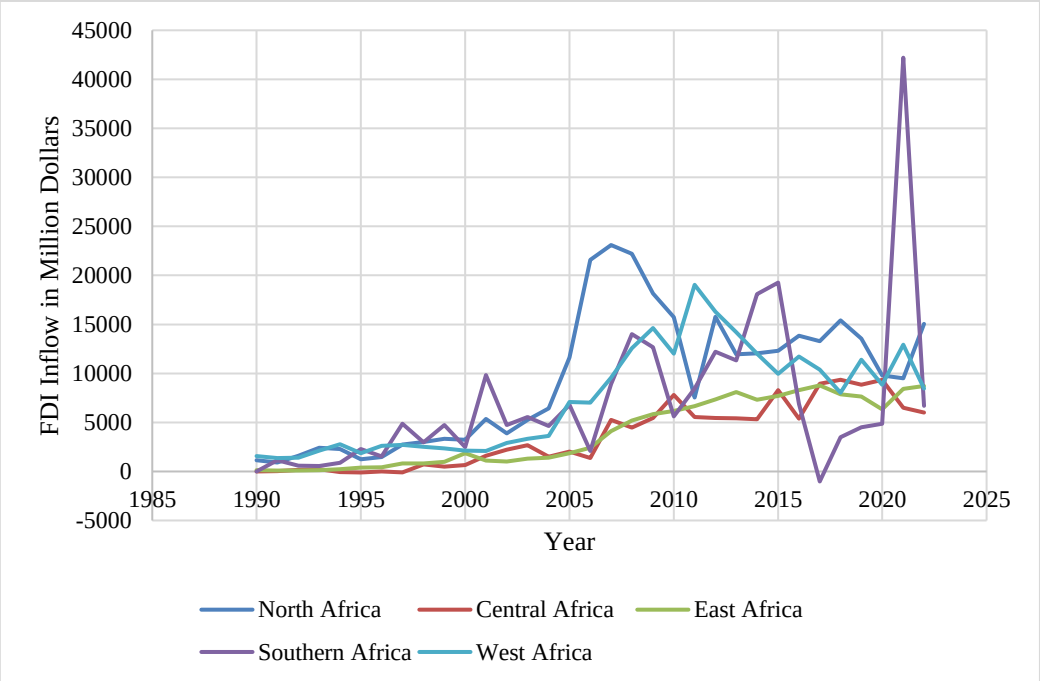
Table 2:- FDI inflows by Host Region

FDI Inflow by Host Region, 1989-2000 (Millions of US $) Average for period							
Region	**1989-94**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
World	200,145	331,068	384,910	477,918	692,544	1,075,049	1,270,764
Developed countries 1/	137,064	202,221	218,870	267,561	482,604	828,316	1,004,301
Developing countries 2/	59,638	114,580	153,310	191,168	188,933	223,511	241,045
Africa	4,012	5,935	6,440	10,970	8,274	10,473	9,075
Of which least developed countries	890	1,659	1,657	2,170	3,207	4,774	3,894
Latin America and the Caribbean	17,506	32,311	51,279	71,152	83,200	110,285	86,172
Developing Europe	232	477	1,085	1,699	1,608	2,723	2,035
Asia	37,659	75,293	94,351	107,205	95,599	99,728	143,479
The Pacific	229	564	155	142	252	302	284
Central and Eastern Europe	3,444	14,268	12,730	19,188	21,006	23,222	25,419
Share of Country groups in world (%)							
Developed countries 1/	68.50	61.10	56.90	56.00	69.70	77.00	79.00
Developing countries 2/	29.80	34.60	39.80	40.00	27.30	20.80	19.00
Africa	2.00	1.80	1.70	2.30	1.20	1.00	0.70
Of which least developed countries	0.40	0.50	0.40	0.50	0.50	0.40	0.30
Latin and the Caribbean	8.70	9.80	13.30	14.90	12.00	10.30	6.80
Developing Europe	0.10	0.10	0.30	0.40	0.20	0.30	0.20
Asia	18.80	22.70	24.50	22.40	13.80	9.30	11.30
The Pacific	0.10	0.20	0.00	0.00	0.00	0.00	0.00
Central and Eastern Europe	1.70	4.30	3.30	4.00	3.00	2.20	2.00

Source:- World Investment Report (WIR), 2001

Earlier forms of foreign direct investment recorded before the 90s in Africa were predominantly in two main regions, the northern and the western parts of Africa, with South Africa joining in the late 80s. This could be as a result of the civil unrest which was a result of the "The apartheid Legislation" and the fight led by Nelson Mandela for equal rights for all in the early part of the 70s. Also, these foreign investments were mostly drawn in by the endowments of natural resources in these areas, predominantly crude oil. North Africa, and West Africa (Nigeria), and Gabon from earlier days have been most important producers of oil, and with more countries from the region joining recently (Angola, Chad, Equatorial Guinea, and Sudan);

undeniably, oil reserves on the African continent are believed to exceed that of other countries outside the Middle East by far (on Trade & Development, 2002). Until recently, the highest foreign direct investment into Africa was recorded in 2008 and it went to the Northern part of the continent. As it stands now, Southern Africa is the leading region of FDI inflow unto the African continent. However, in a critical look at the share of country groups in the world, Africa by far recorded the least inflows throughout the period. The problems inhibiting the inflow of FDI to the continent cannot be exhausted; from civil unrest, to anti-colonialism and these two could be in a few countries on the continent but have rendered the whole continent as a hostile place for investment or simply an unfriendly environment for doing business (Odenthal et al., 1999). If there is a headway, some of these misconceptions should be dealt with and by also stressing on the fact that Africa is a continent and not a country and each country on the continent has sovereign power over its jurisdiction.



Source:- UNCTAD World Investment Report 2023

Figure 1:- FDI Inflow into Africa by Regions (1990-2022)

1.2 FDI into Sub-Saharan Africa (1970-2003)

World's highest inflow of FDI from 1970 to 2003 was recorded in the year 2000. Meanwhile, world foreign direct investment inflow for the period of 1970 to 1979 recorded a little 24 billion dollars of which the developed countries, Africa and Sub-Saharan Africa managed 6 billion, 1 billion, and 160 million dollars respectively (Tab.3). The inflow however quadrupled in the subsequent periods (1980-1989 and 1990 -1999) for world FDI and FDI inflow to developed countries but not for Africa or Sub-Saharan Africa for that matter; Africa and Sub-Saharan Africa only managed to double their inflows in the second period but tripled their figures in the third averaged period. (Table 3).

Out of the 1 billion dollars inflow unto the African continent, the SSA region received a chunk of it ($906m) in the first averaged period. This trend continued through the second and third average periods and up to 2003. The highest inflow of foreign investment in the sub region was recorded in the year 2001 ($6.2b), and it dwindled through to 2003 (Table 3). This is astonishing because the world highest inflow was in the year 2000 and not 2001 as it was in Africa and the SSA. This drop in World investment in 2001 could possibly be as the result of the terrorist attacks on the Twin Towers in the United States in the year 2001 popularly known as "9/11 attack". Investors reacted swiftly, losing interest in investments in the USA which was the major recipient of FDI in the developed countries. For some of the investors who still wanted a place to send their investment, Africa became a safe place comparably for that year until the bubble settled.

Sub-Saharan Africa's share of the world FDI for the period (1970-2003) dwindled throughout and so was the region's share in total developing countries. It starts off at a staggering 3.8 percent of the Words FDI inflow and 14.8 percent in the share of total developing countries in the first averaged period but continued to reduce throughout the period under discussion (Table 3). The FDI inflow per capita however showed an impressive run looking at a persistent increase throughout the study period. It starts off at 2.8 percent in the first averaged period and increases continuously to 15 percent in the year 2003 (Table 3). This is a good account on FDI inflow into the Sub-region because a positive value of FDI per capita normally translates into an inflow of foreign investment in a countrie economy distributed among its residents, whilst a negative figure indicates withdrawn investments.

Table 3:- FDI Inflows and Shares to Developing Regions, 1970-2003 (Millions of Dollars)

	Average for Period						
Category	**1970 - 1979**	**1980 - 1989**	**1990 – 1999**	**2000**	**2001**	**2002**	**2003**
World	24,124	93,887	401,028	1,387,953	817,574	678,751	560,115
Developed countries	6,109	21,356	121,769	252,459	219,721	157,612	172,033
Africa	1,066	2,162	6,187	8,728	19,616	11,780	15,033
North Africa	160	889	1,864	2,525	4,916	2,918	4,434
Sub-Saharan Africa (SSA)	906	1,273	4,323	6,202	14700	8,862	10,599
SSA less South Africa	813	1,259	3,472	5,314	7,911	8,105	9,836
Latin America and the Caribbean	3,269	7,438	44,432	97,537	88,139	51,358	49,722
Asia and the Pacific	1,774	11,756	71,150	146,195	111,966	94,474	107,278
Share of Country groups in world (%)							
Developed Countries	25.30	22.70	30.40	18.20	26.90	23.20	30.70
Africa	4.40	2.30	1.50	0.60	2.40	1.70	2.70
North Africa	0.70	0.90	0.50	0.60	0.60	0.40	0.60
Sub-Saharan Africa (SSA)	3.80	1.40	1.10	0.40	1.80	1.30	1.90
SSA less South Africa	3.40	1.30	0.90	0.40	1.00	1.20	1.80
Latin America and the Caribbean	13.60	7.90	11.10	7.00	10.80	7.60	8.90
Asia and the Pacific	7.40	12.50	17.70	10.50	13.70	13.90	19.20
Share in Total Developing Countries (%)							
Africa	17.40	10.10	5.10	3.50	8.90	7.50	8.70
North Africa	2.60	4.20	1.50	1.00	2.20	1.90	2.60
Sub-Saharan Africa (SSA)	14.80	6.00	3.50	2.50	6.70	5.60	6.20
SSA less South Africa	13.30	5.90	2.90	2.10	3.60	5.10	5.70
Latin America and the Caribbean	53.50	34.80	36.50	38.60	40.10	32.60	28.90
Asia and the Pacific	29.00	55.00	58.40	57.90	51.00	59.90	62.40
FDI Inflow per Capita (US $)							
Africa	2.6	4.00	8.8	11.00	24.1	14.2	17.7
North Africa	2.1	8.9	14.9	18.3	35.1	20.5	30.6
Sub-Saharan Africa (SSA)	2.8	2.9	7.5	9.4	21.8	12.8	15.00
SSA less South Africa	2.7	3.1	6.5	8.6	12.6	12.6	14.9
Latin America and the Caribbean	10.4	18.9	94.5	190.7	169.9	97.6	93.1
Asia and the Pacific	0.7	4.2	21.7	41.4	31.3	26.1	29.2

Source:- UNCTAD secretariat computations based on UNCTAD FDI/TNC database and World Bank online data.

1.3 FDI into Sub-Saharan Africa: The Past Two Decades

World FDI has been increasing at an alarming rate in the past two decades, data from IMF indicates that FDI world stock has more than quadrupled from the year 2000 to the year 2020 (Tab.4). The world FDI flows in 2015 augmented by 2 percent to USD 1.7 trillion, attaining their utmost level from the time when the global financial crisis began in 2007; A fraction of this boost was the consequence of financial and corporate reformations and not of new, industrious investments (OECD, 2016). With this, the investment inflow from businesses to other businesses in Africa has been projected to reach US $66.3 billion (Signé, 2018). Still, African remains the least recipient of global FDI throughout the past two decades. The region managed 2.07 percent of world share of FDI stock in the year 2000, 3.13 percent in 2010 and 2.25 in 2020 whilst Europe managed 33 percent in 2000, 42.39 in 2010 and 36.18 in 2020 (Tab.4). Although, most of the FDI stock inflow into Africa has been recorded in the Sub-Saharan Africa, there's still much to do if the region intends to increase the foreign investment inflows.

Table 4:- FDI Stock, by region, 2000, 2010 and 2021 (Millions of dollars)

FDI Inward Stock			
Region	**2000**	**2010**	**2020**
Developed economies	5 860 038	13 846 108	33 119 269
World	7 377 201	19 907 143	45 448 812
Europe	2 491 244	8 439 157	16 441 775
North America	3 108 255	4 406 182	15 056 860
Other developed economies	260 539	1 000 769	1 620 634
Developing economies	1 517 163	6 061 035	12 329 543
Asia	1 023 690	3 872 409	9 130 113
Africa	153 062	623 756	1 026 320
West Africa	33 010	109 968	208 446
Central Africa	5 053	39 227	118 702
East Africa	7 202	38 085	96 547
Southern Africa	62 208	235 365	276 534

Source: UNCTAD, FDI/MNE database 2021

Several reasons accounted for the minimum inflow of FDI in Africa, notably the protection of sovereignty (Bezuidenhout & Kleynhans, 2015) and again they needed to protect the infant industries (Tomohara & Takii, 2011); as this is in line with the classical theory of international trade which elaborates that infant industries need protection from international competitors until they become more stable and mature to compete. This therefore inhibited the inflow of FDI to the region because it was seen as a hostile environment. Again, there was the need to protect the African environment, as documented by Abdouli & Hammami (2017) that FDI operations in Africa negatively affects the environment. These among others made the leadership of the region to enact laws and rules that seemed hostile for foreign entrants. In recent times, however, policies have been put in place to attract more FDI into the region as it augments economic growth (Zekarias et al. 2016 and Masipa 2018), reduces poverty (Fauzel et al. 2016; Nedumaran & Manida 2019) and augments technology transfer (W. Liu et al. 2016; Hao et al. 2020 and HOANG et al. 2021). The region is also getting a lot of attention because of its market size (Shan et al., 2018), the avenue for tourism (Bezuidenhout & Grater, 2016), trade policy openness (Cantah et al., 2018), substantial economic reforms (Masipa, 2018) and so on. The future looks elegant for the region as it begins to position itself to compete or rub shoulder-to-shoulder with the developed countries for world FDI stock share.

1.4 Dunning's OLI Theory

The eclectic theory of FDI was theorized by Dunning in 1977, popularly, the theory has ground to be known as the OLI theory, thus, Ownership, location and internalization. Narayanan & Bhat (2011) explains that Dunnings eclectic or the OLI framework postulates that foreign investment survive and develop owing to the location (L) recompense, a makeup of production variables such as infrastructure, transportation, and natural and human capital accessible in the host nations; ownership (O) recompense consisting of the substantial and insubstantial assets of the corporation; and internalization (I) compensation owing to the firm's competitive advantage in producing internally rather than selling or licensing technologies to others. It is no doubt that this theory has come under a lot of criticisms (Laanti et al., 2009), nevertheless, although propounded based on the movements of factors of production and MNCs in the mid-1950s, it's still applicable to the ever-changing business environment and the operations of the MNC and remains an efficient and robust tool for analysing related specific theories of foreign

direct investment and international production (Dunning 2001 and Dunning & Lundan 2008b). In theory and practice, international firms will relocate to areas where there exist ownership advantage (Perri & Peruffo 2016; Ross 2019 and Joghee et al. 2020); location advantage; Jones & Temouri 2016 and Joghee et al. 2020); and internalization advantage (Abdurakhmanova & Rustamov, 2020). However, is it more appealing for FDI location decisions when all three advantages come together at a given location (Kurtishi-Kastrati 2013 and Abdurakhmanova & Rustamov 2020).

