

# Journal of International Doctoral Research



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# Journal of International Doctoral Research

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## CONTENTS

### Introduction and Welcome

*The Editorial Board* ..... 2

### Looking forward, looking back: Mission based research and teaching

*Gillian Warner-Søderholm* ..... 4

### Does female management increase the outreach of microfinance institutions? Improving access to microfinance for the poor

*Sigurður Guðjónsson, Kari Kristinsson and Inga Minelgaite* ..... 14

### Reasons for White-Collar Abuse of Financial Support Packages during the Covid-19 Pandemic: A Convenience Theory Approach

*Petter Gottschalk* ..... 40

### Agricultural Inputs on Agricultural GDP in Indian Economy: An Analysis

*Syed Mohd Minhaj, M. Altaf. Khan, Ada. Rehman and Mohammad. Lazib* ... 62

### Role of work environment and work life balance in banking: the triggering effect on retention in post pandemic

*Sushil Kumar Pattanaik* ..... 89

### Digital Information Recording Improvement: Services for Disabled

*Viðja Jónasdóttir, Ligita Zailskaitė-Jakštė and Inga Minelgaite* ..... 118

### Spatial Disparity in CSR expenditure: a study on healthcare sector in Delhi- India

*Madhuri Yadav, Pushpam Singh, Sukanta Kumar Baral* ..... 147

### Combat Mindset Training for Military Students: showcasing a new collaborative CoMind EU Project

*Razvan -Lucian Andronic, Ole Boe, Fredrik Nilsen, Doru Vasile Marineanu,  
Marius Șerbeszki, Adrian Lesenciuc, Catalin Calin, Iulian Taranu* ..... 164

# Journal of International Doctoral Research

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Thanks to our team of blind peer reviewers for their contributions to our manuscript review processes again in 2022.

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**Volume 9, Number 1.**

## INTRODUCTION AND WELCOME

### *Vision:*

The International Doctoral Research Centre was created over two decades ago, by **like-minded researchers** from across the globe who wish to promote excellence in research.

The IDRC journal consequently represents our **multi-national effort** to integrate various organizational disciplines into a coherent body of knowledge and **facilitate the emergence of management and economics** as an interdisciplinary domain of study. The journal seeks to provide a forum for interdisciplinary approaches and research traditions. We aim to showcase an international perspective that **gives voice to doctoral and post-doctoral research and scholars** in all regions of the world.

To submit a manuscript for blind peer review for publication to the JIDR, please forward to: [submissions@jidr.online](mailto:submissions@jidr.online). Scan the QR code below to visit our website or go to [www.jidr.online](http://www.jidr.online) for more details on submission guidelines.



Regards,

Editorial Board of the JIDR directors of the IDRC Journal of International Doctoral Research

## **LOOKING FORWARD, LOOKING BACK: MISSION BASED RESEARCH AND TEACHING: REFLECTIONS FROM THE GUEST EDITOR**

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### **INTRODUCTION**

Our lives as researchers are constantly changing, now more than ever as we navigate global developments such industry 4.0, changing geopolitical shifts of power, climate change, post COVID-19 work and life expectations and not least harnessing the value of digital transformation, Artificial Intelligence, and big data. We are evolving as researchers and just as importantly, we are developing as learning facilitators, helping the next generation prepare for work life after a bachelor, masters or PhD degree.

Many of us met each other again, physically, at conferences such as Academy of Management this year, for the first time since 2019, truly honored to see so many new and old friends again. We see the importance of learning from the pandemic period and the consequent digital advances in teaching technology, remote meeting tools and state-of-art digital classrooms, whilst maintaining the focus on physical presence for community building in our work-life, when it is the best solution for new knowledge building.

**Keywords:** Mission-based research and teaching, PhD journey, AI

## LOOKING FORWARD

How can we develop our mission - based focus further in the next decade? ensuring a combination of conceptual knowledge building, combined with purpose based studies which can then offer key societal and management implications for many? How can we harness the value of AI and become better coaches, learning supporters and facilitators of problem based learning, for real time skills building for our students? As one of my dear colleagues Theo Sikkes at our business school at USN reminded us this week:

“We look forward to continuing the discussion after Christmas regarding the challenges surrounding the phenomenon of AI. We see that many students acquire their knowledge through many more places / channels than just the school, for better or for worse. We are no longer the sole provider of university knowledge dissemination, we are more: we are learning facilitators, coaches, supporters, in applying knowledge for critical thinking. Often the students are more up to date than us in many technology areas, and as we have seen in our high engagement in the ChatbotGPT case this week. We know we all have ambitions to create new value in society, business and education by keeping ahead of such developments”

As a brief exercise in AI applications for automatic text writing, I asked ChatbotGPT to write a brief welcome message to this edition of JIDR, and in less than 2 seconds, ChatbotGPT created this message with AI technology, a task a guest editor might spend an hour or two creating:

The International Journal of Doctoral Research is a peer-reviewed academic journal that publishes original research articles and review papers on a wide range of topics related to doctoral research. The journal aims to provide a platform for

researchers and scholars to share their research findings and insights with a global audience, and to contribute to the advancement of knowledge in their fields of study. If you have a research paper or review article that you would like to submit for publication in the International Journal of Doctoral Research, please check the journal's submission guidelines and follow the appropriate submission process.

Then, when asked to complete a second text generation task: to provide a text on the importance of research ethics, CatbotGPT provided the following data in again, less than 3 seconds:

“Research ethics are important because they help ensure that research is conducted in a responsible, transparent, and respectful manner. The San Francisco Protocol is a set of guidelines for conducting research in an ethical and responsible way. It was developed by the University of California, San Francisco in response to concerns about unethical research practices. The San Francisco Protocol covers a wide range of topics, including informed consent, confidentiality, data management, and the use of human and animal subjects in research. By following the guidelines set forth in the San Francisco Protocol, researchers can help to ensure that their work is conducted in a way that is respectful of the rights and welfare of research subjects, and that it meets the highest standards of ethical conduct.” (ChatbotGPT, 2022)

An important reminder of our ethical standpoints as scholars, now that we move into 2023, post pandemic, is our ethical duty in research and publishing, to be vigilant, correct, honorable and respectful of both study participants and co-authors, as agreed in our global research community within the San Francisco Protocol. This is the written protocol document started a decade ago, focusing on the Declaration on Research Assessment (DORA), which recognizes the need to improve the ways in which

researchers and the outputs of scholarly research are evaluated (DORA, 2022), Even more important to follow today, given the new developments within the digital transformation of knowledge and AI applications for both researchers and our students.

## **LOOKING BACK**

Almost a decade ago, the journal's insights to young scholars on their doctorate journey, was a reminder that when taking courses associated with getting a doctorate degree, one often hears the story of the light at the end of the tunnel. It works rather well in motivating doctoral associates who may have spent a couple of years reviewing the theories and methodologies associated with their thesis. Often one runs into a motivation problem due to lack of data, a poor sample, or the difficulties in applying the appropriate statistics. The light at the end of the tunnel philosophy works well if one can tell the PhD scholar that turning back is a longer journey than if one just continues to the finish line, at the end of the tunnel.

When one reaches the finish line, one is then told that it is important to continue to publish in top international journals. And so begins another journey which is often called "publish or perish" for those who have elected to make a career in academia.

Looking back on the discussion above, from almost a decade ago, we see a research shift has taken place, with an even stronger focus today, on purpose based research, mission based research which endeavours to address major challenges societies and organizations face globally. And which heeds the San Fransisco Protocol in research ethics.

And how has taking a doctoral journey changed in the last decade? What are the factors impacting the success of the doctoral journey today? A meta analysis of critical factors which may act as barriers or drivers of PhD completion (Van Rooij, Fokkens-



Bruinsma and Jansen, 2021), highlighted that the doctoral journey is known to be challenging. They claim that 33–70% of those who start their PhD never finish (Jones, 2013). Also, both Castelló et al. (2017) and Cockrell and Shelley (2011), discovered that one-third of their samples of doctoral students, had at some point intended to drop out. In addition, of those who reached the finish line, the majority did so in (substantially) more time than initially planned.

Van de Schoot et al, (2013) further discovered that in the Netherlands, for example, only 10% of PhD students in their study, managed to finish in the commonly prescribed four years, and that the average completion time for those who finished was five years (Van de Schoot et al., 2013). With PhD students' work conditions and their study environment to be key predictors of PhD completion (Kolmos et al., 2008). Such that good work organization and mental health are key factors for success (Levecque et al., 2017).

In a more recent study, Van Rooij et al., (2021) followed the call for newer research and investigated different barriers and drivers of PhD completion, including 1) supervision factors, 2) psychosocial factors, and 3) research project characteristics. They studied which factors were related to satisfaction, progress, and quit intentions in a sample of 839 PhD candidates (Van Rooij et al., 2021). Findings showed that workload was a key hinder to completion (i.e high teaching load of a PhD scholar taking a PhD). Such high teaching loads and consequent time pressures, were negatively related to satisfaction and progress and positively to quit intentions (Van Rooij et al., 2021). Drivers of a PhD completion (positively related to satisfaction and negatively to quit intentions), were the high quality of the supervisor-PhD candidate relationships, the PhD candidate's strong sense of belonging to the research community, the amount of freedom in the project, and working on a project closely related to their supervisor's

research (Woolderink et al., 2015). Hence being part of a research community, with autonomy, trust and supervisor support, were critical factors found in the study. Regarding which specific demographic factors were related to PhD candidates' intention to quit (Virtanen et al., 2015), gender was observed in several studies to be significant predictor: Male candidates in the study had less often considered quitting their PhD project than the female respondents (Van Rooij et al., 2021). Other findings indicated that nationality and phase of the project mattered (Lovitts, 2001; Van de Schoot, 2013). For example, studies have found that non-European PhD candidates, moving to a European university on a scholarship, considered quitting less often than their European counterparts. Another finding in the study, perhaps counter intuitive for many, was that PhD students in the last years of their PhD had considered quitting more often than first and second year PhD candidates. Important learnings for supervisors and candidates to be aware of as we look forward to supporting post COVID doctorate project completions.

Other developments in the last decade for PhD scholars is that we see a clear transition in many research fields to complete a thesis made up of a collection of 3-5 published articles rather than a traditional monograph. Progression is therefore developed with specific milestones of the 3-5 publications rather than a single monograph. This move helps progression transparency and most valuably, the dissemination and impact of the research is then within the doctoral journey rather than as post doctoral publications. Nevertheless, a new challenge appears, as a manuscript may be in the publication 'revise and resubmit process' for up to two years, which could potentially delay the PhD thesis completion.

## CALL FOR NEW RESEARCH

As we move into 2023, we hope the summary findings above may inspire universities to be more focused on PhD supervision matches, more clear on work autonomy combined with clear publication deliverables in collaboration with supervisors, abiding by the DORA protocol. And perhaps most importantly, that PhD candidates, who are gifted teachers must not be given a high teaching load, as this can hinder research progression. I would be honored to be part of a new ‘post-COVID’ study of key factors impacting PhD progression and would be happy to hear from you to start a new multi-country study.

## JIDR: NEW CONTRIBUTIONS

I now transition for the remaining part of this article into my key role as guest editor for this edition of the JIDR, to reflect upon the JIDR’s contributions to research publications for both PhD scholars and experienced scholars in the last decade present the research contributions in this present edition of the JIDR.

During the last decade, the **Journal of International Doctoral Research (JIDR)** has been honored with an important accreditation for all the hard work done by the Journal’s authors, editorial review board members and editors, as the journal was given official accreditation status in listings such as Washington Academic Library Index and several Nordic academic publishing systems, such as the Icelandic and Norwegian, during the last 10 years. Our goal now is to maintain such rankings and continue to seek growth in external recognitions for the JIDR as an open access journal, continuing to develop the impact of our publication in the international research community.

**The JIDR is truly devoted to a wide range of research themes**, which are all linked to the concepts of organizations and management both implicitly and explicitly.

Management research is no longer defined or confined to work and organizational studies. Today, management is at the interface of ways of thinking and acting in all aspects of our lives. The very history of management scholarship is rooted in the world of work and with concern for employee's well-being, as workers are not simply units of capital production, but also human beings. Our special call for this edition has been for new research within **Post COVID** and **sustainability issues**, in light of the UNs call for sustainability goals as a critical focus for sustainable management.

In this issue we present a number of new studies, which use a management lens to look at some **fundamental questions societies face today**: questions relating to **work-life balance post-pandemic** and lessons learnt. **gender issues** related to who receives **micro finance** for sustainable business, **post pandemic exploration of white-collar crimes and abuse of support packages**, economic issues in **Indian agriculture for sustainability**, post COVID, **health care financing** and spacial disparity issues, **care home support** and the role of patient care recordings. Lastly, a **literature and project review of a 2022 EU:CoMind** project is presented, exploring applied psychology and combat training mindsets for peace keeping forces. Such research is especially critical as purpose-based research in these challenging times, with a new war in Europe- our thoughts go to our European colleagues in conflict regions in the Ukraine and neighboring countries. Hence, with mission based research in focus for this year edition of our journal, we are proud to include outstanding scholars from many countries around the world in this special edition. In the coming years, it is our vision to have JIDR publish a articles which continue the themes of mission based research within **diversity** and **sustainability** studies.

We very much appreciate your support as we strive to develop the JIDR as an authoritative journal, publishing innovative research in an international context. The

success and sustainability of our journal depends on the number of quality manuscripts submitted for peer review. Our acceptance rate is on average between 40 % and 50 % each year. Consequently, we encourage you to invite colleagues to consider the JIDR as an excellent publication channel.

All submissions by prospective authors will be handled efficiently by our blind peer review process, and will also be provided a similarity screening check. One of the great benefits to all authors who submit manuscripts to the JIDR is that no matter whether their work is accepted for publication or not, is detailed one-to-one feedback on both content and language is always given. These are high quality, helpful reviews that are designed to help authors improve their research methodology and manuscripts further. As in prior years, we would like to take this opportunity to thank the JIDR advisory board members, reviewers and authors, who support the journal and help make it so successful. We greatly appreciate your support and readership. With warm regards, Dr Eric Balan Head of Academic and Talent Development, AsiaTech Business School, our guest editor last year, sincere thanks for helping JIDR expand its scholarly network. It is an honor for me to be the journal's guest editor this year.

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**DOES FEMALE MANAGEMENT INCREASE THE OUTREACH OF  
MICROFINANCE INSTITUTIONS? IMPROVING ACCESS TO  
MICROFINANCE FOR THE POOR**

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**ABSTRACT**

The purpose of this study is to explore whether the presence of females in management positions (board members, CEOs, managers, or loan officers) is associated with improved depth of outreach of microfinance institutions, as a unique aspect of microfinance institutions is their focus on outreach<sup>1</sup>, i.e., their ability to reach the poor with micro finance. Previous studies have found that women in management positions of MFIs lead to a better financial performance of these institutions. When women are in control of MFIs, they also fair better in reaching out to the poor. Our results suggest that the presence of female CEOs, managers and loan officers is significantly related to the improved depth of outreach, while the presence of female board members is not.

**Keywords:** Microfinance, Outreach, Gender, Top management team, Corporate governance, Gender and finance.

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<sup>1</sup> Outreach is found as average loan balance per borrower divided by GNI per capita, lower outreach means lower loans and is preferable since those who take lower loans are usually more poor. Negative relationship between females in the management team and outreach means that they improve the outreach.

## INTRODUCTION

Although poverty is a persistent problem in the world economy, significant steps have been taken in the last decades to improve the economic well-being of the poor (Ravallion, 2017; Fosu, 2017). An important part of the solutions has been the rise of microfinance institutions (O'Malley and Burke, 2017). The growing microfinance industry consists of microfinance institutions (MFIs) whose most important goal is outreach, which is to provide the poor with capital (Hartarska et al., 2013; Mersland and Strom, 2009).