1.4.1 "Seeker" Theory of FDI

Many theories apart from the Heckscher-Ohlin theory tries to explain the motives and determinants of FDI from different regions. Conventional trade theorists like Helpman & Krugman in 1985 and the extended version of Krugman & Obstfeld in 1994 emphasizes that the route and enormity of capital flows is as a result of disparities in factor proportions between economies, which is beyond the scope of international trade. This theory posits that dissimilarity in factor proportion kindles an alteration of real exchange rates among economies and as a result support economies with profuse capital and labor deficiencies to put FDI in operation in economies in the contrary circumstances. There exist other factors that could explain capital movement across the globe. For example, if capital movement on the form of FDI was as sole result of capital inadequacy or the absence of it then, developing countries should be having the greater share of it and not the developed countries but that's not the case, according to WDI data, the USA still remains the best region which attracts more FDI stock than any another country in the world. It's with this background that the seeker theory becomes relevant. The seeker theory distinguishes between four main motives for the movement of capital in the form of FDI through various mediums like the MNCs and the TNCs (Dunning & Lundan, 2008b). The four main categories are; (1) Market Seeker (2) Resource Seeker (3) Efficiency Seeker and (4) Strategic Asset Seeker. Dunning & Lundan stress that market seekers have larger market access and are trying to gain a bigger market share and take advantage of economies of scale. As such, some MNCs are interested in high population dense area with the notion that it will translate to high demand. The Resource seekers on the other hand are interested in regions with a high concentration of

natural resources which could be attained at the lowest cost possible. The two types of resource seekers in developing countries in Asia and Africa the natural resources and cheap labor resources. Again the quantum or size of the natural resources matters most and not just the type of natural resources (Asiedu & Lien, 2011). The third seeker is the efficiency seeker. Dunning & Lundan explains that the purpose of the efficiency seeker MNC confines its production locality to a few advantageous regions and supplies to the surrounding markets. The intention isn't to enter every market with a production site but to situate at a cost advantageous. The last seeker is the strategic asset seekers; this MNC wants to acquire assets that will give them a competitive edge over their competitors, the industry, and the global marketplace at large.

2. Research Methodology

To analyse the underlying factors of foreign direct investment to the Sub-Saharan Africa region, we employ a qualitative approach. This is because of the limited nature of FDI variables with ample data in the region. There also exists inadequate data for quantitative research in the study area. Data available in the sub-region allows for only some variables to be analyzed statistically and as it stands now it looks overstretched, thus this study seek to use the literature available to infer possible outcomes in the region. The study of FDI is so dynamic in that it supports both quantitative; Nguyen et al. 2020 and Huy et al. 2021) and qualitative; Tocar et al. 2018 and Nguyen et al. 2019) approaches.

Even though this approach has restrictions, we take advantage of its explanatory characteristics of this theory and predict that future studies may perhaps investigate quantitatively when secondary data is presented. Many studies have engaged the underlying factors of FDI in different regions with the OLI and Seeker theories (Bezuidenhout et al. 2018; Tang et al. 2021; Luo 2021 and Affandi et al. 2021).

Although there exists some literature review of foreign direct investment and its underlying factors in some regions, they are very scanty when it comes to using literature to explore the theories. Furthermore, a theoretical review of this nature hasn't been done on the African region and SSA for that matter. This therefore presents a gap to fill with respect to FDI underlying factors in the region and to explore what literature can tell where data fails. Again, the sub-region has a lot of data deficiencies making it difficult to explore more underlying variables in relation to the region. To this end, we present a distinctive approach to

understanding and analyzing the underlying factors of FDI in the Sub-Saharan region.

Given the over-exploring of the few available data and the unavailability and incomplete of secondary data in the region, we center our attention on the existing and accessible literature to offer answers to the research question - what are the underlying factors of foreign direct investment in the Sub-Saharan Region?

Snyder (2019) iterates that gathering literature as data is possible in three main ways; integrative review, semi-systematic review, or systematic review. Whereas the systematic review is fitting for gathering and scrutinizing empirical results, integrative review and semi-systematic review are applicable when tracking the evolution of research. The researchers therefore adopt the integrative and semi-systematic review to the fore of the systematic review. This will help steer the selection of literature. The systematic review is proven to be the best method of analysing literature because it follows standardized rules and procedures (Snyder, 2019). Owing to the broad nature of this study, the rigidity of the systematic review will put a dent in the scope we could explore, for this reason, we choose the semi-systematic review. This approach is suitable since the process has been explored idiosyncratically by scholars. Again, the study's objective is not to cover all obtainable studies but to center our attention on precise ones. We therefore develop a semi-systematic review to analyse the underlying factor of FDI activities in the Sub-Saharan region.

2.1 Data Collection and Approach

To present meticulous scientific evidence, we place our exploration condition to embrace only peer-reviewed articles. In addition to this, we set our search terms to include, OLI and FDI seeker theory, underlying factors of FDI and developing countries, and FDI spillover effects'. Finally, we catalog in sequential order databases (Web of Science, Scopus, Science Direct, IEEE, and Google Scholar) to hunt for data. To begin with, we gathered a total of 212 papers from the above, listed databases. To avoid replications, we speed, read to eliminate identical papers collated from different sources. Subsequently, the data is spruced to 102. Additionally, by means of authors name, we underwent a backward review and gathered preceding articles connected to the replica-free data of 102. This procedure bought the tally to 116. Afterward, we employ the forward review to eliminate articles based on the number of citations. After this exercise, we eliminated a total of 59 papers because it lacked citations. The product is an

ultimate set of 57 papers. This sampling modus operandi foils the insertion of unbefitting articles and congregates quality data to shore up the study.

2.2 Direct Content Analysis

We espouse a thematic approach or analysis to unearth and validate the trends in our data as used by Snyder. This assists in the process of understanding the trends in the literature regarding the underlying factors of FDI and the possible effects on its host. The direct content approach has been employed as a research technique in scanty FDI papers in both developing and developed countries. None for what so ever has been employed in the sub-region with respect to FDI. In fact, the method is not new but its application in FDI and foreign investment papers have received minute attention (da Silva-Oliveira et al. 2021 and Wang et al. 2022). Subsequently, da Silva-Oliveira et al. employ content analysis in "Emerging Economy Inward and Outward Foreign Direct Investment" by reviewing literature in relation to the subject matter and drawing conclusions. Grounded on this, we adopt the approach and combine OLI attributes and the four-seeker concept of FDI to build up a linkage for evaluating the attributes and the underlying factors of FDI into developing countries, using SSA as the case study. Accordingly, the resulting framework is an intersection of three major parts. The first part centers on the OLI theory; Ownership advantage, Location advantage, and Internationalization advantage. The second part captures the seeker theory and the last part looks into the effect of these investments on the host. Adding the third part to the framework, which measures the effects of FDI operations, answers our question as to the contributions of FDI in developing countries and SSA, be it negative or positive. Again, including the OLI attributes and the four-seeker concept of FDI also helps to understand specific offerings of the concept of FDI inflow to the sub-region and to check whether the literature agree or disagree with these theories. Expressly, the characteristics of the theory are matched with the needs of the host and the spillover effects as depicted in the framework. Owing to this, we pose questions that will guide the analysis of the data gathered. This is adequately illustrated in Table 5 below.

Table 5:- Dunnings Perceived FDI Theory and Spillover Research Questions

Spill-over Effect			
FDI Seeker	**Technology**	**Econ/Business Reforms**	**Envr. Degradation**
Market (MS)	Does MS share its technical know-how with host?	Does MS influence economic and/or business reforms of host?	Can MS contribute to the pollution of host nation?
Resource (RS)	Does RS make its tech available for the host?	Can RS cause an Economic and/or business reforms of the host?	Does RS pollutes Environment of the host?
Efficiency (ES)	Is ES known for its sharing technology with the host?	Does ES cause economic and/or business reforms?	Is there a link between ES and the pollution of host?
Strategic Asset(SAS)	What is the effect of SAS on the technology of host?	Can SAS impact economic and/or business reforms?	Is the SAS blamed for pollution of host?

Source:- Authors Construction, 2022

3. Results and Discussion

The basis for the analysis was Dunning & Lundan motives for foreign direct investment and the underlying factors from the Sub-Saharan perspective. The authors focus on factors with little or no research on the region and without ample secondary data like technology, economic reforms, and among others for empirical analysis. We therefore mine from literature on these variables and infer to the sub region. Table 6 unveils the data supporting our framework. The result of the research is expressed and discussed per the FDI seeker theory by Dunning & Lundan.

Table 6:- Results of Dunnings FDI Theory and Spillover Research Questions

Spill-over Effect			
FDI Seeker	**Technology**	**Econ/Business Reforms**	**Envr. Degradation**
Market (MS)	Tülüce & Dog˘an (2014)	Xu, Han, et al. (2021)	Jaiblai & Shenai (2019)
	De Beule & Van Den Bulcke	Tan et al. (2019)	Dunning (1988)
	Giroud & Mirza (2015)	Gabriel & David (2021)	Zhao et al. (2016)
	Jaiblai & Shenai (2019)	Sandler et al. (2019)	Bian et al. (2019)
	He et al. (2015)	Pereira et al. (2019)	Edokpayi et al. (2017)
	Cheng et al. 2007		Z. Liu et al. (2018)

FDI Seeker	Technology	Econ/Business Reforms	Envr. Degradation
Resource (RS)	Tugendhat (2021)	Berry (2017)	González-Martínez et al.
	Rudy et al. (2016)	Shukurov (2016)	Y. Liu et al. (2021)
	Masipa (2018)	Skovoroda et al. (2019)	Zhu et al. (2018)
	Charaia et al. (2020)	Contractor et al. (2020)	Melina et al. (2016)
	Ayentimi et al. (2016)	Diprose & Azca (2020)	Zhu et al. (2018)
	Ross (2019) Ghebrihiwet (2016)	Bottazzi et al. (2016)	
Efficiency (ES)	Driffield et al. (2021)	Wadhwa & Reddy (2011)	Pan et al. (2020)
	Wadhwa & Reddy (2011)	Dunning (1988)	Dunning & Lundan
	Alon et al. (2010)	Ross (2019)	Jaiblai & Shenai (2019)
	Guimón & Salazar-Elena	Kumar et al. (2007)	
	Dunning (1988)	Driffield et al. (2021)	
Strategic Asset (SAS)	Alfaro & Chen (2018)	Sutherland et al. (2020)	Zheng et al. (2016)
	Sutherland et al. (2020)	Dunning (1988)	Lu (2022)
	Peng et al. (2017)	(Yoo & Reimann (2017)	Y. Liu et al. (2021)
	Liang et al. (2021)	Anwar & Mughal (2017)	Lu (2022)
	Li & Shenkar (2018)	Rozen-Bakher (2017)	Dunning (1988)

Source:- Authors Construction, 2022

3.1 Technology Transfer

Technology transfer is among the most important reason why companies and economies opt for FDI (Blomstrom, 2014). This segments focal point is on how market, efficiency, resource and strategic asset seekers could affect the technology of the host through spill-over effects. It seeks to pen down how the host can benefit in terms of technology transfer from operations of FDI in developing countries around the world and then infer try to predict same for the sub-region.

3.1.1 Market Seeker- Does MS Share its Technical Know-how with Host?

The market seeker is more interested in demand, owing to this, they seek regions that are highly populated because all things being equal that will translate to demand (De Beule & Van Den Bulcke 2012;

Giroud & Mirza 2015 and Jaiblai & Shenai 2019). Their technology and distribution mechanisms are not at the blindside of the host since they mostly become industry players and take advantage of already established distribution channels of the host's industry as they obtain trading and distributing rights to operate (He et al., 2015). They however tend to augment it in situations where the host technology and procedure needs a face-lift (Cheng et al. 2007; Tülüce & Dog˘an 2014 and He et al. 2015). This implies that the given the same chance, the SSA could benefit from the market seekers transfer of state of the art technology and distribution since it made easily available.

3.1.2 Resource Seeker- Does RS make its Technology Available for the Host?

The resource seeker is more likely to be driven to areas with ample natural resource at a lower cost and/or an area with a high density of cheap labour and other resources (Phung 2016; Ma et al. 2020 and Eissa & Elgammal 2020). Owing to this, they are mostly found in developing and underdeveloped countries because of their untapped natural resources or relaxed labour policies (Ross, 2019). Their technology and mode of operations are mostly spelled in their contract but most governments have initiated the local content policy which forces them to work with the locals and train them (Rudy et al. 2016; Masipa 2018 and Tugendhat 2021). Ghebrihiwet (2016) admonishes that in some cases, governments have include laws and regulations that ties the hands of the MNCs to employee and train local workers, purchase from local producers and suppliers and augment local research and development. Through this, on the job training and other mechanisms for operations are taught to the locals, to be more skilled and better managers. This inherently transfers skills and RD from the MNCs to the host (Ayentimi et al., 2016). The resource seeker mostly brings in their own technology to either mine or manage labour, and this mostly is easily picked by local producers by means of poaching and so on. Years of RD is made available for mimicking and adopting as MNCs who seek resources share the same grounds with local producers (Charaia et al., 2020). In situations where there exists no competition from local manufacturers, the spillover is felt in the training of the local employees and their exposure to hands-on experience in the field. SSA could benefit from

the resource seekers if attention is paid to their operations and a local content compulsory clause stated in their contracts. In this way, spillover effect is inevitable.

3.1.3 Efficiency Seeker- Is ES known for Sharing its Technology with Host?

The efficiency seeker is more interested in activities that will reduce cost of operations and maximize profits. They will move near the raw material or the area with the best distribution channels if that's what reduces the cost of operations, however in recent times, they are found to be swayed into regions with heavy tax havens (Driffield et al., 2021). Their aim is not to be found in every location but to be situated at an advantageous location where they can have new avenues of competitiveness, low cost of production, and economies of scope and specialization so as to distribute to the rest of the market (Wadhwa & Reddy, 2011). The spillover effect of the efficiency seeker is in their mode of operations. In Asia for example, they build factories and brands which mostly localized to appeal to the host and to supply developed countries like the USA (Alon et al., 2010). This and more are easily picked up by local producers to gain from such a highly organized way of doing business. The local entrepreneur may pick business ideas and modes of operations by mostly collaborating with the MNCs or poaching from these companies. This may include RD, business founding options and distribution channels; collaborations that may inspire more global innovation networks (Guimón & Salazar-Elena, 2015). According to Fernández-Olmos & Ramírez-Alesón (2017), local producers and SME's stand a greater chance of surviving through collaboration. For SSA to gain from the efficiency seeker, market giants, and local entrepreneurs should seek collaboration rather than hostility and unhealthy competition.

3.1.4 Strategic Asset Seeker- What is the Effect of SAS on the Host Technology?

The strategic asset seeker is more interested in acquisitions and mergers that will give them a competitive urge over their counterparts in the industry.

They move to new areas to explore the advantages of that market and to better serve their international customers (Alfaro & Chen 2018 and Sutherland et al. 2020). They are not interested in starting a business from scratch but are ready to take over an existing business and make it theirs. The spillover effect can be both ways as the host learns from the MNC and the MNC from the host (Peng et al., 2017). However, one thing about the strategic asset seekers is they tend to bring their years of experience and technology to the host and the most revealing thing is they tend more to targeting firms in develop countries (Liang et al., 2021). This in the long run affects local business operations as their mode of operations or their presence is felt in the industry. Again, the spillover effect is that local businesses could adopt their modes of doing business to their advantage; things like customer relations, guarantees, and warranty, business operating software, architectural and business premises designs, among others (Li & Shenkar, 2018). SSA should move more towards mergers rather than acquisitions to experience the full impact of business knowledge and years of RD from the MNC's.

3.2 Economic/Business Reforms

This segment's focal point is on how market, efficiency, resource, and strategic asset seekers could initiate economic and business reforms of the host nation and in this case Sub-Saharan Africa. These reforms mostly arise in what the businesses and the economy as a whole put in place in either to maintain its FDI inflow or to attract more (Kasasbeh et al. 2018 and Shen et al. 2020). This segment seeks to illustrate the FDI-induced reforms that occur in developing countries and infer to the Sub-Saharan region.

3.2.1 Market Seeker- Does MS Influence Economic /Business Reforms of Host?

Jaiblai & Shenai (2019) stipulates that the market seeker as it name sounds is more likely to be moved by regions with high population density and not just that but also with a high demand for goods and services. Although the general idea is that a high population tends to mean high demand, income also matters all things being equal. In economics, the willingness to buy and being able to buy makes the difference between demand and want. For the market to operate well and maximise profits, certain fundamental apparatus should be

present. The infrastructure (Ross 2019; Sabir et al. 2019 and Rahman & Samsul 2012 of the host in addition to a couple of factors like trade openness (Donghui et al. 2018 and Xu, Han, et al. 2021) and financial openness (Tan et al. 2019 and Gabriel & David 2021) comes into play. The market seeker will come with its technology but needs the grounds to be conducive so as to augment their part of the whole production process. One does not expect the market seeking FDI to come and build roads and other variables relevant to their operations but they are known to mostly build subsidiaries from the scratch (Sandler et al., 2019). Owing to these, business environments and economies that wish to attract the market seeking FDI undergoes some reforms like building roads and provision of adequate infrastructure to entice more MNCs to move in to do business and as well, maintain their level of FDI inflows. In recent years, tax havens have been penned down to attract more FDI into developing countries but the efficiency-seeking FDI is most influenced (Pereira et al., 2019). This implies that the SSA could benefit from the market seekers if the right infrastructure is put in place and at the right time, all things being equal. The region should not throw all their burden on the MNCs since that increases their cost of operations and this eats into their profits. If care is not taken, and the right infrastructure is not put in place by the government and relevant bodies, they might fold up and relocate elsewhere where these benefits will come easily or cheap.

3.2.2 Resource Seeker- What is the Role of RS in Economic and Business Reforms of Host?

Eissa & Elgammal (2020) iterates that the resource-seeking FDI is more interested in areas, predominantly, developing countries with ample and cheap natural resources. In addition, they tend to be swayed to areas with cheap and lose labour policies to take advantage of reduced labour cost (Rudy et al. 2016 and Elshamy 2017). The resource-seeking FDI is more likely to bring their own technology and resources to take advantage of the resources of the host but in that, they tend to influence reforms that may span from infrastructure, environmental concerns exploitation of local workers (Shukurov 2016 and Contractor et al. 2020). In some cases there have been strikes and law suites to bend the hand of the resource seeker to pay

compensation packages or to give some sort of incentives where the labour unions deem fit. This arises because of the dangers with the line of work especially with the miners and the unfair labour or exploitation of labour in host countries which translates into civil war, terrorism, and strikes (Skovoroda et al., 2019). To a large extent, some of the unfair labour policies in most developing countries and unfair labour treatment have led to more labour unions being formed at most MNCs in developing countries. These labour unions then make their own rules in accordance the law governing labour unions and this helps them to come together and fight for their rights in cases where the government rules governing labour fails. In the long run, however, the industry or the local government which has the jurisdiction authority makes reforms to check the operations of these resource-seeking multinational corporations and in so doing put measures and procedures in place to meet all needs of both the FDI and the locality (Contractor et al., 2020). The sub-region is not free from some of this chaos being discussed, in fact, there's are a lot of clashes with locals and foreign corporations in oil-rich nations and geographical areas where the government sells rights to the MNCs and the local or traditional authorities disapprove of the governments agreements. In some cases, gas pipelines are cut open and others just set fire to destroy company properties, a continuous clash with the locals and the foreign investors (Diprose & Azca, 2020). For the region to gain from the resource-seeking FDI, reforms should gear towards local content policies to involve the traditional owner of such rich lands so as to encourage working together and not disrupting the operations of the MNCs. This becomes relevant because land in most of Sub-Saharan Africa belongs to the traditional rulers and not the governments, although there are portions that are allotted to the governments which are normally called government lands (Bottazzi et al. 2016 and Berry 2017). In addition to this, tax havens should be exploited since they tends to sway FDIs into such regions.

3.2.3 Efficiency Seeker- Does ES Cause Economic/Business Reforms of Host?

Wadhwa & Reddy (2011) stresses that the mode of the operations of the efficiency-seeking FDI is not to be found in every geographical area but rather to be strategically positioned to take advantage of low

cost of production and economies of scope. They intend to build closer to the raw material or access to a more efficient distribution channel if that's what is cost-efficient and then distribute to the other surrounding markets (Dunning & Lundan, 2008b). The efficiency-seeking FDI is more likely to influence businesses and economic reforms especially for economies and industries that wish to attract them; this is simply because they are attracted to areas with efficient allocation of resources and conducive working environments (Ross, 2019). In India for instance, the efficiency-seeking FDI influenced the regional trade agreements (RTA) between the country and its FDI counterparts (Kumar et al., 2007). With this said, it is not out of place to think of how these efficiency seeking FDI could initiate reforms and regulatory framework of FDI in the Sub-Saharan region. To attract more efficiency seeking FDI, the government and industry players should engage in activities and programs that tend to remove barriers of trade and make the business environment more conducive and efficient; tax haven is an added advantage (Driffield et al., 2021). Investment in infrastructure will also go a long way to induce efficiency seeking FDI into the region since they seek to move to areas that augment or cuts down the cost of production. Good roads and well-demarcated regions with state-of-the-art addressing systems are the bases on which good distribution channels thrive. Governments and the relevant government agencies should therefore make efforts to put in place a good and well-cataloged addressing systems among others if the efficiency-seeking FDI is the target.

3.2.4 Strategic Asset Seeker- Can SAS Impact Economic/Business Reforms of Host?

Sutherland et al. (2020) explain that the strategic asset-seeking FDI is mostly interested in mergers and acquisition and not a fan of starting a business from scratch. They tend to move into the acquisitions industry giants in developing countries mostly to acquire parts of control of the company in the form of mergers and buys the company out outright (Yoo & Reimann 2017 and Anwar & Mughal 2017). Strategic asset seeking FDI is mostly in the service industries, especially in IT and telecommunications, in the banking sector, in building and construction, just to mention a few. Strategic asset seeking FDIs are more induced by tax haven economies and a

relatively peaceful nation free from civil and political unrest. This is mainly because their investment is mostly in huge sums and therefore they expect the continuity of business operations so to break even and reap profit through their operations; free from political instability and civil unrest (Anwar & Mughal 2017). Countries that seek strategic asset seeking FDI reform their company and business laws to relax the rules on entry and exit into industries (Rozen Bakher 2017). The other reforms that come into play may include infrastructural face-lifts and more foreign-friendly business environment. For SSA to attract more strategic asset seeking FDI, the anti-colonialism movements, and hostility to foreigners should be kept under country and embrace all manner of culture and ideas irrespective of background and especially of race.

3.3 Environmental Degradation

This segment pinpoints how market, efficiency, resource, and strategic asset seekers could affect the environment of the host through their day-to-day activities. It seeks to bring to light how the host can benefit or be left worse-off in terms of environmental friendly or hazards from the operations of FDI in developing countries around the world and then try to relate it to the sub-region of Africa. Although some studies indicate that FDI through spillovers and their diffusion of a variety of environmental knowledge, they bring onboard an overall positive environmental knowledge externalities (Ning & Wang, 2018). To a large extent, their operations in developing countries are believed to cause more harm to the host environment than the its prose to the locality (Hanh et al., 2020). Although a lot of factors comes into play when discussing the forever deteriorating environment in which we live, majority of the degradation have been attributed to trade openness and industrialization, financial development, energy consumption, and among others (Burki & Tahir, 2022).

3.3.1 Market Seeker- What is the Link Between MS and Environmental Pollution of Host?

The market-seeking FDI may be among the major environmental degrading FDI, although it might be a far-fetched theory or gradually gathering momentum. Their aim is to increase their market share or presence in markets; so basically they sort for a large markets so they can produce on large scales (Jaiblai & Shenai, 2019). Their effect on

the environment stems from their mode of operations, thus their technology for production and distribution channels. Producing on large scale to take advantage of economies of scale mostly translates into burning more fuel or using more energy (Zhao et al., 2016). Again, their distribution channels and mode of distribution alongside their market segmentation may be adding to the burning of fossil fuel or coal in the economy since they mostly resort to road transport and not other environmental friendly modes like railways (Bian et al., 2019). Owing to the fact that environmental laws are relaxed in Africa and in most developing countries, they tend to turn a blind eye on that and resort to cheap mechanism which are not environmental friendly (Edokpayi et al. 2017 and Z. Liu et al. 2018). It's obvious they cannot show up in a region and start investing int railway technology if they already don't exist in the locality, but their operations increases energy consumption in the host, and steps should be taken to reduce this menace. Although Africa generates less carbon emissions among other environmental degrading substances year in and year out, governments in the region should put stiff measures in place so as not to deteriorate the drift which is being led by the MNCs operations on the continent. Greener ways of doing business should be explored and much attention should be given to greener forms of energy production like hydro, solar, just to mention a few.

3.3.2 Resource Seeker- How does RS Impact Environmental Pollution of Host?

Perhaps the FDI with the most blame according to scholars on the degradation of the environment is the type of resource-seeking FDI that concentrates on natural resource exploration, with mining and agriculture causing more harm to water bodies than good (Y. Liu et al., 2021). This in the long run will affect portable drinking water and the quality of life at large. The resource seeker actually enters markets to exploit and take advantage of the host natural resources and it has been documented that mining is perhaps the most significant source of environmental degradation (Zhu et al., 2018). Natural resource FDIs are about the most FDI forms that move into Africa and most developing countries because they sit on ample and untapped natural resources (Melina et al., 2016). Again, their methods of operations are what add to the pile of environmental pollution of the host. Mining

takes the form of different modes and technology to search for minerals that are mostly hidden in rocks, seabed's, and deep underground (Zhu et al., 2018). There's being adverse effects of mining not only on its employees or land but also in the water bodies and the sea as a whole, affecting aquatic life; lives have been lost to cave-ins on mining grounds and oil spillage affecting and other activities including commercial farming affecting water bodies (González-Martínez et al. 2019 and Y. Liu et al. 2021). River and surface mining has also resulted in rendering farms land poisonous and rivers and lakes inhabitable for aqua-life and undrinkable for human and animals; in a nutshell it's posing a threat on farming which if not curbed will affect the future supply of farm products. Although most mining MNCs do engage in some sort of corporate social responsibilities, their impact on the environments outwit the benefits the host receives. There's the need for the sub-regions policymakers to sit up and not think of just today when inviting these explorers in to mine but they should think of tomorrow.

3.3.3 Efficiency Seeker- Is there a Link between ES and Pollution of Host?

In some parts of the world, the efficiency-seeking FDI has impacted positively on the use of clean energy sources and forms and tends to augment the environmental friendly procedures put in place in areas they operate (Pan et al., 2020). Their mode of operation alerts them to seek areas and regions that they can produce at a lower cost per unit and as efficient as possible so as to increase presence in neighbouring markets and to maximize profits (Dunning & Lundan, 2008b). The efficiency-seeking FDI may cut corners and resort to activities that pollute the environment when policies in the host country gives room for that but they mostly bring in-efficient technologies and capital to limit their cost of operation (Jaiblai & Shenai, 2019). Jaiblai & Shenai (2019) iterates that it is because efficient-seekers are cost conscious and will do anything to reduce the cost of production and maximize profits. Regulatory frameworks in the region should be tightened enough to curb corruption-related issues that cause public offices to turn a blind eye on efficiency-seekers who engage in hazardous production processes.

3.3.4 Strategic Asset Seeker- Is SAS Blamed for Pollution of Host?

The strategic asset-seeking FDI enters into different markets through mergers and acquisitions (Zheng et al., 2016). They mostly inherit the corporate image and business practices of the corporation they are merging with or acquiring. The Majority of these strategic asset-seeking FDIs happen in developing countries where MNC's simply wants to take advantage of new and emerging markets or just because they see an opportunity to expand and maximize their customer base and profits in the long run. The strategic asset-seeking FDI impact on the environment stems from the type of industry they find themselves in. In China for instance, through the influence of international green trade barriers, selling overseas scale of China's profoundly polluting corporations is reduced (Lu, 2022; Darkwah & Boohene, 2023). It must be said however that in the service industry may be more friendly to the environment than the mining sector (Y. Liu et al., 2021). The strategic asset seeker will adhere to rules and regulations like any normal business, therefore it's up to the government and the requisite agencies in the sub region to enact laws to keep the operations of these foreign investors in check; just like China's international green trade barriers and how its positively impact the environment by reducing the amount of pollution from the Chinese enterprises (Lu, 2022).

4. Conclusion

There exist literature pertaining to how FDI, be it a market-seeking, resource-seeking, strategic asset seeking or and efficiency-seeking's influence on the three subjects of discussion under the underlying factors (Technology, economic reforms, and environmental degradation). These literatures are predominantly in Asia and Latin America but not Africa or SSA to begin with. There exist some country-level analyses which cannot be generalized on the region. This research becomes important in that it highlights the need for the region to record data pertaining to all activities to enable statistical research in all spheres of the region and again it forms the basis on which other papers can be built. This study documents conclusively that foreign direct investment influences economic reforms, augments technological transfers and impacts environmental degradation in developing countries. The other highlights of this paper are that resource-seeking FDI, and particularly the natural resource seeker has a greater impact on environmental pollution than the remaining seekers in developing

countries. Inferring from this therefore, we can state categorically that the mining sectors in the sub region may be one of the major sources of pollution in the region and also project that the region's economic reforms and technological advancements can be attributed to the operations of FDI.