The literature suggests that microfinance institutions' management might benefit from more female participation (Bassem, 2009; Strom, et al., 2014; Hartarska; et al., 2014). This is especially important as the microfinance industry is also female focused with women comprising approximately 70 percent of all borrowers (Armendáriz and Morduch, 2007; Reed, 2011). As for research on female management and MFI performance Bassem (2009) found that having female board members tends to lead to better outreach, and both Strom, et al., (2014) and Hartarska et al., (2014) found that having a female CEO tends to lead to the superior financial performance of MFIs. The literature also suggests that loan officers may influence MFI performance. Agier and Szafarz (2013) claim that female loan officers provide smaller loans to females. In addition, Beck et al., (2012) presented a noteworthy finding in which they illustrated that having female loan officers resulted in better financial performance than having male loan officers.

Motivated by these findings, this paper examines whether the rate of females in management positions (board members, CEOs, managers, or loan officers) is associated with improved outreach of microfinance institutions. The paper is structured as follows. After discussing theoretical developments in the microfinance literature and putting forth our hypotheses, we move on to the data collection and regression analysis. The paper then ends with a discussion of our findings as well as some concluding remarks.



## **THEORETICAL DEVELOPMENT AND HYPOTHESES**

The microfinance phenomenon has received great attention in recent years. Relatively unknown in the late 1970s, the microfinance industry has since grown rapidly, from just a handful of borrowers in the beginning to hundreds of millions of people in the developing world, most of them with poor social and economic backgrounds (Maes and Reed, 2012). Indeed, the microfinance industry continues to grow; in some countries by more than 20 percent on an annual basis (Lascelle s and Mendelson, 2011).

The microfinance industry is somewhat a unique mixture of institutionalist profit seeking approach as well as to be simultaneously welfare driven institutions (Olivares-Polanco (2005) and Cull et al., (2007). Unlike other organizations, MFIs have dual performance goals: a social one called outreach, as well as a financial one called sustainability. The dual performance goals of sustainability and outreach build on the argument that MFIs should be able to survive independently in the long term (sustainability) while providing the poor with capital (outreach) while sustainability is fond with economically related proxies such as return on asset or return on equity. Outreach is Outreach is found as average loan balance per borrower divided by GNI per capita, lower outreach means lower loans and is preferable since those who take lower loans are usually poorer. Negative relationship between females in the management team and outreach means that they improve the outreach.

In microfinance literature, outreach performance is indeed often accepted as the MFIs' main performance goal (Hartarska, et al., 2013; Mersland and Strom, 2009; Leite et al., 2018; Copestake, 2007; Mersland and Strom 2010; Caudill et al., 2009), however several studies show that there is a tradeoff between outreach and sustainability (Zeller et al., 2003; Olivares-Polanco, 2005; Wry and Zhao, 2018, Battilana and Dorado, 2010; Kent and Dacin; Hermes et al., 2011; Churchill, 2019).

## **FEMALE MANAGEMENT IN MICROFINANCE INSTITUTIONS**

The microfinance literature has rightly pointed out that the microfinance industry is gender specific in that most of their borrowers are women (Strom et al., 2014; Armendáriz, et al., 2007). Additionally, the female borrowers of MFIs are usually among the poorest of all borrowers (D'Espallier and Vanroose, 2013). Although women get the same loan approval rate as men, the size of the loans provided to women are generally much less (Aiger and Szarfaz, 2013).

Given the prevalence of female borrowers in microfinance, researchers in this area have often been drawn to gender issues when examining the industry. Drawing on Becker's (1973) matching theory, their focus has been on the characteristics of the management teams of microfinance firms. In short, Becker (1973) states that people looking for a partner to marry will search for and match with people who have similar characteristics. While marriage theory was originally aimed at explaining matching in heterosexual marriages, the theory has been extended to the matching of characteristics between MFI management and their borrowers (Strom et al., 2014; Agier and Szafarz, 2013), and the matching of MFI borrowers with other similar borrowers in group loans (Ghatak, 1999; Ghatak and Guinnane, 1999; Ghatak, 2000).

Recent literature has explored the use of Becker's (1973) theory of marriage to explain the financial performance of MFIs (e.g., Strom et al. 2014; Ghatak and Guinnane, 1999). Both Mersland and Strom (2009) and Strom, D'Espallier, and Mersland (2014) find that the presence of female CEOs improves MFIs' financial performance. In this paper, we argue that the same should apply to the relationship between female CEOs and MFIs' outreach. As Strom et al., (2014) argued, MFIs operate in a female-specific world, therefore, female CEOs should match with female borrowers. Female leaders are also more concerned with the well-being of others (Terjesen et al., 2009) and are oriented towards enhancing the self-worth of others (Nielsen and Huse, 2010). We, therefore, state the following hypothesis.

**H1: Having a female CEO improves the MFIs' outreach**

The direction of microfinance firms is, however, not only determined by their CEOs. Managers of microfinance firms also have a significant impact on their performance. Research has found that female managers cause better financial results (Shrader et al., 1997), higher returns on equity (Catalyst, 2004), as well as higher total return to shareholders (Powell, 1990; Rizzo and Mendez, 1988). There is a strong reason to believe that this will hold for microfinance firms' outreach as well.

Eagly et al., (2003) argued that females in the upper echelon of management positions were more helpful to their staff members and helped them with their self-development, which resulted in better performance for the company. Other studies also show female managers to positively affect company performance (Krishnan and Park, 2005; Cordeiro and Stites-Doe, 1997; Adams and Ferreira 2009 and Catalyst 2004). Furthermore, for investment decisions, women appear to be less self-confident and more risk-averse than males (Croson and Gneezy, 2009; Powell and Ansic, 1997; Barber and Odean 2001; Eckel and Grossman 2008)

The empirical literature indicates that the presence of women in management positions could influence the performance of MFIs, therefore, the following hypothesis is proposed.

**H2: Female managers improves MFIs' outreach**

Fama and Jensen (1983) argued that many important decisions are made below the top level of the organization. It is indeed important to go lower in the hierarchy of the management team of MFIs and consider loan officers who are mid-level managers. Loan officers are key decision makers regarding loan applications and their evaluation, which in turn affects MFIs performance.

Although the limited literature does suggest that loan officers may have an effect on MFIs performance, very little is known about loan officers and their potential effects on MFIs' outreach. Agier and Szafarz (2013) claim that female loan officers provide lower loans to females, which

keeps them in poverty. Marr and Awaworyi (2012) argued that MFIs with more assets and higher ratios of loan per loan officers were able to perform better socially and Bennouri et al, (2021) found the proportion of female loan officers to reduce the negative relationship between social performance and financial performance. Finally, Beck et al., (2012) found that female loan officers resulted in better financial performance than male loan officers and furthermore, Blanco-Oliver et al., (2021) found female loan officers more likely to lend to female borrowers.

It has already been argued in the literature that women who are in senior positions focus more on developing and mentoring their subordinates, encouraging them to reach their full potential (Eagly et al., 2003). Females in top management positions, therefore, engender increased motivation for lower-level managers. This is in line with the transformational leadership style where the leaders spot potential in their followers (Burns 1978). Indeed, the female leadership style is characterized by cooperation, collaboration and collective problem-solving and decision-making (Jogulu and Wood, 2006; Mandell and Pherwani, 2003). Furthermore, the transformational leadership style that women often use is built around characteristics of caring and to be concerned for the need of others and nurturing (Jogulu and Wood, 2006), and women are particularly concerned about the needs of others (Eagly et al., 2003). We therefore argue that female loan officers could have a decisive effect on the MFIs' outreach. This leads to the following hypothesis.

### **H3: Female loan officers improves MFIs' outreach**

Substantial literature has investigated how women directors on corporate boards affect the performance of firms. In general, the results are mixed and inconsistent (Terjesen, et al., 2009; Nielsen and Huse, 2010). While some researchers have found a positive relationship (e.g., Luckerath-Rovers, 2013; Carter et al., 2003; Erhardt, and Shrader, 2003), others found a negative relationship (Adams and Ferrara, 2009), while yet another research stream (Dwyer et al., 2003; Rose, 2007) reported no discernable relationship whatsoever.