The study predicts the future reforms in the region to aim at efficiency seeking FDI move into regions that give them a reduced cost of operation in either to maximize profits. These reforms could also be in the area of building a strong transports system and building ample infrastructure to attract market-seeking FDIs since the region can boost of its high-density population status. Tax havens and other similar enactments could also engineer a lot of FDI inflows.

The study also envisages the region learning from other leading developing countries like China on building eco-friendly policies in the industries and the mining regions to reduce the amount of energy usage and as well the carbon emission levels. This is achievable by building enough infrastructure and providing a conducive environment for foreign investors and local producers to work together and tab from modern methods of doing businesses that are environmentally friendly.

5. References

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Leveraging Innovativeness of High-tech Enterprises through Hope & Optimism: Insights from Case Studies

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Abstract

India has shown noteworthy progress in its high-tech sector during the last decade. High-tech enterprises can be identified as their novel growth is driven through creative and innovative environments. Creative behavior is inclined by personality factors including cognitive and non-cognitive factors, and an association between individual and organizational factors of creativity and innovativeness. Hope and optimism can enhance newness and novelty through motivational empowerment. The present paper concentrates on identifying the role of hope and optimism which foster the motivational empowerment of an individual leveraging creativity and innovativeness. It provides discussions on various aspects of personality factors that bring strengths to enhance hope and optimism through motivational empowerment of leveraging the creative potential of the workforce. The exploratory research has been conducted through a case study in two high-tech industries. This research aims to integrate personality factors with hope and optimism through motivation-empowerment which leads to creativity and innovativeness of employees at individual and organizational levels.

Keywords

Hope & Optimism, Creativity, Innovation, Empowerment-motivation, and High-tech Enterprises.

1. Introduction

As the universe confronted the covid 19 pandemic and its negative impacts, including associated mental health issues, negative environment, and adverse surroundings, finding meaning in life, and building positive self-talk and capacities will help to strengthen positive orientation for the future (waters et al.,

2021). In literature hope and optimism can be considered as pillars for positive thought processes, and can act as potential mechanisms toward achieving positive mental health (Gallagher & Lopez, 2009, 2018). The concept of dispositional hope (Synder, 2003) and dispositional optimism (Scheier and Carver, 1985; Carver, 2014) share several elements: (a) personality factors, (b) cognitive components, (c) reference to prediction, (d) connection to meaningful personal target, (e) futuristic direction, and (f) behavioral factors (Kraft et al., 2021).

In the last decade, India has witnessed a revolution in its high-technology sector. The successful emergence of its knowledge-based industry in the prevailing competitive milieu of globalization has resulted in creating a common interest among planners, policy-makers, professionals, entrepreneurs, and researchers to understand the impact of various organizational and personality factors on the sustainable performance of such firms. High-technology enterprises are characterized by their knowledge-intensive environment and focus on newness and novelty in the development of products, processes and services (Nirjar & Tylecote, 2007). In general terms, the ability of people to combine ideas in a uniquely way is called 'creativity' (Amabile et al., 1996). Creativity has been described by Gurteen (1998) as the generation of new ideas whereas innovation implies putting these ideas into action by processes of shifting, redefining, and implementing (Job and Bhattacharya, 2007). Thus besides the technical competence of professionals, creativity, and innovation are the dominant factors which are essential for surviving and holding competitive advantage in highly dynamic technology-intensive sectors (Ojha and Krishna, 2004; Kapur et. Al. 2008).

The professionals working in high technology enterprises having technical competence are often known as knowledge workers. The definition of knowledge workers based on their individual characteristics identifies workers as people who are highly educated, creative, talented, smart and communicative. (Herwitz, Heng and Quazi, 2003, p31.)

Knowledge workers have a high level of skills/education in technological literacy, high cognitive power, and abstract reasoning. This includes the ability to observe, synthesise and interpret data and to communicate new perspectives and insights to lead to more effective decision-processes and solutions for their organization.

In addition collecting data through case studies and analyzing the responses of case studies show that hope and optimism have a significant relationship with creativity and innovativeness through motivational empowerment. In other words, hope, and optimism are effective through motivational empowerment to foster innovativeness.

Researchers have identified that the main objective of a creative thinking process is to think beyond existing boundaries, to enkindle curiosity, to break away from rational conventional ideas and formalized procedures to rely on the imagination, the divergent and random to consider multiple solutions and alternatives (Candy, 1997; Schlange and Juttner, 1997). The capability of an organization to be more creative starts at the level of the individual and the task of a high-tech enterprise is to identify the individual personality characteristics and create an organizational environment conducive to strengthening the individual potential for innovation ((Einsteine & Hwang 2007)).

In present scenario, Informational technology and biotechnology are the two sectors which are derived and sustained through creativity and innovation and are heavily dependent on professional knowledge for their successful business. While considerable research has been conducted on understanding the impact of various individual and organizational determinants on the creative potential of high-tech enterprises (D'Costa, 2002; D'Costa and Sridharan, 2003; Nirjar and Tylecote, 2007; Ojha and Krishna, 2004).

This paper aims to examine the role of hope and optimism in the innovativeness of knowledge - professionals. We also intend to bring out some components that enkindle hope and optimism to lead to the creative potential of individuals.

Our present study is focused on high-tech enterprises and a brief of India's knowledge enterprises is provided in the next section.

2. The Indian High-tech Sector

The high technology based industries and services commonly known as 'Knowledge Intensive Business Services (KIBS) are those enterprises which are heavily dependent on professional knowledge for their business operations and service. In present scenario of globalization, deregulation, and intense competition, India's entrepreneurial firms in software development, biotechnology and knowledge based service sectors have exhibited credible performance and resilient capability to withstand against the uncertainties of a vibrant global economy. The research literature provides quite a comprehensive evidence concerning impact of various individual organizational and environmental determinants on the innovation capability, performance and

sustainable growth of software development firms (Athreya, 2002; Budhwar, 2001; Buxton, 1991; D'Costa, 2002 2004; Humphrey, Snyder & Willis, 1991; Leintz & Swanson, 1980; Mahajan, 2000; Mowery & Graham, 2001; Nirjar &Tyelcote, 2007; Ojha & Krishnan, 2004; Shridharan, 2004). However, in case of the biotechnology industry which is another sun rise sector of India's emerging economy, the dynamics of development are different. Besides, another knowledge-based business sector which although is a comparatively new entrant to Indian business has indicated a promising potential for sustainable growth is the e-business sector. It may thus be emphasized that the consistent progress of Indian entrepreneurial enterprises in a high technology sector last decade is essentially a result of the innovation capabilities of its highly qualified, motivated, empowered manpower (Nirjar and Tylecote, 2007). Our next section illustrates issues concerning individual and organizational facets of creativity and innovation.

3. Creativity and Innovation

The high tech enterprises conducting business in a global environment and focusing significant competition requires an uninterrupted furnishing of creativity and innovation as a crucial ingredient of their survival and sustainability (Vande Ven et.al, 1999; Van Djik & Van den Ende, 2002) Woodman, et.al (1993 p294) suggested that individual creativity is:

"a function of antecedent conditions (e.g., past reinforcement history, biographical variables), cognitive style and ability (e.g., originality, divergent thinking, ideational fluency), personality factors (e.g., self-confidence, future mindedness perseverance risk orientation, self-esteem) motivation and social influences (e.g., social facilitation, social rewards) and contextual influences (e.g., the physical environment and time constraints)".

Individual creativity is a complex phenomenon, influenced by multiple individual, contextual and environmental variables (Politis, 2005) and is a crucial component of organizational creativity. Woodman, et al., (1993 p294) suggested that organizational creativity is the creation of a valuable, useful, new product, service, idea, procedure or process by individuals working together in a complex social system, and is a function of the creative outputs of its component groups and contextual influences such as organizational culture, reward system and resource constraints. Amabile (1997) portrayed the inter-relationship between individual creativity and organizational innovation. Researchers have suggested that organizational innovation which is defined as the adoption of a novel idea or behavior that is unique to the organization (Damanpour 1991, Zammato and

O'Conner, 1992) is created through learning. As learning leads to newness and finally to innovation, the essential task before a company for producing innovations (product or processes) is to acquire new knowledge. Nonanka and Takeuchi (1995), based on their extensive research on Japanese companies presented a theory of knowledge creation in organizations. The theory posits that knowledge creation is a process of continual socialization i.e. sharing of individual tacit knowledge, externalization which is associated with creating new concepts having the potential to contribute to organizational intent, and combination in which the prototypes of new concepts are developed and incorporated into the organization and internalization of this knowledge by doing and experimentation. The effect of organizational learning on innovation performance in high-tech firms was explored by Therin (2002) who suggested that the innovation capacity of a firm is an outcome of organizational learning. Chen (2006) reached the same conclusion in the context of biotech firms.

Several researchers have studied the characteristics of creative workers. According to these researches, a knowledge worker incorporates several personality and professional attributes such as self-confidence, future-mindedness, perseverance, originality, aesthetic sensibility, risk orientation, and can orient their personal and professional growth with corporate vision (Awad and Ghaziri, 2004; Kelloway and Barling, 2000 and Storey, 2005;) The creative behavior of an individual is impacted by both, the cognitive and non-cognitive factors of personality (Woodman et al., 1993). The individual creativity is the psychological engagement of an individual (Drazin et al.,1999) and his creative performance is determined by the interaction of his personal traits and working environment (Bruce & Scott, 1994; Ford & Gioia, 1995; Oldham & Cumming, 1996) This indicates a definite role for positive psychological capacities in enhancing the innovation potential of knowledge professionals. The next section deals with the concept of psychological empowerment and its relevance for leveraging the creative potential for innovation.

4. Psychological Empowerment and Innovation

Researchers have adopted diversified approaches to conceptualizing the nature of the empowerment construct. Conger & Kanungo (1988) defined empowerment as a process of augmenting feelings of self-efficacy among organizational members. Self-efficacy according to Bandura (1989, p 408) involves "beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands". Researchers (Spreitzer 1995, 1996; Thomas & Velhouse, 1990) have defined psychological empowerment

based on multi-dimensional motivational constructs consisting of four distinct cognitive dimensions namely meaning or purpose, competence, self-determination, and impact which taken together comprise the basic essence of psychological empowerment in a workplace. Thus empowerment may be regarded a cognitive state and approach that causes individuals to strive toward and feel capable of shaping work roles and work contexts (Spreitzer, 1995). The concept of motivational aspects of psychological empowerment is intimately associated with positive psychological capacities (hope & optimism) of knowledge workers. This indicates a definite role of hope and optimism in enhancing the innovative potential of knowledge professionals. The next section deals with the idea of hope and optimism and their relevance for leveraging the individual propensity to innovate.

5. Hope and Innovation

Hope is another integral constituent of psychological capital that validates, enriches and support the present in life and yet creates confidence that the future will be more meaningful than in the past (Mackinnon, 2003; Walker, 2004). Human thought is always directed towards some valued goals. These goals oriented cognitions consists of two components (a) cognitive will power to get involved in a task (called as agency component) and (b) the perceived ability to foster routes to reach the destination. Dufault & Martocchio (1985 p 378) defined Hope as:

"multidimensional dynamic life force characterized by a confident yet uncertain expectation of achieving a future good, to the hoping person, is realistically possible and personally significant".

Thus hope can be conceptualized as a cognitive process that inspirits an individual to work for something that he believes to be significant and meaningful to him (and not because it stands a chance to succeed), which is the case with all creative-ventures. Research has also revealed that high-hope individuals are more decisive in formulating plans and since they possess confidence in their chosen plans, they are more likely to succeed in their effects (Snyder, 2000). Hope along with providing, perseverance, tenacity, and a sense of possibility strengthens the individual and organizational sense of self-efficacy. It may also be emphasized that a knowledge worker would be required to pass through all these stages in a process of innovation. Thus it may be envisaged that hope as a psychological construct would positively contribute in accruing to the individual's potential for innovations, which is being examined in the present study.

6. Optimism and Innovation

Like hope, 'optimism' also has a distinctive meaning as a positive psychological construct which is open to development (Schneider, 2001; Seligman, 1998). As a facet of psychological capital that is related to a positive outlook and defined in an attributional explanatory style (Carver and Scheier, 2002; Peterson 2000; Seligman 1998, Seligman and Csikszentmihalyi, 2000). Optimists are defined as those who attribute their successes (task accomplishment) to internal, stable and global causes such as their own abilities and identify unfavorable outcomes to specific causes which are unstable and external (Seligman, 1998). Researchers (Snyder, 2002) have also suggested that optimism is also a goal-based cognitive process that operates whenever an outcome is perceived as having substantial value. An individual involved in an innovation process has to go through a number of uncertain circumstances and negative events and essentially requires an optimistic attitude and unflinching belief in his abilities to override numerous impediments to success.

Research has revealed that hope and optimism are related to various attitudinal, behavioral, and performance outcomes and affect success in various life domains. (Avey, et al, 2010: Babalolo, 2009; Chiaroni, et al,2009; Choubisa, R, 2009; Giachetti 2009 Froman, 2009, Jensen, 2008; Luthans et al, 2007; Money et al, 2008; Schermerhorn Jr. & McCarthy, 2004 and Seligman et al, 2005). Researchers have also suggested that the cognitive factors reflected through ideational fluency and associative thinking and individual factors (i.e. non cognitive personality factors such as willingness to assume responsibility, future mindedness, individual experimentation, risk orientation, and perseverance have an effective impact on an individual creativity and innovation. This leads us to our research propositions.

Summary of Propositions for Research

- Hope and optimism has a positive impact on cognitive and non-cognitive personality factors of an individual reflected Psychological empowerment.
- The individual's capability for ideational fluency, associative thinking, individual experimentation, future mindedness, risk orientation and perseverance, is positively associated with his propensity for creativity and innovation.

7. The Case Studies

Case study is the distinctive qualitative research technique adopted by researchers for developing a holistic and 'in-depth' understanding of the meaningful characteristics of a contemporary phenomenon within its real life contexts but such understanding encompasses important contextual conditions (Yin, 2003, 2008). Our case-studies were mainly focused on conducting semi-structured interviews with top executives of High-tech firms situated in 'National Capital Region'. The questions developed for conducting case-studies are broadly concerned with the issues of our research.

7.1 Methodology Adopted

Two case studies were conducted using semi-structured interviews, Yin (1994,p 13) has argued that a case study 'benefits from the prior development of theoretical proposition to guide data collection and analysis'. This was ensured on the basis of the literature, the discussions held with certain senior scientists of national-level research institutes situated in the National Capital Region (NCR) who have been extending support and guidance to biotech entrepreneurs and their own experience of second author with the industry. The firms were chosen based on their performance, level of operations, areas of applications, and close relationship with national laboratories situated in the NCR. Their performance ranged from above average to very good and their operations spread over several countries. Initially, eight firms were selected from the list of biotech industries situated in NCR region: The CEO's of those firms, whose reference were provided by scientists and academicians (known to authors) of these industries were approached through e-mails and telephone calls.

It may be mentioned that the present research is a part of an ongoing research conducted by authors to investigate the influence of 'PsyCap' on creativity, innovation, and performance, and its objective concentrates on generating insights that would facilitate the further development of the theoretical propositions (rather than any sort of testing).

Company Details

Brief descriptions of these firms are provided which would be followed by findings of case studies:

Company A

Company A based in Gurgaon, (National Capital Region) was established in 1992. The company has a team of more than 130 well-qualified professionals. It provides solutions for genomics, proteomics, and cell culture and occupies a commanding position in the instrumentation business. The company is now focusing on Imaging and Analytic business with tie-ups with major brands in the segments. The company has a strong export orientation and has been rated as fastest-growing bio supplier company by Association of Biotech Led Enterprises (ABLE) India, and is ranked 8th among the top 20 companies of India.

Company B

Based in Manesar, Gurgaon near Delhi. Company B is an international biotechnology venture founded by a group of highly qualified scientific experts and experienced industry professionals. The company is involved in conducting high-value research services for drug discovery solutions for the life science research industry. The company's clients besides Indian Pharma companies include a few larger global companies located in USA and Europe. The company employs around 80 highly qualified professionals. The company's growth during the last ten years has been excellent and it is on the move into new areas of application. The company is recognized as an 'in house Research and Development unit' by Department of Scientific and Industrial Research (DSIR) of the Government of India.

7.2. Factors Affecting Individuals' Propensity to Innovate

7.2.1. Individual Creativity and Innovation

We have cited earlier Amabile's opinion that creativity is a precursor to innovation (Amabile, 2000), and that creativity considered as individual's ability to recognize unusual designs, associations, and generate new ideas and things. Recognizing the complexities of managing biotech companies' long development cycles and their managers' obvious thrust for innovation, we raised our first question to know their opinion about individual creativity and how a creative idea is transformed into an innovation. Our respondents stated:

There are certain individuals who have a natural inclination towards finding new, simpler but more effective solutions to problems which might have earlier been solved or who most often like to engage in solving the unsolvable problems. They keep creating new concepts

and then work on them to create a novelty. I would consider such person to be a creative-individual. (Director of Company A)

The CEO of Company B, is a highly qualified person, having strong research background in a reputed university in the U.K. and has varied reading interests, responded: A Creative individual could be any person having a curious intellect, having an attitude to strive for utilizes his potential in solving the riddles of what is yet not clear or even unknown. (Chief Executive Officer of Company B)

The CEO of company B was more emphatic on the integration of non-connected ideas being the precursor of innovation He stated: "If an individual through his intensive involvement or we must say that a person has having clarity to connect these unrelated ideas into an integrated idea, be sure with proper organizational support it would sooner or later be materialized into an innovation. In our company which is involved in developing vaccines for certain serious and incurable diseases, numerous techniques and vaccines were developed which have been the outcome of the intensive efforts of those individuals who were from varied educational background such as information technology physics etc. and did not have any formal degree in biosciences."

To our curiosity about whether a potential innovator possesses some generic traits, attitudes, or characteristics through which he could be identified, or regarding the popular conception that they are often nonconformist, unconventional, and even bohemian with more conspicuous behavior flexibility, our respondents emphasized.

"On the basis of my observations of creative individuals around me, I believe that they are normal human beings like all of us in every aspect of life. In our industry professionals who have discovered effective techniques are normal people like us. But it is their deep understanding of the problem, openness to new information, lively awareness, and commitment which made them successful in their endeavours. It may also be mentioned that all the two of us, who started this firm were earlier engaged in the maintenance of electronic equipments and later moved to biotech instrumentation. (CEO of Company B)

CEO of company A briefly narrated the process of development of company at its initial stages and the varied situations the company has passed through during last two decades and said: "On the basis

of the belief that every person possesses the innate capability for creativity. On the basis of numerous factors like family-background, social surrounding, education, varied experience and other challenges that life imposes upon him. The existential necessity to keep striving intellectually, physically and spiritually in a proper environment and intensive learning convert an individual's creative potential into a successful innovation."

The interactive sessions with top managers/entrepreneurs of these biotech enterprises revealed that innovative ideas rise in the process of finding a solution to an unsolved problem or during an individual's intensive involvement in uncovering the mystery of some complex phenomenon. When a creative individual is intellectually absorbed and is able to connect the unrelated ideas, often from different fields of knowledge, conceived by him into an integrated conception, he is able to discover a novelty to refinement an existing product or process or create something new. Koestler (1964) raised the term 'bisociation' for such thinking pattern that is another term for associative thinking and may be identified as an important factor for an individual's creativity and innovation capability.

Our next few questions were focused on understanding the viewpoints of biotech managers regarding the individual and organizational factors which influence an individual's creativity and innovation potential. According to the Director of Company A:

"Our experience suggests that there could be numerous individual factors which influence the innovation capacity of knowledge workers at various stages of the innovation process. However, I would restrict to a few, which in my opinion are more important in the context of the biotech industry. The first factor that comes to my mind is an individual's positive attitude towards assuming responsibility and involving into new experimentation. Although the outcome of innovative ventures may be uncertain, one should be prepared to take such risks. Moreover the sense of assuming responsibility itself moderates an individual's risk orientation and reinforces his futuristic attitude and perseverance. In our industry, all the innovations and new techniques were developed by such individuals."

The opinions of other owners/managers were similar, although there may have been varied emphasis on various factors. The Chief Executive Officer of Company B emphasized:- "For converting a creative idea into an innovation, the person concerned should have a futuristic bent of mind. This future mindedness motivates him to assume responsibility and conduct experiments to create something new. But it may sometimes not be such a smooth drive. He may have to pass through roller coaster passages, blind turnings, and roadblocks. So, what does he need in such situations? It is essentially the perseverance, which helps in maintaining equanimity and the sense of responsibility through which one's conscience enforces him to keep working until the goal is achieved. Our HR manager while recruiting professionals gives due weightage to the candidate's attitude towards setbacks in life. It is through the achievements of such individuals that we are growing at a good rate even in present times of global recession. (Chief Executive Officer of Company B)

The CEO of Company A, elaborated on his experience:- An individual may have an excellent creative idea, but to convert it into a useful innovative product, extensive experimentation is needed. No experimentation would be possible without a trustworthy support of technology and other resources. Further, he should also be assured that his job will remain safe, even if he is not successful in his initial attempts. For a good number of years at internal stages our HR section has adopted a result-oriented policy for awarding increments and promotions. In other words, if a scientist could make a breakthrough he was amply rewarded, but if he failed to achieve success he was not considered for promotion. Such employees would leave the company. We were often forced either to abandon the task itself or to start again from scratch. However, after the new 'Director' took over the policy was changed. The company now supports and recognizes an individual's effort at every stage, irrespective of his success or failure in his endeavour. Now our retention rate of employees is very good. We have developed numerous new techniques and products and have moved into new areas of operation and occupy a respectable place among good-performing biotech firms in India.

We may thus conclude that while the owners/managers of biotech entreprises consider ideational fluency, integrative (associative) thinking, assuming responsibility for individual experimentation, future mindedness, risk orientation, and perseverance are important individual factors which derive an individual's potential for creativity and innovation. The mediating role of organization support specifically in the form of providing autonomy to conduct new experiments and maintaining the self-esteem, particularly in times of disappointments inspires a knowledge worker to continue performing at the workplace.

7.2.2. Hope & Optimism for Enhancing Individual Innovativeness

The next phase of interviews was devoted to understanding the views of biotech entrepreneurs/managing professionals regarding the significance of 'Hope & Optimism' and its constructs for fostering the creative potential of individuals for innovation. The researchers were interested in knowing their views regarding the role they envisage for an individual's hope and optimism in strengthening his potential to innovate.

7.2.3. Observation

Hope and optimism are necessarily the decisive factors emerging in a research worker's confidence to find meaning in his efforts and strengthen his belief in the positive outcomes of his efforts. As earlier it was emphasized that life is not a smooth ride and one has to pass through many disappointments and failures, more so, in R&D derived sectors such as the biotech industry. But failures are the test of one's intellectual, physical and spiritual strength. It is essentially an individual's resilience along with his optimism and hope of a better future combined together which sustains his sense of responsibility and future-mindedness, his involvement in new experimentation, risk orientation and perseverance. Resilience provides necessary motivation and psychological strength to bounce back. In my opinion in all situations, the combined effect of psychological constructs will be much more pronounced on an individual's capability to innovate and achieve success. (CEO of Company A)

Company B in recent years has diverted its effort towards producing high value products in new areas of application and thus the value ladder. The CEO of company B elaborated his views:- Hope and Optimism may be separate constructs for psychologists and philosophers, but to an entrepreneur or practical professional they are the same, which provides confidence to an individual that he will definitely achieve his goal. I also believe that hope and optimism are the building blocks of the ultimate positive capability of an individual's resilience, which becomes an existential necessity for a diligent individual. Let me narrate an incident: Researchers were working on a specific vaccine and even though they had spent a significant amount of time, effort, and money we were not able to see a breakthrough which could give us confidence of the success of our efforts. At that time, I was somehow losing hope as I had the responsibility of maintaining the job of an odd number of people who were on this project and I feared that with the breakthrough not coming through what would happen? I had to leave for the US for meetings with some clients there and thought that on turn I will take a call on this matter. To my utter surprise, as it happens often in research my chief operating called me at midnight and cheerful noise made by teammates could assure me the they had achieved the breakthrough. This is possible only because of the fact that they had self-belief, they were optimistic and hopeful about the technical dimensions they were handling and the sustained efforts they were putting in. I would say that this could happen due to the combined effect of the confidence, hope, optimism, and resilience of team members.

We also wanted to know, about if there is any opinion, beyond these psychological constructs and individual factors which may yet be unexplored, but is likely to affect the individual's propensity for innovation. The response of an entrepreneur was: Yes, apart from these constructs and factors, and it is 'mindfulness' which is the awareness that comes out of an individual's paying attention on the purpose from moment to moment. To be mindful a person is required to remain alive to present, this would have a positive effect on individual's mind and thinking pattern and prepare the necessary ground for germinating the seeds of hope, optimism, per se in his

personality and will enhance his creative potential also. (CEO of Company A)

Our interactions thus reveal that Hope and Optimism have a positive impact on cognitive and non-cognitive personality factors which determine the individual potential for creativity & innovation. Organizational creativity is an outcome of the collective efforts of creative individuals. This may also be mentioned that an organization environment conducive to creativity further moderates the individual factors and creativity.

8. Implications & Conclusions

The responses revealed by entrepreneurs/management professionals dispel the myth that creativity is an inherent trait and creative individuals have some recognizable distinct characteristics, styles, and attitudes towards life. Individual creativity is the potential of an individual to solve the riddles of unusual and unsolved problems and to produce novelty in ideas things and processes. Such novelty is achieved by the creative individual through his persistent involvement in his purposeful pursuit at psychological intellectual and physical levels (Tang, 1998).

8.1 Implications

The significance of findings of the present study is quite equable in societal context showing that creative potential of an individual is not tied down to any class, creed or country of origin. Since the innovativeness of an individual is an open to-develop attribute, there is a role for entrepreneurs and managers to enhance the creative potential of their workforce and to improve the innovation productivity of their firms. Researches have suggested that creative thinking and problem solving skills can be improved through appropriate training, though there may not be a single training technique which may be applied in all situations. (Brown, 1991; Clapham and Schuster, 1992).

8.2 Conclusions

The purpose of the case studies was focused on analyzing the views of managers/professionals of biotech companies in the context of the creative potential of their scientific workforce. Our questions were confined to what could be the pertinent factors (cognitive and non-cognitive) which in their views would be most effective in determining an individual's propensity to

innovate and what role they envisage for positive psychological capital, and its constructs in strengthening these factors thereby accruing the individual potential for creativity and innovation. The conclusions drawn from our interactions are:

- An individual's creative potential is an attribute which is open to development. It may be strengthened through appropriate psychological and intellectual nurturing and the consistent organizational support through technology and resources. The organization should ensure that an innovator is provided with necessary autonomy to conduct his experimentation and his efforts are well appreciated.
- When a creative individual is able to connect the unrelated ideas conceived by him through logical deductions or insight into an integrated conception, it is the initiation of innovation. There are numerous cognitive and non-cognitive individual factors such as ideational fluency, associative thinking, assuming responsibility, individual experimentation, future-mindedness, risk orientation, and perseverance which determine and derives an individual's propensity for creativity and innovation.
- Although hope, and optimism are affect the individual's personality factors in differing ways at various stages of innovation process but they should essentially be considered as an integrated construct of personality 'SHOR' (or PsyCap). All the four constructs of 'SHOR' are interconnected and interdependent and one construct nourishes the other.

The authors are not aware of any formal study being conducted on understanding the role of 'PsyCap' in the context of individual and organizational creativity and innovation and are conscious of the limitations of the present study. There is an immense scope for further research on various aspects of psychological capital in the context of creativity and innovation such as exploring the leadership role in enhancing innovation through 'PsyCap' and the influence of 'PsyCap' on organizational commitment, performances, and sustainability. Research may also be conducted for creating an effective framework, procedure and programme for providing 'PsyCap' training to knowledge workers. As pointed out by one learned respondent, the constructive role of mindfulness in enhancing the individual creative potential and organizational creativity and innovativeness, through 'PsyCap' could be another area for further, exploration.

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Impact of Demonetization on Digitalization and Financial Inclusion in India and the Way Forward

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Abstract

This paper explores the impact of demonetization on digitalizing financial transactions and promoting financial inclusion in India. The Government of India implemented demonetization, the sudden withdrawal of high-denomination currency notes from circulation, in November 2016 to curb black money, promote a cashless economy, and enhance financial inclusion. The paper analyzes the effects of demonetization on digital payment systems, the adoption of technology in financial services, and the inclusion of previously unbanked segments of the population. It also highlights the challenges and opportunities associated with these changes and provides insights for policymakers and stakeholders in the financial sector. The paper is distributed into five sections i.e. introduction, digitalization of financial transactions, technology adoption in financial services, financial inclusion, Challenges, and Opportunities. The final section concludes.

Keywords

Demonetization, Digital transactions, Financial inclusion, Cashless economy, Digital payments, Technology adoption, Unbanked population, and Financial services.