In recent literature for the microfinance industry, Adusei and Obeng (2019) found female board directors to reduce the leverage level of microfinance institutions and female board members were in many cases the main drivers for MFIs capital structure. Furthermore, Adsei and Sarpong-Danquah (2021) found women board members to lead to less debts within MFIs.

When the focus on boards of directors is narrowed down to certain tasks, a different and more comprehensive result emerges. Both, Karau and Makhijani (1995) and Huse, (2010) found that the impact of women board members depended on the nature of the tasks they undertook, with more socially related tasks being better suited. In a similar line, Brown, and Brown (2002) found boards with female directors to be decisive towards ethically related tasks, such as customer satisfaction, gender representation, and corporate social responsibility. Konrad et al., (2008) found female board members to be particularly successful in steering organizations towards philanthropic issues, while Nielsen and Huse (2010) found that having females on boards help to strengthen sensitivity to others, which then shapes the organizational strategy and results in better social performance. When looking more specifically at outreach, Hartarska (2005) found that having female representatives on the board did not affect MFIs' outreach. However, Bassem (2009) found that female representatives helped to improve outreach.

Although the literature of female board members provides mixed results on organizational performance, building on Bassem (2009) results and with outreach being a socially related task (Eagly et al., 1995; Nielsen and Huse 2010), we expect the presence of female board members to enhance MFIs social performance. Therefore, the following hypothesis is stated.

#### **H4: Higher rate of female board members improves MFIs' outreach**

##### **Regression analysis**

The data set in this research contains data from MixMarket.org, which is then matched with original, hand-collected data. About third of the MFIs are Non-Governmental Organizations (NGOs), another

third are Non-Banking and Financial Institutions (NBFIs), and the rest are Microfinance Banks, Cooperative/Credit Unions, and other types of institutions. Although Microfinance Banks are only about 10% of the number of institutions, they do account for 2/3 of total gross portfolio. Out data set of 226 MFIs are representative in terms of where these institutions are located in comparison with total number of institutions provided in the MixMarket data set, most of the MFIs in the data set were located in Asia (1/3 of all the MFIs), Latin America (1/3 of all the MFIs) and Africa (1/4 of all the MFIs). It must be noted that a potential bias in the data is that it is self-selected, i.e., organizations choose themselves to send in information to the Mix Market. The additional data on gender was also from the organizations themselves as well as being from the same time period.

The data has several different gender variables. Women board members are measured as the percentage of the board that consist of women. Female management is defined as the percentage of female managers within the MFIs. We use dummy variable to define if the CEO of the microfinance institutions is a woman. Women loan officers is defined as the percentage of loan officers who are women.

There were some noticeable challenges in using the MixMarket data set. Not all MFIs in the MixMarket data set had information on issues such as women board members, female loan officers and female managers. Further, MFIs did not have information on asset, legal status, country/location, weather they were regulated, or information on ROA. Number of years was also unexpected challenge. Even though the data from MixMarket spans over a decade, many of the main independent variable of interest, particularly that were related to participation of women, were only available from 2010 onwards. Since data reports for the year 2012 were still being sent to the data platform, the final collection of these data was postponed until early 2014 to have a data set spanning three years (2010, 2011 and 2012).

Another challenge was to get the additional hand-collected data, mostly from financial statements available online, rating reports from Planet Rating, Micro Rate, Micro Finanza, Grisil

and M-Cril, as well as from MFIs' homepages. When sufficient information could not be gathered from these sources, more extensive searches had to be undertaken. Some further information could be found on the webpage LinkedIn, such as information on the MFIs' CEOs. In addition, roughly 100 emails were sent out to MFIs to gather more information. Despite being able to receive information for vast majority of our remaining MFIs, few had to be left out. The dataset spans three years (2010, 2011 and 2012) and the final sample contains 226 MFIs.

The final sample of 226 MFIs is representative of the total population of the MFIs from the MixMarket data set. For the dependent variable, the outreach, the median is fairly similar, 0.30 for the population but 0.24 for the final data set. The main independent variables of interest, the gender variables, were remarkably similar, that is the median. The percentage of female board members was 0.30 for the population but 0.27 for the final data set. The Percentage of female borrowers was 0.65 for the population but 0.66 for the final data set. The Percentage of female managers was 0.27 for the population but 0.25 for the final data set. Finally, the percent of female loan officers was 0.27 for the large data set but 0.29 for the final data set.

The model used is a single equation model and follows the one used by Molyneux, Lloyd-Williams and Thornton (1992), Hartarska (2005) and Bassem (2009), and will, therefore, include the same variables they used to be able to make a fair comparison. Differing from Hartarska (2005), neither random effect nor fixed effect was used, since the variable for outreach cannot take zero or negative values. A Logit Tobit regression model is therefore carried out. This model will also contain gender-specific variables that are examined separately in each case along with the rest of the model. A detailed description of the variables in the dataset, as well as descriptive statistics, can be seen in tables 1 and 2.

$$O_{ijt} = \alpha_0 + \beta_1 G_{ijt} + \beta_2 S_{ijt} + \beta_3 M_{ijt} + \beta_4 B_{ijt} + \beta_5 EG_{ijt-1} + \beta_6 M_{jt} + \varepsilon_{ijt},$$

VARIABLES

Table 1.

<u>DEPENDENT VARIABLE</u>	<u><i>O<sub>it</sub></i> = Outreach performance, for MFI i in country i at time t.</u>
Outreach depth	Average loan balance per borrower divided by GNI per capita. A smaller amount indicates a poor borrower, as does negative relationship with independent variables.
<u>GENDER VARIABLES</u>	<u><i>Gi</i> = Are gender specific variable, the main independent variable of interest.</u>
Percentage of female board members	Proportion of women on board
Percentage of female loan officers	Proportion of loan officers who are women
Percentage of female managers	Proportion of managers who are women
Where CEO is female	Dummy, when there is female as CEO
<u>SPECIFIC MFIs VARIABLES</u>	<u><i>Si</i> = Are MFI-specific variables</u>
Size of MFIs (logAsset)	Size of MFIs is measured as the logarithm of total assets.
Age of MFIs (years)	MFIs age is measured of years since commencement.
MFIs type	Four types of MFIs, Non-Governmental Organizations (NGOs), Non-Banking and Financial Institutions (NBFIs), Coops and Banks.
MFIs ALSO lending to individuals	Dummy variable of one if MFIs use group and individual lending methods.
<u>MANAGEMENT SPECIFIC VARIABLES</u>	<u><i>Mi</i> = Are management-specific variables.</u>
Fixed salary (no bonus)	Dummy variable of one if MFIs does not provide bonus for financial performance to CEO
CEO experience (years)	A proxy for manager's quality, measured as years of working experience in the field



<u>BOARD SPECIFIC VARIABLES</u>	
Number of board members	<i>Bit</i> = Are board-specific variables.
Independent board members	Board size, number of board members.
	Proportion of non-affiliated board members.
<u>EXTERNAL GOV. MECHANISM</u>	
Regulated	<i>EGit-1</i> = Are external governance mechanisms
Rated	Dummy variable of one if MFIs is supervised by the central bank.
Audit	Dummy variable of one if MFIs is subject to independent rating of outside organization
	Dummy variable of one if MFIs is audited with financial statement.
<u>COUNTRY SPECIFIC VARIABLES</u>	
Economy size (logGDP)	<i>Mft</i> = Are country specific macroeconomic variables.
Average Inflation	Size of economy, logarithm of the country's GDP
	Average inflation rate, consumer price index.
<u>ERROR TERM</u>	<i>eijt</i> , = Error term.