1. Introduction

1.1 Background of Demonetization in India (Shirley:2017)

Demonetization refers to the act of stripping a currency unit of its status as legal tender. In the case of India, demonetization was a significant policy

move implemented by the Government of India on November 8, 2016. The decision involved the withdrawal of the ₹500 and ₹1,000 denomination banknotes, which accounted for a significant portion of the currency in circulation at the time. The primary objectives behind this move were to curb black money, combat corruption, reduce counterfeit currency, and promote a digital and cashless economy.

Prior to demonetization, India had been witnessing an increased emphasis on financial inclusion initiatives, such as the Jan Dhan Yojana, which aimed to provide access to banking services for the unbanked population. However, a significant portion of the Indian economy still operates on a cash-based system, with limited penetration of digital payment methods.

The demonetization moves temporarily disrupted the economy as people were required to exchange their old currency notes for new ones. The sudden scarcity of cash resulted in long queues outside banks and ATMs as individuals sought to deposit or exchange their old currency. However, amidst these challenges, the government also aimed to leverage this opportunity to accelerate the adoption of digital payment systems and promote financial inclusion.

1.2 Objectives of Demonetization: Digitalization and Financial Inclusion

The demonetization exercise in India was driven by a set of objectives, including curbing black money and countering corruption and promoting digitalization and financial inclusion. The government recognized that the transition from a cash-based economy to a digital economy could unlock several benefits, such as transparency, efficiency, and greater access to financial services for all segments of the population. Digitalization and financial inclusion have worked through promoting digitalization, enhancing financial inclusion, encouraging cashless transactions, strengthening financial infrastructure, increasing accountability, and curbing illicit activities.

2. Digitalization of Financial Transactions

Demonetization in India acted as a catalyst for the rapid growth and adoption of digital payment systems. The scarcity of physical currency during the demonetization period led to a surge in digital transactions as individuals and businesses sought alternative means to carry out their daily financial activities. This section discusses the significant increase in digital payments witnessed in the aftermath of demonetization.

Following the demonetization announcement, there was a sharp rise in the usage of digital payment methods, such as mobile wallets, payment apps, and online banking. The necessity to adapt to the cash crunch and the government's emphasis on digital transactions spurred individuals to explore and embrace digital payment solutions. Mobile wallets, also known as e-wallets, gained significant traction during this period. Wallet providers like Paytm, PhonePe, and MobiKwik experienced massive usage and user registrations. These mobile wallet platforms allow users to store money digitally and make payments through their smartphones, providing a convenient and secure alternative to cash transactions. Prominent mobile wallet providers such as Paytm, PhonePe, MobiKwik, and Google Pay (formerly Tez) witnessed a significant surge in usage and user registrations after demonetization. These platforms offered a range of features, including peer-to-peer (P2P) transfers, bill payments, merchant payments, and even options to pay for utilities, groceries, and transportation. Payment apps based on the Unified Payments Interface (UPI) also played a significant role in driving digital payments. UPI-enabled apps such as BHIM (Bharat Interface for Money), Google Pay, PhonePe, and Paytm Payments Bank allowed users to link their bank accounts and make instant payments using virtual payment addresses. UPI simplified transactions by eliminating the need for traditional bank account details, enabling users to make seamless transfers to individuals and merchants. The interoperability of UPI-based apps further enhanced their utility, as users could transact with individuals using different payment apps. This interoperability facilitated a more inclusive digital payment ecosystem, as users were not restricted to a specific payment app for transactions. Mobile wallets and payment apps not only provide convenience to users but also contribute to financial inclusion and the formalization of the economy. They enabled individuals, including those in remote areas, to participate in digital transactions, access banking services, and build a digital financial identity. Thus, Demonetization in India not only accelerated the adoption of digital payment methods but also witnessed a significant increase in online banking and e-commerce transactions. As cash became scarce, individuals turned to online platforms for their banking needs and shopping requirements. Tables 1 and 2 as well as charts 1, 2, and 3 show the continuous uprising trends toward the digitalization of payments.

Table 1:- Status of Digital Payments after Demonetization

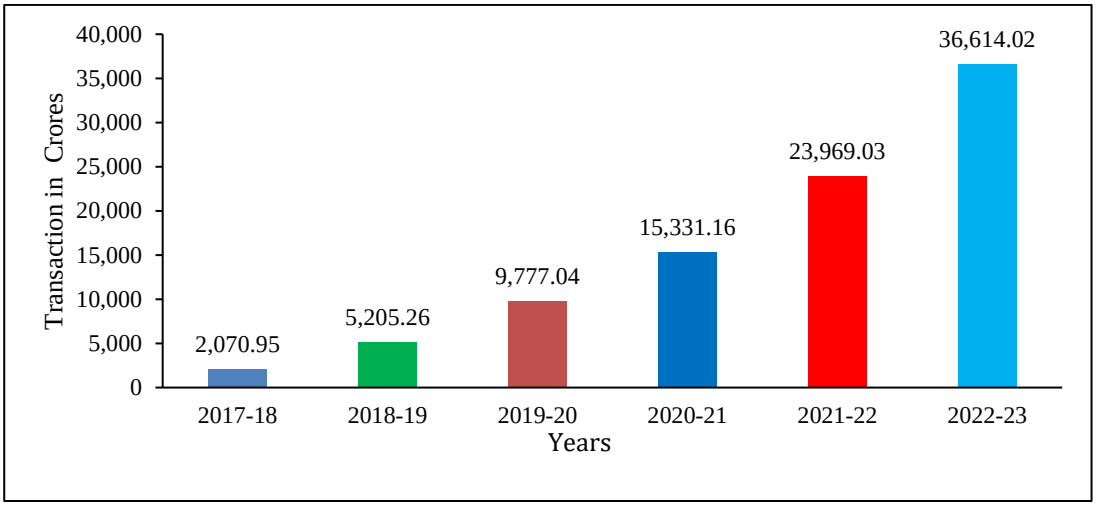
Sr. No.	Duration	Digital Transactions (Crore)	BHIM Transactions (Crore)	Debit Card (Crore)
1	2017-18	2070.95	91.31	334.34
2	2018-19	5205.26	626.47	776.13
3	2019-20	9777.04	1878.22	1288.51
4	2020-21	15331.16	4111.17	1699.98
5	2021-22	23969.03	8671.96	2114.73
6	2022-23	36614.02	16996.01	2494.93

***Source*:-** Ministry of Electronics and Information Technology, Government of India, 2023-24. https://meity.dashboard.nic.in/KpiReport_DivisionWise.aspx?Report=MzcjMjMjMTg4IzM2I0UjMg

Table 2:- Payment System Indicators

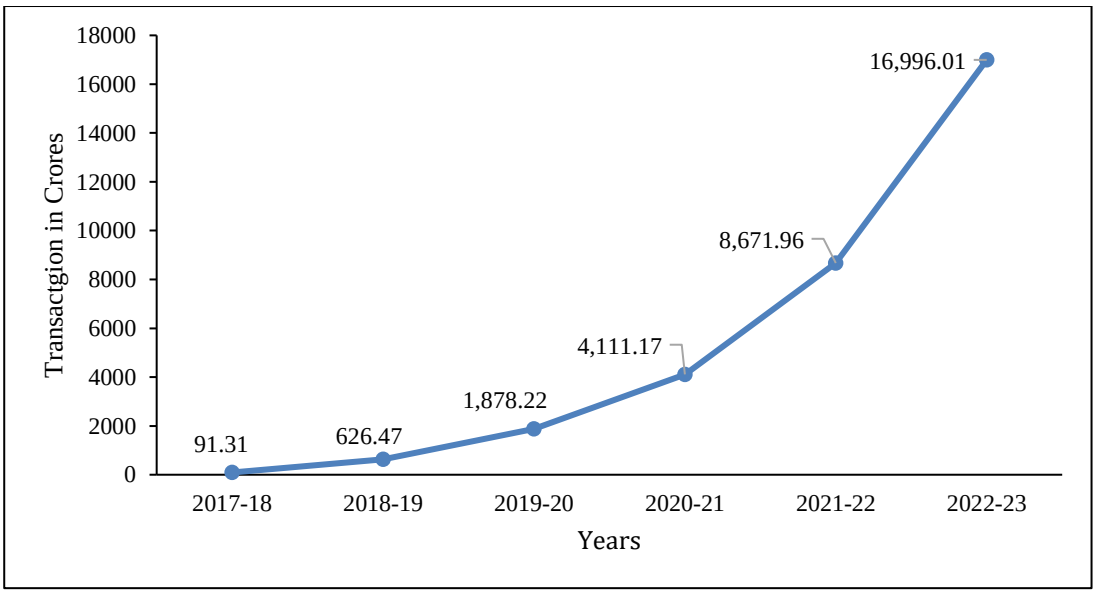
(Volume in Million; Value in ₹ Billion)										
Particulars	**2012-13**		**2013-14**		**2014-15**		**2015-16**		**2016-17**	
	Volume %	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**
Cards	74.22	1.40	73.65	1.46	71.89	1.51	66.37	1.60	61.69	1.32
Credit Cards	4.80	0.09	5.22	0.10	5.29	0.11	5.23	0.13	5.60	0.15
1 Usage at ATMs	0.03	0.00	0.03	0.00	0.04	0.00	0.04	0.00	0.03	0.00
2 Usage at POS	4.77	0.09	5.19	0.10	5.25	0.11	5.19	0.13	5.56	0.14
Debit Cards	69.42	1.31	68.43	1.36	66.60	1.40	61.13	1.47	56.09	1.18
Usage at ATMs	63.80	1.26	62.11	1.29	59.71	1.32	53.37	1.38	43.82	1.03
Usage at POS	5.61	0.06	6.32	0.06	6.90	0.07	7.76	0.09	12.28	0.14
Prepaid Payment Instruments (PPIs)	0.80	0.01	1.36	0.01	2.68	0.01	4.95	0.03	10.05	0.04
m-Wallet	0.39	0.00	1.10	0.00	2.18	0.00	3.99	0.01	8.34	0.02
PPI Cards	0.41	0.00	0.26	0.00	0.50	0.01	0.95	0.01	1.70	0.01
Paper Vouchers	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Banking	0.64	0.00	0.97	0.01	1.47	0.06	2.57	0.22	5.00	0.57

***Source*:-** Handbook of Statistics On Indian Economy, Reserve Bank of India, 2016-2017, pp.130-131.



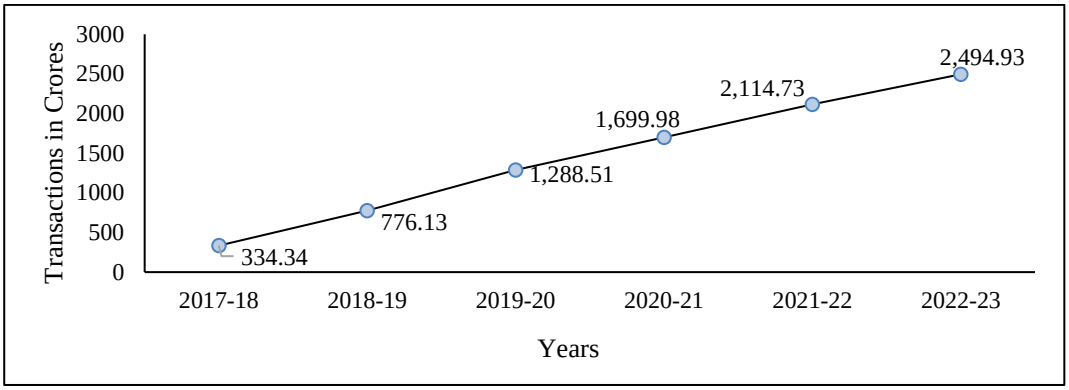
Source:- Ministry of Electronics and Information Technology, Government of India
https://meity.dashboard.nic.in/KpiReport_DivisionWise.aspx?Report=MzcjMjMjMTg4IzM2I0UjMg

Chart 1:- Digital Transactions (Crore)



Source:- Ministry of Electronics and Information Technology, Government of India
https://meity.dashboard.nic.in/KpiReport_DivisionWise.aspx?Report=MzcjMjMjMTg4IzM2I0UjMg

Chart 2 :- BHIM Transactions (Crore)



Source:- Ministry of Electronics and Information Technology, Government of India
https://meity.dashboard.nic.in/KpiReport_DivisionWise.aspx?Report=MzcjMjMjMTg4IzM2I0UjMg

Chart 3 :- Digital Payments of Debit Card (Crore)

3. Technology Adoption in Financial Services

Demonetization in India acted as a catalyst for the rise of financial technology (fin-tech) start-ups, which played a significant role in the digitalization of financial services. Fintech start-ups leveraged technology and innovation to provide a wide range of financial services, disrupting traditional banking models and expanding access to financial products and services. This section elaborates on the emergence and impact of fin-tech start-ups in the post-demonetization era. Fintech start-ups seized the opportunity presented by demonetization to address the gaps in the financial ecosystem and cater to the growing demand for digital financial services. These start-ups harnessed technology, such as mobile applications, artificial intelligence, data analytics, and blockchain, to offer innovative solutions that simplify financial transactions and enhance customer experience. Additionally, fin-tech start-ups focused on financial inclusion by reaching out to underserved and unbanked populations. These start-ups leveraged technology to provide basic financial services, such as savings accounts, micro-insurance, and investment options, to individuals who were previously excluded from the formal financial system. By harnessing mobile technology and digital platforms, fin-tech start-ups facilitated financial inclusion by providing affordable and accessible financial services to marginalized populations. The rise of fin-tech start-ups also fostered innovation in areas such as wealth management and personal finance. Start-ups like Scrip Box, Zerodha, and Kuvera introduced online investment platforms that allowed individuals to manage their portfolios, invest in mutual funds, and access financial advice at their fingertips. These platforms democratized investment opportunities and empowered individuals to

take control of their financial future. The emergence of fin-tech start-ups brought competition and innovation to the financial services sector. They challenged traditional banking models, forcing established financial institutions to adapt and embrace digital transformation. Banks responded by investing in technology and partnering with fin-tech start-ups to leverage their capabilities and expand their digital offerings.

Demonetization in India not only accelerated the digitalization of financial transactions but also spurred the adoption of Aadhaar-based services. Aadhaar played a crucial role in the post-demonetization era as it facilitated the digitization and authentication of individuals' identities. It served as a secure and verifiable proof of identity, enabling individuals to access a wide range of government and financial services. Aadhaar authentication leverages biometric data such as fingerprints and iris scans, ensuring a high level of accuracy and security. Moreover, Aadhaar-based Direct Benefit Transfer (DBT) programs were implemented to ensure targeted and efficient delivery of government subsidies and welfare benefits. The linkage of Aadhaar to bank accounts enabled direct transfers of subsidies, eliminating intermediaries and reducing leakages. According to the Ministry of Finance, Aadhaar-based DBT resulted in savings of approximately INR 83,184 crore ($12.3 billion) between 2014 and 2019.