**Table 2**

VARIABLES	N	Mean	SD	P50	Min	Max
Outreach depth	771	0.491	0.692	0.239	0.023	6.402
Percentage of female board members	771	0.304	0.247	0.273	0	1
Percentage of female loan officers	733	0.348	0.278	0.287	0	1
Percentage of female managers	736	0.323	0.290	0.250	0	1
Where CEO is female	771	0.209	0.497	0	0	1
Size of MFIs (logAsset)	770	16.313	1.743	16.220	12.254	21.642
Age of MFIs (years)	771	14.615	8.588	13	0	60
MFIs also lending to individuals	771	0.895	0.307	1	0	1
Fixed salary (no bonus)	771	0.696	0.460	1	0	1
CEO experience (years)	714	13.980	7.170	13	1	35
Number of board members	771	6.627	3.302	6	1	27
Independent board members	770	0.502	0.316	0.550	0	1
Regulated	771	0.553	0.498	1	0	1
Rated	771	0.553	0.498	1	0	1
Audit	771	0.988	0.107	1	0	1
Economy size (logGDP)	753	24.958	1.962	24.532	21.184	29.739
Average inflation	730	0.065	0.037	0.063	-0.009	0.473
Number of MFIID	226		226	226	226	226

## RESULTS

To test the effect of females in management positions (board members, CEOs, managers or loan officers) on outreach we use the four linear models (Field, 2009): Model 1 uses female CEO as the independent variable, Model 2 uses percentage of female managers as the independent variable, Model 3 uses percentage of female loan officers as the independent variable, and finally Model 4 uses percentage of female board members as the independent variable. The correlations between the variables can be seen in Table 3.

**Table 3.**

Variables*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1)	1																
(2)	-0.13*	1															
(3)	-0.15*	0.20*	1														
(4)	-0.10*	0.25*	0.46*	1													
(5)	-0.10*	0.37*	0.12	0.28*	1												
(6)	0.34*	-0.16*	-0.11*	-0.08*	-0.05	1											
(7)	0.03	0.04	0.05	0.02	0.04	0.23*	1										
(8)	0.09*	-0.06	-0.13*	0.04	-0.01	0.15*	0.13*	1									
(9)	0.00	0.03	0.02	-0.01	0.10*	-0.27*	0.11*	0.08*	1								
(10)	0.04	-0.05	-0.13*	-0.10*	-0.12*	0.19*	0.10*	-0.01	-0.09*	1							
(11)	0.01	-0.02	-0.02	-0.09*	-0.01	0.39*	0.27*	0.07	-0.10*	0.26*	1						
(12)	-0.14*	-0.03	0.01	0.02	-0.03	-0.12*	-0.14*	-0.03	-0.03	-0.01	-0.12*	1					
(13)	0.16	-0.08*	-0.13*	-0.11*	0.00	0.30*	-0.14*	-0.03	-0.37*	0.09*	0.09*	-0.09*	1				
(14)	-0.01	0.02	-0.06	-0.07	0.03	0.39*	0.11*	0.17*	-0.21*	-0.03	0.02	0.00	0.14*	1			
(15)	0.05	-0.07	-0.13*	-0.04	0.06	0.19*	0.10*	0.20*	0.16*	.	0.05	0.01	-0.02	0.14*	1		
(16)	-0.41*	-0.07	0.02	-0.09*	-0.05	0.04	-0.04	-0.20*	-0.09*	0.13*	0.06	-0.03	-0.07*	0.06	0.05	1	
(17)	-0.03	-0.02	-0.11	-0.13*	-0.04	0.01	-0.13*	-0.17*	-0.05	0.16	0.07	-0.03	0.20	-0.02	-0.20*	0.15*	1

\* The variables are defined in Table1. Numbered here as follow: 1= Outreach depth, 2=Percentage of female board members, 3=Percentage of female loan officers, 4=Percentage of female managers, 5=CEO is female, 6=Size of MFIs (logAsset), 7=Age of MFIs (years), 8=MFIs also lending to individuals, 9=Fixed salary (no bonus), 10=CEO experience (years), 11=Number of board members, 12=Independent board members, 13=Regulated, 14=Rated, 15=Audit, 16=Economy size (logGDP), 17=Average inflation. 5% significance level.

Looking at our first hypothesis, the presence of the female CEO appears to result in better outreach, but the result is not strong, with only marginal significance (Table 4). However, the rather weak statistical significance is sufficient and thus hypothesis 1 is supported (Model 1). For Hypothesis 2, we find that the rate of female managers improves MFIs outreach. This suggests that female managers do improve MFIs when it comes to outreach (Model 2). The third hypothesis, which argues that female loan officers will improve outreach, is supported but the statistical significance is rather weak (Model 3). Finally, when looking at the fourth hypothesis regarding the rate of females in the board of directors, we do not find a significant relationship with outreach (Model 4). Female board members appear to have no effect on outreach. The fourth hypothesis is therefore not supported.

In some way our results are in line with previous findings in the microfinance literature. Our results indicate that the presence of a female CEO improve outreach. This finding is in line with those outlined by Hartarska et al (2014). It is noteworthy, particularly since it has already been found that female CEOs in MFIs improve financial performance (Mersland and Strom, 2009; Strom et al., 2014). However, when it comes to female boards members, our results are not in agreement with Bassem (2009) and Hartarska (2005). We expected the presence of female board members to improve outreach. However, this was not the case and that could be because females are more effective when they are at the lower level of the management team rather than at the upper echelon (Mengoli et al., 2017). The contradicting results from this research and from the existing literature calls for further exploration and explanation.

One of the novel contributions of this paper is the linking of the lower levels of the management hierarchy and outreach. We find that female loan officers improve outreach. This result is interesting as Beck et al., (2012) found that the presence of female loan officers improved MFIs financial performance. It appears that having female loan officers may improve both financial

performance and outreach. We also find that female managers improve outreach. This is in line with prior research which found that female managers improve organizational financial performance in general (Adams and Ferreira 2009; Krishnan and Park, 2005; Cordeiro and Stites-Doe, 1997 and Catalyst, 2004).

As for the control variables, MFIs size is positively related to outreach, i.e., the larger the MFIs, the less is the focus on outreach. This should not be surprising since the largest profit-oriented MFIs in the data set, the MFIs that are legally defined as banks, are more inclined to be focusing on profit rather than outreach. The control variables used in relation to outreach in this research, are the same as have been used in previous microfinance research, such as independence of board members (Hartarska, 2005; Bassem, 2012), number of board members (Bassem, 2012), fixed salary/bonus (Bassem, 2012) and individual v.s. group lending (Hartarska, 2005; Bassem, 2009; Bassem 2012). However, since the number of MFIs in the data set were only 226, they were not further divided into MFI types.

**Table 4.**

VARIABLES	Outreach MFIs	Outreach MFIs	Outreach MFIs	Outreach MFIs
Women	CEO	Managers	Loan Of.	Board M.
Woman: CEO/Managers/ Loan officers/Board members	-0.137* (0.0767)	-0.140** (0.0564)	-0.117* (0.0676)	-0.0491 (0.0659)
Size of MFIs (logAsset)	0.130*** (0.0197)	0.137*** (0.0200)	0.123*** (0.0188)	0.130*** (0.0198)
Age of MFIs (years)	-0.00518 (0.00415)	-0.00576 (0.00415)	-0.00569 (0.00404)	-0.00568 (0.00416)
MFIs lending to individuals	0.0680 (0.133)	0.0939 (0.133)	0.0596 (0.131)	0.0796 (0.134)
Fixed salary (no bonus)	0.0516 (0.0841)	0.0414 (0.0839)	0.0346 (0.0827)	0.0431 (0.0844)
CEO experience (years)	0.00367 (0.00454)	0.00413 (0.00454)	0.00236 (0.00444)	0.00433 (0.00454)
Number of board members	-0.0154** (0.00672)	-0.0164** (0.00690)	-0.0115* (0.00641)	-0.0154** (0.00674)
Independent board members	-0.253*** (0.0898)	-0.269*** (0.0915)	-0.252*** (0.0870)	-0.253*** (0.0901)
Regulated	0.0181 (0.0773)	-0.00262 (0.0773)	0.0179 (0.0760)	0.00912 (0.0776)
Rated	-0.0523 (0.0770)	-0.0643 (0.0771)	-0.0285 (0.0758)	-0.0518 (0.0775)
Audit	-	-	-	-
Economy size (logGDP)	-0.139*** (0.0186)	-0.140*** (0.0186)	-0.141*** (0.0183)	-0.137*** (0.0187)
Average inflation	-0.496 (0.331)	-0.451 (0.341)	-0.375 (0.323)	-0.480 (0.331)
Constant	2.039*** (0.578)	1.974*** (0.579)	2.212*** (0.565)	1.984*** (0.581)
Observations	675	650	642	675
Number of MFIID	226	226	226	226

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## CONCLUSIONS AND FUTURE RESEARCH

Delivering capital to the poor is the most important goal of MFIs. As the poor are predominantly women, success in this endeavor is also a gender issue. However, the extent to which the distinctive characteristics of MFIs management team can improve outreach has so far been a rather neglected issue in the literature. Built on prior research in management, this paper focuses on whether increasing the rate of women in MFI management positions is associated with improved depth of outreach.

Overall, our findings suggest that the presence of female CEOs, managers and loan officers is related to improved outreach, while the presence of female board members is not. The finding is noteworthy, as outreach is considered the main performance goal of MFIs and does provide substantial benefit to the poor. Our research contributes to the existing body of knowledge in three major ways. Firstly, it provides evidence on how female participation in the various levels of management within MFIs is associated with outreach. Although prior research has found women in the upper echelon of the management system to be associated with better outreach, namely board members (Bassem, 2009) and female CEOs (Strom et al., 2014; Hartarska et al., 2014), this has so far not been linked to the lower levels of the management team. Our research, therefore, contributes to the microfinance literature by showing the importance of female presence in the lower levels of the management team for MFIs outreach.

Secondly, this study highlights a practical way for MFIs to improve their outreach depth and fight poverty more effectively. Finding ways to improve outreach is important for both MFIs and some of the poorest people on earth. So far, the relationship between outreach and female management has also remained a mostly unexplored subject. Thirdly, our result should be useful for both policymakers and microfinance participants. Introducing more women to the MFIs' management team should serve the dual purpose of improving female empowerment and addressing poverty.

While one of the novel contributions of this paper is the linking of the lower levels of the management hierarchy and outreach, it is however possible that rotation of loan officers and managers could make outreach harder to measure. Same could be true for the socially oriented MFIs and for private MFIs where incentives given to female managers are not enough to assure their permanence there. These issues would be worth considering in future research.

A shortcoming of this study is the lack of a clear theory as to why female management at various levels of the firm have different impact on performance. Future research should address this point. Although several possible explanations have been suggested in this paper further research needs to disentangle these effects and provide a clear theory. An especially interesting avenue to pursue are empirical findings that women tend to be more risk averse and less self-confident than men (Croson and Gneezy, 2009; Powell and Ansic, 1997; Barber and Odean, 2001; Eckel and Grossman, 2008). Microfinance literature appears to support this as well, women clients is associated with lower portfolio risk and fewer write offs (D'Espallier et al., 2013) and female borrowers appears to reduce cost related to portfolio risk and therefore women may be unlikely to lead to performance trade off (Agier and Szafarz, 2013). Given these findings, our results seem to indicate that the greater risk aversion of women could be offset by their matching with borrowers, thereby increasing outreach (e.g., Bassem, 2009; Strom et al. 2014; Ghatak and Guinnane, 1999). Further research of the relationship between women, their risk averseness and outreach would be noteworthy to carry out.

As for further research, it has been pointed out that outreach is one of the main goals of the MFIs and should be treated as such. However, it would be interesting to see more research on the subject, particularly since MFIs have evolved over the last few years. Further work is also needed to assess the robustness of these results. The limited sample, which was the result of original data gathering, requires an extension. Further analysis using a larger dataset might include the use of panel data methods as well as addressing potential endogeneity problems or unobserved factors.



Additionally, issues regarding selection bias need to be tackled. This is especially true since organizations choose themselves to send in information to the Mix Market. However, our results indicate a promising research avenue to pursue.

While acknowledging certain shortcomings of the study, this research paper presents an interesting platform for future research. As microfinance research seems to indicate that increasing female presence in the management team improves both financial performance as well as outreach, it would be interesting to see if the presence of a female management team could lead to no trade-offs between these two performance goals. Another direction for future research would be to investigate why women seem to improve the outreach of MFIs. As research seems to indicate that females have a different leadership style that is characterized by cooperation and collaboration (Jogulu and Wood, 2006; Mandell and Pherwani, 2003), this might prove to be a valuable avenue to investigate.

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**REASONS FOR WHITE-COLLAR ABUSE OF FINANCIAL SUPPORT  
PACKAGES DURING THE COVID 19 PANDEMIC: A CONVENIENCE  
THEORY APPROACH**

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**ABSTRACT**

Convenience theory is an emerging theoretical perspective to explain the phenomenon of white-collar crime. This article presents a one-sided theoretical study of convenience themes that emerged for white-collar offenders during the Covid-19 pandemic by abuse of governments' emergency support packages for business enterprises. Special motives, special opportunities, and special willingness for deviant behavior in abuse of financial aid occurred during the pandemic. Stronger motives – both based on possibilities and threats – are discussed. The opportunity was mainly rooted in rule complexity linked to external lack of control and guardianship. The willingness has many convenience themes including rationality, learning, justification, and neutralization. The one-sided approach of white-collar crime enablers during the pandemic in abuse of public funding needs to be supplemented by discussion of white-collar crime barriers during the pandemic in future research.

**Keywords:** Covid-19; convenience theory; rule complexity; white-collar crime.

## INTRODUCTION

The Covid-19 pandemic was a public health emergency of international concern starting in 2020. The pandemic “led governments around the world to take drastic action and implement a wide range of proactive and reactive measures to limit the spread of the disease” (Payne et al., 2021: 1). There were travel restrictions and border controls, quarantine requirements for those infected, social isolation and distancing requirements for almost everyone, and the closure of diverse services, businesses, and educational facilities. The new situation globally created convenient opportunities for criminals (Kennedy et al., 2021: 494):

From the very beginning of the Covid-19 crisis, criminals sought to take advantage of the lack of information available regarding the virus, misinformation coming from official and unofficial sources, and disinformation spread via the internet and social media channels. When the corona virus Covid-19 spread to Norway, the country closed down most sectors on March 12, 2020. The wealthy Norwegian state provided financial compensation to businesses as well as individuals. Some explored and exploited the compensation arrangements because they found it convenient. They had a convenient motive, a convenient opportunity, as well as a convenient willingness for deviant behavior. The convenient motive was the fear of bankruptcy despite receipt of some legitimate compensation from the state. The convenient motive was also greed, to be able to climb the hierarchy of needs. The convenient opportunity was the lack of controls and guardianship as the state based its payments on trust to be able to provide financial support quickly to victims of the close-down already in April 2020. The convenient willingness was the attribution of guilt to the state that had closed down the economy and the society. The convenient willingness was also the assumption that a number of other people and businesses did abuse the financial compensation arrangements as well. Already after a

month into the pandemic, the Norwegian national authority for investigation and prosecution of economic and environmental crime detected Covid-related fraud (Langved and Klevstrand, 2020).

This kind of wrongdoing is in line with the theory of convenience suggesting that a strong motive, an attractive opportunity, and a high-level willingness for deviant behavior increase the likelihood of misconduct and crime. Covid-related fraud schemes were detected all over the world (e.g., Kennedy et al., 2021).