The adoption of Aadhaar-based services also facilitated financial inclusion by bringing previously unbanked individuals into the formal financial system. The use of Aadhaar simplified the account opening process, making it easier for individuals without traditional identity documents to access banking services. As per the World Bank's Global Findex Database 2017, India witnessed a significant increase in the number of adults with bank accounts, reaching 80 percent in 2017 compared to 53 percent in 2014.

In the wake of demonetization, the expansion of micro-ATM (Automated Teller Machine) infrastructure played a crucial role in enhancing financial inclusion and promoting digital transactions. Micro-ATMs are handheld devices that enable individuals in remote areas to access basic banking services, such as cash withdrawals, balance inquiries, and fund transfers. This section elaborates on the expansion of micro-ATM infrastructure and its impact on financial inclusion. Micro-ATMs emerged as a solution to address the challenges faced by individuals residing in rural and underserved areas who had limited access to traditional banking infrastructure. These handheld devices, often operated by business correspondents (BCs) or banking agents, enabled individuals to conduct basic banking transactions in their own localities, eliminating the need to travel long distances to access a bank branch. According to the Reserve Bank of India (RBI)

data, the number of micro-ATMs in India witnessed substantial growth after demonetization. In December 2016, the number of micro-ATMs stood at around 3.3 lacks, which increased to more than 12 lakhs by December 2019. This expansion in micro-ATM infrastructure played a vital role in improving access to banking services, especially for marginalized populations.

4. Impact on Traditional Banking Practices

Demonetization in India had a significant impact on traditional banking practices, compelling financial institutions to adapt and embrace digital transformation. Post demonetization there was increased adoption of digital channels i.e. there was a surge in the adoption of digital banking channels by both customers and financial institutions. Traditional banks witnessed a significant increase in online and mobile banking transactions as individuals sought alternative methods for conducting financial transactions. According to the Reserve Bank of India (RBI), the number of digital transactions, including Mobile banking and Internet banking, witnessed a substantial growth of 55.1 percent in volume and 24.8 percent in value in 2016-17. There was also reduced reliance on cash, enhanced focus on customer experience, integration of Aadhaar, and enhanced fin-tech collaboration.

The impact of demonetization on traditional banking practices was a transformative one. Financial institutions embraced digitalization and adapted their strategies to meet the changing customer demands and market dynamics. The focus shifted from physical branches to digital channels, resulting in improved efficiency, enhanced customer experience, and increased financial inclusion. It is important to note that while the impact of demonetization was significant, traditional banking practices continue to coexist alongside digital transformation. Traditional banking channels and physical branches still play a vital role, particularly in serving customers who prefer face-to-face interactions or those residing in remote areas with limited digital infrastructure. The data presented in Table 4 reinforces the transformative impact of demonetization on traditional banking practices in India. It provides quantitative evidence of the shift from paper-based transactions to digital payment methods.

Table 4 shows a decline in paper-based transactions like paper clearing and cheque truncation. In 2016-17, paper clearing accounted for only 6.17 percent of transaction volume and 3.55 percent of transaction value, indicating a significant decrease compared to previous years. Similarly, cheque truncation saw a decline, accounting for 5.69 percent of transaction volume and 3.24 percent of transaction value in 2016-17.

On the other hand, digital payment methods experienced substantial growth during this period. Retail electronic clearing, which includes electronic funds transfer (EFT) and National Electronic Funds Transfer (NEFT), witnessed significant increases in both volume and value. In 2016-17, retail electronic clearing accounted for 21.52 percent of transaction volume and 5.79 percent of transaction value, reflecting the growing adoption of digital payment channels.

The table also highlights the rise of innovative payment solutions such as Immediate Payment Service (IMPS) and National Automated Clearing House (NACH). These digital payment methods saw substantial growth in volume and value during the analyzed period, indicating a shift towards faster and more efficient payment systems.

Table 4:- Payment System Indicators

(Volume in Million; Value in ₹ Billion)										
Particulars	**2012-13**		**2013-14**		**2014-15**		**2015-16**		**2016-17**	
	Volume %	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**	**Volume %**	**Value %**
Paper Clearing	15.79	7.54	12.83	6.14	10.21	5.08	7.25	4.46	6.17	3.55
Cheque Truncation System (CTS)	3.31	1.64	6.03	2.94	8.23	3.97	6.34	3.81	5.69	3.24
MICR Clearing	9.90	4.33	4.49	2.04	0.19	0.11	-	-	-	-
1 RBI Centres	5.97	2.71	2.20	1.00	0.06	0.04	-	-	-	-
2 Other Centres	3.92	1.61	2.29	1.03	0.13	0.07	-	-	-	-
3 Non-MICR Clearing	2.59	1.57	2.30	1.16	1.79	1.00	0.91	0.65	0.49	0.30
Retail Electronic Clearing	8.34	2.40	11.31	3.15	14.40	3.89	20.77	4.98	21.52	5.79
ECS DR	2.12	0.08	1.97	0.08	1.93	0.10	1.49	0.09	0.04	0.00
ECS CR (Includes NECS)	1.47	0.13	1.56	0.16	0.98	0.12	0.26	0.06	0.05	0.01
EFT/NEFT	4.74	2.18	6.74	2.88	7.92	3.55	8.28	4.54	8.30	5.26
Immediate Payment Service (IMPS)	0.01	0.00	0.16	0.01	0.67	0.03	1.46	0.09	2.59	0.18
National Automated Clearing House (NACH)	-	-	0.88	0.01	2.90	0.07	9.28	0.21	10.53	0.35

***Source*:-** Handbook of Statistics On Indian Economy, Reserve Bank of India, 2016-2017, pp.130-131.

4. Financial Inclusion

Financial inclusion was a key objective of demonetization, and one of the notable initiatives undertaken to promote financial inclusion was the opening of Jan Dhan accounts. Jan Dhan Yojana, launched in August 2014, aimed to provide access to financial services to the unbanked population in India. This section elaborates on the opening of Jan Dhan accounts and its impact on financial inclusion. Jan Dhan Yojana aimed to ensure that every household in India had access to a bank account and other financial services such as debit cards, insurance, and pension schemes. The initiative was instrumental in bringing millions of unbanked individuals into the formal financial system, promoting savings, and facilitating access to credit.

According to data from the Ministry of Finance, as of January 2017, over 28 crores (280 million) of Jan Dhan accounts were opened since the launch of the scheme. These accounts witnessed a substantial increase during the demonetization period, with around 24 crores (240 million) of accounts opened between November 2016 and January 2017. This surge in account openings demonstrated the success of the initiative in bringing the unbanked population into the formal banking sector. The opening of Jan Dhan accounts played a crucial role in enhancing financial inclusion in several ways like increase access to Banking Services, Direct Benefit Transfer (DBT), facilitating insurance and pension schemes like the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY), Atal Pension Yojana (APY).

One of the key impacts of demonetization in India was the increased accessibility to formal financial services, particularly for the unbanked and underbanked populations. This section elaborates on the improvement in accessibility to formal financial services following demonetization. Demonetization spurred the adoption of digital technologies in financial services, leading to the development of innovative solutions for improving accessibility. Mobile banking, mobile wallets, and other digital payment platforms became popular, providing individuals with the convenience of conducting financial transactions anytime and anywhere. The availability of low-cost smartphones and affordable internet connectivity further contributed to the accessibility of formal financial services.

Demonetization in India had a significant impact on empowering women and rural communities by promoting financial inclusion and enhancing their access to formal financial services. Data from the Ministry of Finance, Government of India, and other studies highlight the positive impact of demonetization on the empowerment of women and rural communities. The microfinance sector in India has witnessed significant growth in recent years. According to the Microfinance

Institutions Network (MFIN), the number of women borrowers from MFIs increased by 26 percent from 2016 to 2019, indicating improved access to credit and financial services for women.

Table 5:- RBI Financial Inclusion Plan - Progress Report

Particulars	Banking Outlets in Villages - Total	Change in Percentage	BSBDA Total (in millions)	Change in Percentage	ICT A/Cs-BC-Transaction - No. in millions	Change in Percentage
Mar-2010	67694	0	73.45	0	26.52	0
Mar-2011	116208	41.75	104.76	29.89	84.16	68.49
Mar-2012	181753	36.06	138.5	24.36	155.87	46.01
Mar-2013	268454	32.30	182.06	23.93	250.46	37.77
Mar-2014	383804	30.05	243	25.08	328.6	23.78
Mar-2015	553713	30.69	398	38.94	477	31.11
Mar-2016	586307	5.56	469	15.14	826.8	42.31
Mar-2017	598093	1.97	533	12.01	1159	28.66
Mar-2018	569547	-5.01	536	0.56	1489	22.16
Mar-2019	597155	4.62	5742	90.67	21019	92.92
Dec-2020	1253177	52.35	6384	10.06	23289	9.75
Dec-2021	1900523	34.06	6631	3.72	21095	-10.40

***Source*:-** Reserve Bank of India, Annual Report 2011-12 to 2021-2022.

The data presented in Table 5 provides a progress report on the Reserve Bank of India's Financial Inclusion Plan, highlighting the changes in various financial inclusion indicators over the years.

The first column of the table shows the total number of banking outlets in villages, indicating the availability of banking services in rural areas. The data reflects a steady increase in the number of banking outlets from 67,694 in March 2010 to 1,900,523 in December 2021. This represents a significant growth of 181.4 percent over the analyzed period, indicating improved access to banking services in rural areas.

The second column presents the number of Basic Savings Bank Deposit Accounts (BSBDA) in millions, which are low-cost, no-frills accounts designed to promote financial inclusion. The data reveal a substantial increase in the number of BSBDA accounts, from 73.45 million in March 2010 to 6,631 million in December 2021. This marks a remarkable growth of 8,915.6 percent over the analyzed period, signifying the success of initiatives aimed at bringing unbanked individuals into the formal banking system.

The third column focuses on Information and Communication Technology (ICT) Accounts through Business Correspondents (BC) and the number of transactions conducted. The data demonstrate a significant increase in the number of ICT

A/Cs-BC transactions, rising from 26.52 million in March 2010 to 21,095 million in December 2021. This reflects the growing adoption of digital payment channels and the utilization of technology-enabled banking services.

Overall, the table highlights the progress made in enhancing financial inclusion in India. The expansion of banking outlets in villages, the significant growth in BSBDA accounts, and the surge in ICT A/Cs-BC transactions signify increased accessibility to formal financial services for previously underserved populations. These developments have contributed to improving access to formal financial services, particularly in rural areas.

5. Challenges

While demonetization in India has led to significant progress in digitalization and financial inclusion, it has also brought forth several challenges and highlighted existing technological barriers. The digital divide refers to the disparity in access to technology, particularly internet connectivity and smartphones, among different segments of the population. In rural areas and among marginalized communities, access to reliable internet services and affordable smartphones remains limited. According to the Telecom Regulatory Authority of India (TRAI), as of March 2021, the rural Tele-density stood at 60.14 percent compared to the urban tele-density of 143.69 percent indicating a significant gap in connectivity. Alongside unequal access to technology, limited digital literacy poses a significant barrier to the adoption of digital financial services. Many individuals, particularly in rural areas and among the elderly population, lack the necessary knowledge and skills to navigate digital platforms and conduct online transactions. This gap in digital literacy hampers the effective utilization of digital financial services and inhibits the complete integration of marginalized populations into the formal financial system. Inadequate infrastructure, such as the availability of reliable electricity and network coverage, poses challenges to the widespread adoption of digital financial services. In remote and rural areas, where connectivity and infrastructure are limited, conducting online transactions becomes difficult. Insufficient infrastructure also impacts the functioning of micro-ATMs and other digital payment devices, hindering the accessibility of financial services in these areas.

The digitalization of financial transactions brings forth concerns related to cybersecurity and data privacy. Individuals, especially those with limited exposure to digital platforms, may be wary of sharing sensitive financial information online. The lack of trust in the security of digital transactions can deter individuals from fully embracing digital financial services.

Addressing these challenges requires a multi-pronged approach involving government initiatives, private sector participation, and community engagement. Initiatives like infrastructure development, digital literacy programs, simplified and User-friendly interfaces, addressing security and privacy concerns, addressing infrastructure and connectivity issues, provisioning last mile connectivity, and increasing consumer awareness are required to address the challenges.

6. Way Forward through Capacity Building

Promoting capacity building and financial literacy is essential for ensuring the successful adoption of digital financial services. This section elaborates on the importance of capacity building and financial literacy initiatives and their impact on digital inclusion.

Capacity-building programs aimed at enhancing digital skills among individuals play a crucial role in promoting the adoption of digital financial services. Financial literacy programs and awareness campaigns also play a very important role in educating individuals about the benefits of digital transactions, addressing concerns related to security and privacy, and highlighting the convenience and accessibility of digital financial services. Awareness campaigns can be conducted through various channels, including mass media, community outreach programs, and digital platforms. Financial institutions play a crucial role in promoting capacity building and financial literacy. Thus capacity building and financial literacy initiatives have a significant impact on digital inclusion, financial empowerment, and improved financial decision-making.

By focusing on capacity building and financial literacy, India can empower individuals to effectively participate in the digital economy and promote inclusive financial growth.

7. Conclusion

Demonetization had a profound impact on digitalization and financial inclusion in India. The total digital payment as a share of total payment has shown an increasing trend throughout the last decade (92.56 percent in 2017-18 to 99.03 percent in 2021-22). The move towards a cashless economy and the promotion of digital financial services aimed to improve transparency, reduce corruption, and enhance financial access for all segments of society. Demonetization served as a catalyst for the rapid growth of digital payments in India. According to the Reserve Bank of India (RBI), digital transactions in terms of volume and value witnessed significant growth post-demonetization. The volume of digital

transactions increased from 672 million in November 2016 to 1.03 billion in December 2016, representing a growth rate of 53.2 percent. The value of digital transactions also witnessed a surge, reaching INR 1.42 trillion in December 2016. The demonetization drive led to a surge in the adoption of mobile wallets and payment apps. Companies like Paytm, PhonePe, and Google Pay witnessed exponential growth in their user base and transaction volumes. The ease of use, convenience, and accessibility of mobile wallets played a significant role in the rapid adoption by both urban and rural populations. Demonetization also accelerated the adoption of online banking and e-commerce platforms. As individuals faced a shortage of physical cash, they turned to online platforms for their banking needs and shopping requirements. Online banking transactions, including fund transfers, bill payments, and online shopping, witnessed a significant increase, reflecting a shift toward digital financial services. Demonetization spurred the growth of financial technology (fin-tech) start-ups in India. These start-ups introduced innovative solutions and digital platforms to enhance financial services, including digital lending, investment platforms, and personal finance management tools. The rise of fin-tech start-ups contributed to the expansion and diversification of digital financial services in the country.