This article addresses the following research question: *What kind of special motives, special opportunities, and special willingness for deviant behavior by white-collar offenders in abuse of financial support packages occurred during the Covid-19 pandemic?*

This article maintains that the concept of convenience may help understand the wrongdoing at the top of organizations. The purpose of the article is to provide a theoretical foundation for future research based on a multi-dimensional explanation of white-collar offending. This perspective, which is composed of three interrelated themes of motivation, opportunity, and willingness, suggests that individuals more likely to commit white-collar crime are differently oriented to convenience as a factor in the choice to engage in illegal behavior. Individuals become more oriented toward convenience as the motive becomes stronger, as the opportunity improves, and as the willingness to engage in deviant behavior becomes more intense. Thus, perception of convenience should differ between those who view white-collar crime as more acceptable and those who view it as less acceptable.

## **COVID-19 FRAUD**

A variety of Covid-19 frauds developed quickly during the pandemic, including fraud schemes that did not target public financial support packages. Kennedy et al. (2021) studied frauds that targeted consumers and that were related in some way to the virus. They

looked at sale and distribution of fake virus-related products such as counterfeit testing kits, some of which were destined for healthcare facilities. Fake preventive medicines and treatments against the virus were marketed to consumers. Counterfeit versions of legitimate goods essential to health and safety infiltrated the legitimate supply chain. Some virus-related scams did not involve products or services, but rather attempts to make consumers turn over personal information or money without ever receiving anything in return.

In our perspective of white-collar abuse of financial support packages, two examples from the United States and Norway respectively can illustrate the issues. A California couple was sentenced for \$20 million in Covid fraud, where they had abused the government support package of emergency and relief loans for threatened businesses (Løvik, 2021). The couple had created fictive companies with fake payment checks and income statements in 151 loan applications (Hernandez, 2021):

A California couple was sentenced to prison for illegally obtaining more than \$20 million in Covid-19 relief funds – but authorities need to catch them first. Richard Ayvazyan, 43, was sentenced to 17 years behind bars and his wife, 37-year-old Marietta Terabelian, received a six-year sentence in federal prison on Monday for conspiracy, bank fraud and money laundering, according to the Department of Justice. The two are on the run from authorities and were sentenced in absentia. Federal officials said they cut off their tracking bracelets on August 29, federal officials said. During the sentencing, US District Judge Stephen V. Wilson said he could not recall a fraud case conducted in such a “callous, intentional way without any regard for the law”. Wilson described Ayvazyan as “an endemic, cold-hearted fraudster with no regard for the law” and someone who “views fraud as an achievement”. The judge also sentenced Ayvazyan’s brother, Artur, 41, to five years in prison. On June 25, a federal jury found Richard Ayvazyan, Artur Ayvazyan and

Terabelian guilty of one count of conspiracy to commit bank fraud and wire fraud, 11 counts of wire fraud, eight counts of bank fraud and one count of conspiracy to commit money laundering. Richard Ayvazyan and his brother were also convicted of aggravated identity theft. The FBI is offering a reward of up to \$20,000 for information leading to the arrest of Richard Ayvazyan and Terabelian.

By December 2021, the Norwegian police had 80 Covid fraud cases on their table. One of the cases that lead to conviction was a couple who made up a list of cancelled concerts as well as a closed-downed parking garage (Haram, 2021):

By inflating his own and his spouse's income in a manipulated tax return form, the man in his 50ies incorrectly reported millions in turnover in companies that were without operations. In this way, he imposed a sky-high tax burden on himself and his wife, but at the same time he was given the opportunity to take advantage of the corona support schemes that the state launched in April 2020. The convicted man in his 50ies registered several companies in different districts to make control difficult. A recent ruling from the Oslo district court states: Despite the fact that "the frauds do not have a very professional character", the convict, by establishing different companies in different tax regions, has tried to "minimize the risk of being exposed/arousing suspicion". Through several companies, he tried to get the Cultural Council to pay out more than NOK 13 million as a result of canceled concerts. He did the same to the Norwegian Lotteries Authority, which he tried to defraud for almost six million. A total of 17 applications were sent for compensation for concerts that "there was no reality behind", the Oslo district court writes in the verdict.

First, the convicted has used several different associations and companies to commit economic crime, both in his own and in the name of the spouse. Secondly, the applications have been developed in line with the new requirements that came in the

regulations, including requirements for the events to be traceable, says police lawyer Anders Orerød at Økokrim (Norwegian national authority for investigation and prosecution of economic and environmental crime) to VG.

The economic support package in Norway led to a very profitable year 2020 for many companies in the cultural sector such as entertainment groups. Folkvord et al. (2022) found that 57% of the companies that received government funding had better bottom-line results in 2020 than in previous years. Half of those companies that improved their results had their best year ever in 2020.

In Australia, the economic response package for businesses was called “jobkeeper”. Australian government’s jobkeeper payments helped keep Australians in jobs and supported businesses affected by the significant economic impact of the Covid-19 pandemic (Treasury, 2021):

In the first phase of JobKeeper (30 March to 27 September 2020), eligible businesses and not-for-profits were able to receive \$1,500 (before tax) per fortnight per employee to cover the cost of wages. During the extension phase of JobKeeper (28 September – 28 March 2021), the payment was tapered and targeted to those businesses that continued to be significantly affected by the economic downturn. Businesses were required to reassess their eligibility with reference to their actual turnover. In the extension phase the payment was reduced and paid in two rates:

- From 28 September 2020 to 3 January 2021, the payment rate was \$1200 per fortnight for employees who worked 20 hours or more a week on average in the reference period and \$750 for employees who worked less than 20 hours a week on average in the reference period.
- From 4 January 2021 to 28 March 2021, the payment rate was \$1000 per fortnight for employees who worked 20 hours or more a week on average in the reference period

and \$650 for employees who worked less than 20 hours a week on average in the reference period.

In Norway, the general compensation arrangement for businesses covered 85 percent of fixed, unavoidable costs in companies that have had a turnover loss of 30 percent or more, compared to the year 2019. The compensation was dependent on the size of the turnover loss. The compensation was first limited to NOK 4 million and then NOK 7.5 million for a two-month period. If a company was profitable during this period, the company was required to repay some of the compensation received (Regjeringen, 2022).