As already, discussed one of the key objectives of demonetization was to promote financial inclusion by bringing the unbanked and underbanked population into the formal financial system. The opening of Jan Dhan accounts direct benefit transfers, and subsidy rationalization initiatives aimed to provide access to formal financial services to marginalized populations. These initiatives, coupled with the growth of digital financial services, have contributed to improved financial access and inclusion in India. The progress in financial inclusion post-demonetization is evident through the expansion of banking services, increased access to credit, and the adoption of digital financial services. The initiatives undertaken by the government, coupled with the growth of digital technologies, have contributed to greater financial access and empowerment of marginalized communities in India. The impact of demonetization on digitalization and financial inclusion in India has been significant, but there is still room for improvement. Looking ahead, it is crucial to continue building upon the progress made and address the challenges that hinder complete financial inclusion. To ensure widespread access to digital financial services, there is a need to improve digital infrastructure and connectivity, especially in rural and remote areas. Expanding high-speed internet connectivity, strengthening mobile network coverage, and promoting the development of digital payment infrastructure will facilitate the adoption of digital financial services by all sections of society. Increasing financial literacy

and awareness programs will empower individuals to make informed financial decisions and effectively utilize digital financial services. Collaborative efforts by government agencies, financial institutions, and non-profit organizations can play a crucial role in designing and implementing comprehensive financial literacy initiatives. These programs should focus on educating individuals about digital financial services, safe digital practices, and the benefits of financial planning. As digital financial services continue to expand, it is essential to ensure robust consumer protection mechanisms. Regulatory authorities should enforce stringent data privacy and security standards to safeguard consumers' financial information. Promoting transparency, fair practices, and effective grievance redressal mechanisms will install confidence among individuals and promote trust in digital financials. Addressing the digital divide is critical to ensure equal access to digital financial services. Efforts should be made to bridge the gap in digital literacy and infrastructure between urban and rural areas, as well as among different socio-economic groups. Targeted initiatives, such as skill development programs and subsidies for digital devices, can help bridge the digital divide and promote equitable access to digital financial services.

Collaboration between government agencies, financial institutions, technology companies, and non-profit organizations is essential to drive digitalization and financial inclusion. Public-private partnerships can facilitate the development of innovative solutions, promote interoperability, and drive the adoption of digital financial services. Cooperative efforts will ensure that all stakeholders work together towards a common goal of inclusive digitalization. Encouraging innovation in the fin-tech sector will contribute to the growth of digital financial services. Regulatory sandboxes, supportive policies, and favourable regulatory environments can nurture a vibrant fin-tech ecosystem. Collaboration between traditional financial institutions and fin-tech start-ups can result in innovative solutions that cater to the unique needs of underserved populations. Regular monitoring and evaluation of digitalization and financial inclusion initiatives are crucial to assess their impact and identify areas for improvement. Data-driven insights will enable policymakers to make informed decisions and refine strategies to enhance financial inclusion further.

By implementing these recommendations and staying committed to the goals of digitalization and financial inclusion, India can continue its journey toward a more inclusive and digitally empowered society. The collective efforts of various stakeholders will be crucial in creating an ecosystem that enables every individual, irrespective of their background, to access and benefit from digital financial services.

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Annexure 1: Payment System Indicators
(Volume in Million; Value in ₹ Billion)

Year	2012-13				2013-14				2014-15				2015-16				2016-17			
	Volume	**%**	**Value**	**%**	**Volume**	**%**	**Value**	**%**	**Volume**	**%**	**Value**	**%**	**Volume**	**%**	**Value**	**%**	**Volume**	**%**	**Value**	**%**
1 RTGS	**68.52**	**0.82**	**10,26,350.05**	**77.21**	**81.11**	**0.83**	**9,04,968.04**	**59.57**	**92.78**	**0.79**	**9,29,333.09**	**55.24**	**98.34**	**0.65**	**10,35,551.64**	**56.43**	**107.86**	**0.55**	**12,53,652.08**	**54.93**
1.1 Customer Transactions	63.99	**0.77**	5,12,997.84	**38.59**	76.35	**0.78**	5,73,614.03	**37.76**	88.39	**0.75**	6,31,050.74	**37.51**	93.95	**0.62**	7,00,899.82	**38.19**	103.66	**0.53**	8,49,950.51	**37.24**
1.2 Interbank Transactions	4.52	**0.05**	1,63,843.20	**12.33**	4.75	**0.05**	1,60,638.37	**10.57**	4.38	**0.04**	1,22,981.62	**7.31**	4.37	**0.03**	1,23,678.19	**6.74**	4.17	**0.02**	1,31,953.25	**5.78**
1.3 Interbank Clearing	0.01	**0.00**	3,49,509.02	**26.29**	0.01	**0.00**	1,70,715.64	**11.24**	0.01	**0.00**	1,75,300.73	**10.42**	0.02	**0.00**	2,10,973.63	**11.50**	0.02	**0.00**	2,71,748.31	**11.91**
2 CCIL Operated Systems	**2.26**	**0.03**	**5,01,598.49**	**37.74**	**2.56**	**0.03**	**6,21,569.63**	**40.91**	**3.03**	**0.03**	**7,52,000.42**	**44.70**	**3.12**	**0.02**	**8,07,370.42**	**44.00**	**3.65**	**0.02**	**10,56,173.36**	**46.28**
2.1 CBLO	0.16	**0.00**	1,20,480.39	**9.06**	0.18	**0.00**	1,75,261.92	**11.54**	0.21	**0.00**	1,67,645.96	**9.96**	0.22	**0.00**	1,78,335.28	**9.72**	0.22	**0.00**	2,29,528.33	**10.06**
2.2 Govt. Securities Clearing	0.70	**0.01**	1,19,947.98	**9.02**	0.87	**0.01**	1,61,848.24	**10.65**	1.09	**0.01**	2,58,916.76	**15.39**	1.02	**0.01**	2,69,778.20	**14.70**	1.51	**0.01**	4,04,389.08	**17.72**
2.2.1 Outright	0.66	**0.01**	65,920.33	**4.96**	0.82	**0.01**	89,566.99	**5.90**	0.98	**0.01**	1,01,561.62	**6.04**	0.88	**0.01**	97,285.41	**5.30**	1.34	**0.01**	1,68,741.46	**7.39**
2.2.2 Repo	0.04	**0.00**	54,027.65	**4.06**	0.05	**0.00**	72,281.26	**4.76**	0.11	**0.00**	1,57,355.15	**9.35**	0.13	**0.00**	1,72,492.78	**9.40**	0.17	**0.00**	2,35,647.62	**10.32**
2.3 Forex Clearing	1.40	**0.02**	2,61,170.12	**19.65**	1.51	**0.02**	2,84,459.46	**18.72**	1.73	**0.01**	3,25,437.69	**19.34**	1.89	**0.01**	3,59,256.94	**19.58**	1.93	**0.01**	4,22,255.95	**18.50**
3 Paper Clearing	**1,313.45**	**15.79**	**1,00,168.15**	**7.54**	**1,257.31**	**12.83**	**93,316.04**	**6.14**	**1,196.50**	**10.21**	**85,434.14**	**5.08**	**1,096.37**	**7.25**	**81,860.79**	**4.46**	**1,206.69**	**6.17**	**80,958.15**	**3.55**
3.1 Cheque Truncation System (CTS)	275.04	**3.31**	21,779.52	**1.64**	591.38	**6.03**	44,691.39	**2.94**	964.86	**8.23**	66,769.93	**3.97**	958.39	**6.34**	69,889.15	**3.81**	1,111.86	**5.69**	74,035.22	**3.24**
3.2 MICR Clearing	823.31	**9.90**	57,503.97	**4.33**	440.07	**4.49**	30,942.81	**2.04**	22.43	**0.19**	1,850.40	**0.11**	-		-		-		-	
3.2.1 RBI Centres	496.81	**5.97**	36,045.97	**2.71**	215.50	**2.20**	15,246.84	**1.00**	7.50	**0.06**	614.51	**0.04**	-		-		-		-	
3.2.2 Other Centres	326.50	**3.92**	21,458.00	**1.61**	224.57	**2.29**	15,695.97	**1.03**	14.93	**0.13**	1,235.89	**0.07**	-		-		-		-	
3.3 Non-MICR Clearing	215.10	**2.59**	20,884.66	**1.57**	225.86	**2.30**	17,681.84	**1.16**	209.21	**1.79**	16,813.81	**1.00**	137.98	**0.91**	11,971.64	**0.65**	94.83	**0.49**	6,922.93	**0.30**

Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14
	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%
4 Retail Electronic Clearing	**694.07**	**8.34**	**31,881.14**	**2.40**	**1,108.32**	**11.31**	**47,856.29**	**3.15**	**1,687.45**	**14.40**	**65,365.51**	**3.89**	**3,141.53**	**20.77**	**91,408.14**	**4.98**	**4,204.96**	**21.52**	**1,32,255.30**	**5.79**
4.1 ECS DR	176.53	**2.12**	1,083.10	**0.08**	192.91	**1.97**	1,267.96	**0.08**	226.01	**1.93**	1,739.78	**0.10**	224.75	**1.49**	1,651.50	**0.09**	8.76	**0.04**	39.14	**0.00**
4.2 ECS CR (Includes NECS)	122.18	**1.47**	1,771.28	**0.13**	152.54	**1.56**	2,492.19	**0.16**	115.35	**0.98**	2,019.14	**0.12**	39.00	**0.26**	1,059.44	**0.06**	10.10	**0.05**	144.08	**0.01**
4.3 EFT/NEFT	394.13	**4.74**	29,022.42	**2.18**	661.01	**6.74**	43,785.52	**2.88**	927.55	**7.92**	59,803.83	**3.55**	1,252.88	**8.28**	83,273.11	**4.54**	1,622.10	**8.30**	1,20,039.68	**5.26**
4.4 Immediate Payment Service (IMPS)	1.23	**0.01**	4.33	**0.00**	15.36	**0.16**	95.81	**0.01**	78.37	**0.67**	581.87	**0.03**	220.81	**1.46**	1,622.26	**0.09**	506.73	**2.59**	4,116.24	**0.18**
4.5 National Automated Clearing House (NACH)	-		-		86.50	**0.88**	214.81	**0.01**	340.17	**2.90**	1,220.88	**0.07**	1,404.08	**9.28**	3,801.83	**0.21**	2,057.27	**10.53**	7,916.17	**0.35**

Annexure 2: Payment System Indicators
(Volume in Million; Value in ₹ Billion)

Year	2012-13				2013-14				2014-15				2015-16				2016-17			
	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%
5 Cards	**6,174.48**	**74.22**	**18,670.65**	**1.40**	**7,219.13**	**73.65**	**22,159.58**	**1.46**	**8,423.99**	**71.89**	**25,415.27**	**1.51**	**10,038.67**	**66.37**	**29,397.65**	**1.60**	**12,055.87**	**61.69**	**30,214.00**	**1.32**
5.1 Credit Cards	399.23	**4.80**	1,244.27	**0.09**	512.03	**5.22**	1,556.72	**0.10**	619.41	**5.29**	1,922.63	**0.11**	791.67	**5.23**	2,437.02	**0.13**	1,093.51	**5.60**	3,312.21	**0.15**
5.1.1 Usage at ATMs	2.51	**0.03**	14.43	**0.00**	2.96	**0.03**	16.87	**0.00**	4.29	**0.04**	23.47	**0.00**	6.00	**0.04**	30.41	**0.00**	6.37	**0.03**	28.39	**0.00**
5.1.2 Usage at POS	396.72	**4.77**	1,229.84	**0.09**	509.08	**5.19**	1,539.85	**0.10**	615.12	**5.25**	1,899.16	**0.11**	785.67	**5.19**	2,406.62	**0.13**	1,087.13	**5.56**	3,283.82	**0.14**
5.2 Debit Cards	5,775.25	**69.42**	17,426.39	**1.31**	6,707.10	**68.43**	20,602.86	**1.36**	7,804.57	**66.60**	23,492.65	**1.40**	9,247.00	**61.13**	26,960.63	**1.47**	10,962.36	**56.09**	26,901.79	**1.18**
5.2.1 Usage at ATMs	5,308.39	**63.80**	16,683.42	**1.26**	6,088.02	**62.11**	19,648.35	**1.29**	6,996.48	**59.71**	22,279.16	**1.32**	8,073.39	**53.37**	25,371.36	**1.38**	8,563.06	**43.82**	23,602.73	**1.03**
5.2.2 Usage at POS	466.86	**5.61**	742.97	**0.06**	619.08	**6.32**	954.51	**0.06**	808.09	**6.90**	1,213.49	**0.07**	1,173.61	**7.76**	1,589.27	**0.09**	2,399.30	**12.28**	3,299.07	**0.14**

Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14	2014-15	2015-16	2016-17	Year	2012-13	2013-14
	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%	Volume	%	Value	%
6 Prepaid Payment Instruments (PPIs)	**66.94**	**0.80**	**79.23**	**0.01**	**133.63**	**1.36**	**81.05**	**0.01**	**314.46**	**2.68**	**213.42**	**0.01**	**748.02**	**4.95**	**487.58**	**0.03**	**1,963.66**	**10.05**	**838.01**	**0.04**
6.1 m-Wallet	32.70	**0.39**	10.01	**0.00**	107.51	**1.10**	29.05	**0.00**	255.00	**2.18**	81.84	**0.00**	603.98	**3.99**	205.84	**0.01**	1,629.98	**8.34**	532.42	**0.02**
6.2 PPI Cards	33.76	**0.41**	49.62	**0.00**	25.60	**0.26**	28.36	**0.00**	58.91	**0.50**	105.35	**0.01**	143.47	**0.95**	253.77	**0.01**	333.11	**1.70**	277.52	**0.01**
6.3 Paper Vouchers	0.48	**0.01**	19.60	**0.00**	0.53	**0.01**	23.63	**0.00**	0.55	**0.00**	26.24	**0.00**	0.56	**0.00**	27.97	**0.00**	0.56	**0.00**	28.08	**0.00**
7 Mobile Banking	**53.30**	**0.64**	**59.90**	**0.00**	**94.71**	**0.97**	**224.18**	**0.01**	**171.92**	**1.47**	**1,035.30**	**0.06**	**389.49**	**2.57**	**4,040.91**	**0.22**	**976.85**	**5.00**	**13,104.76**	**0.57**
8 Grand Total (1.1+1.2+2+3+4+5+6)	**8,319.71**	**100**	**13,29,238.70**	**100**	**9,802.05**	**100**	**15,19,234.99**	**100**	**11,718.19**	**100**	**16,82,461.12**	**100**	**15,126.04**	**100**	**18,35,102.59**	**100**	**19,542.66**	**100**	**22,82,342.58**	**100**

Source: Reserve Bank of India, Handbook of Statistics On Indian Economy, 2016-2017, pp.130-131.