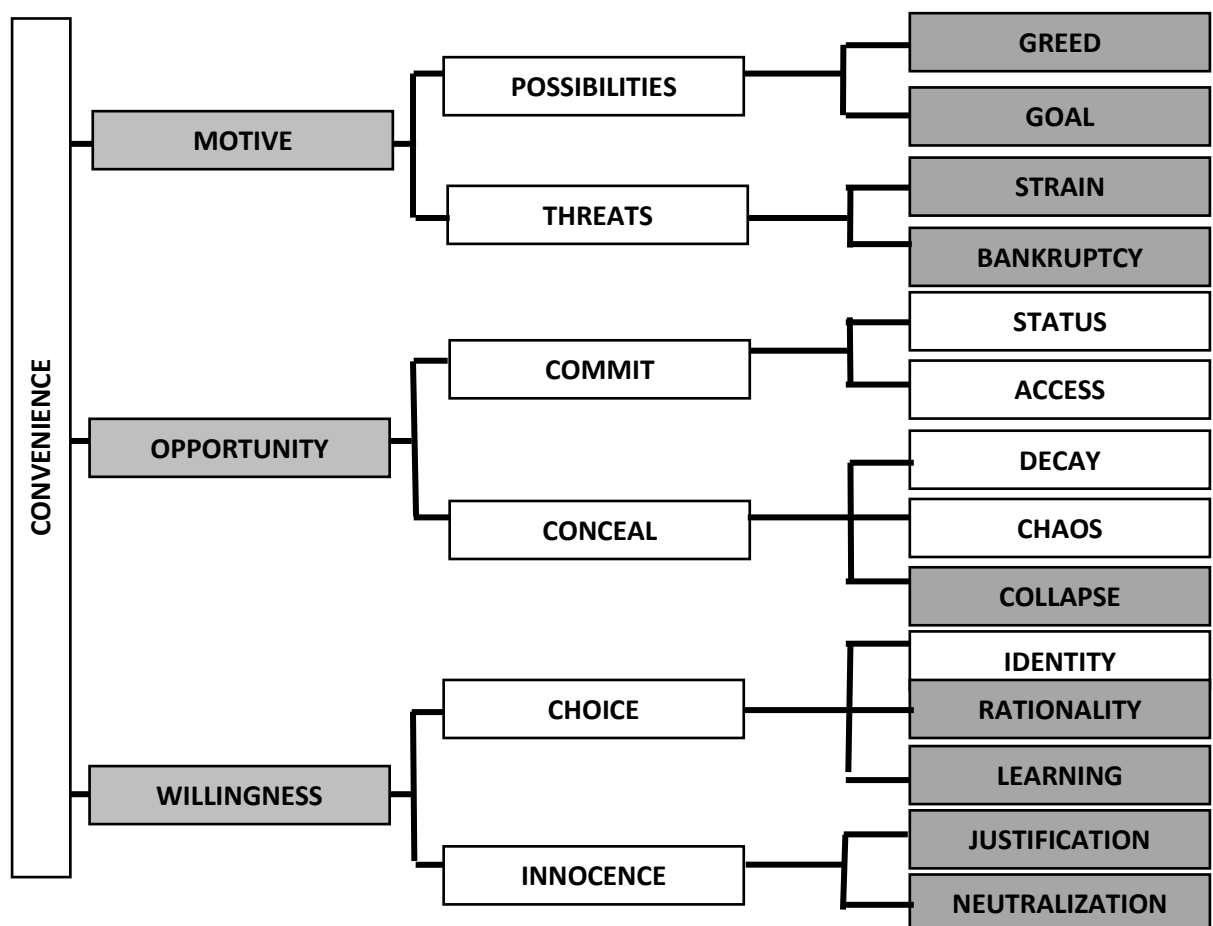
## **THEORY OF CONVENIENCE**

Convenience theory is an emerging theoretical perspective to explain the phenomenon of white-collar crime where convenience was first introduced as a core concept by Gottschalk (2017). Recently, the theory has been evaluated (e.g., Chan and Gibbs, 2020; Hansen, 2020; Oka, 2021; VasIU, 2021; VasIU and Podgor, 2019) and applied by several scholars such as Asting and Gottschalk (2022), Braaten and Vaughn (2019), Dearden and Gottschalk (2020), Desmond et al. (2022), Stadler and Gottschalk (2021), and Qu (2021). The structural model of convenience theory is illustrated in Figure 1. The motive is dichotomous in possibilities and threats, the opportunity is dichotomous in committing crime and concealing crime, and the willingness is dichotomous in choice and innocence. The motive along the convenience dimension of possibilities for individuals might be greed and for organizations the achievement of goals. The motive along the convenience dimension of threats for individuals might be avoidance of strain and for organizations the avoidance of bankruptcy.

High social status and legitimate access to resources make it convenient to commit crime. Organizational decay in the form of institutional deterioration, organizational chaos

in the form of lacking overview and guardianship, and market collapse caused by rule complexity, cartels, and crime networks make it convenient to conceal crime.

Willingness can be based on choice or innocence. Choice is a conscious decision to commit crime, while innocence is a perception of lacking a role in wrongdoing. A conveniently oriented individual in a trusted position with a stronger deviant identity, stronger rational mind, or a stronger differential association has a higher level of willingness to get involved in financial crime. A conveniently oriented individual in a trusted position with a stronger ability to justify wrongdoing or a stronger ability to deny guilt has a higher level of willingness to get involved in financial crime.



**Figure 1** *Structural model of white-collar crime convenience*



There are a total of 14 convenience themes in the structural model of white-collar crime on the right-hand side in Figure 1. The theoretical challenge in the following is to identify those themes that are impacted by the Covid-19 pandemic. The theoretically identified convenience themes are marked in grey boxes and discussed in the following. The identified themes represent special motives, special opportunities, and special willingness for deviant behavior by white-collar offenders in abuse of financial support packages that occurred during the Covid-19 pandemic.

### **FINANCIAL MOTIVE**

Some business individuals seized the opportunity for financial gain as a possibility during the pandemic. The greed perspective might derive from a need to restore the perception of equity and equality (Leigh et al., 2010; Cullen et al., 2020)). The equity perspective then as a motive suggests that a person compares his or her outcome during the pandemic to the outcome before the pandemic. The potential reduction in outcome is caused by the state and needs to be compensated. The offender blames the state for having caused reduced freedom to conduct business. While there is no threat to the offender, the offender nevertheless has a motive for fraud to compensate for the unjust restriction treatment by the state.

The greed perspective can also derive from the need to satisfy the desire to help others as social concern (Agnew, 2014). Many suffered losses during the pandemic, and the offender might want to help and thus moving beyond the assumption of simple self-interest. However, as argued by Paternoster et al. (2018), helping others can be a self-interested, rational action.

Some businesses seized the opportunity for financial gain as a possibility during the pandemic to reach ambitious business goals. While the compensation package only

intended to make each business stay alive, businesses had their own strategic plans with objectives that needed to be achieved. Goalsetting is often perceived in a positive light, meaning that ambitious goals increase performance (Locke and Latham, 2013). The state has created barriers to the achievement of goals. Therefore, the enterprise needs to commit fraud to compensate for the gap in resources to achieve goals. There might be an escalation of commitment to goals where decision-making in the face of negative state restrictions and uncertainty surrounding the likelihood of goal attainment cause even stronger dedication to goals. In many organizations, ends justify means (Campbell and G6ritz, 2014).

The pandemic caused strain from uncertainty by lock-down. The strain perspective emphasizes strains and stressors that increase the likelihood of crime, the negative emotions (including anger) resulting from those strains that create pressure for corrective action (Thaxton and Agnew, 2018). Strains are events and conditions that individuals dislike. Strains lead to negative emotions and thereby create pressure for corrective action. Strain triggers negative emotional states such as anger, fear, or depression, with anger being potentially the most criminogenic emotion. Crime is one possible corrective action (Froggio and Agnew, 2007).

An increased fear of falling from a high-status position resulting from the lock-down can cause wrongdoing (Piquero, 2012). The fear of falling perspective suggests that people in leading positions are afraid of the consequences of failure and therefore try to survive in their privileged positions by applying various means. The fear of falling perspective thus suggests that the motivation for financial crime by white-collar offenders is the fear of losing what one has worked so hard to achieve (Benson and Chio, 2020).

The threat of bankruptcy was real as lock-down occurred. Threats are associated with urgency, difficulty, and high stakes (Chattopadhyay et al., 2001). Threats involve a

negative situation in which loss is likely and over which one has a fair amount of control. The threat of corporate collapse and bankruptcy might cause exploration and exploitation of illegal avenues to survive, where moral panic can occur (Kang and Thosuwanchot, 2017). The survival of the corporation can become so important that no means come across as unacceptable in the current situation where the state carries the blame.

Both individual and corporate responses to possibilities and threats can result from rational self-interest (Pillay and Kluvers, 2014). During the pandemic, offenders might assume that the risk of detection is low. The rational choice model considers incentives and probability of detection. This applies to both private and professional life. Human behavior finds motivation in the self-centered quest for satisfaction and avoidance of suffering (Hirschi and Gottfredson, 1987). If the individual assesses economic crime as an attractive action in the form of gain now (profit for realization of current ambitions) compared to probable future cost (punishment, isolation, loneliness), and the individual prefers to avoid the use of more time and effort to solve problems preventing realization of ambitions, then convenience theory says that crime will probably occur.

## **ORGANIZATIONAL OPPORTUNITY**

Some offenders have a status implying that they are almost too big to fail and too powerful to jail (Pontell et al., 2014). Status is an individual's social rank within a formal or informal hierarchy, or the person's relative standing along a valued dimension (Kakkar et al., 2020). In our perspective of special opportunities from the pandemic, there seems to be no convenience issues from status as illustrated in Figure 1. Similarly, there seems to be no convenience issues from legitimate access to resources to commit crime (Benson and Simpson, 2018). Furthermore, the pandemic seems to have no influence on organizational decay in the form of institutional deterioration (Barton, 2004; Donk and Molloy, 2008) and

no influence on organizational chaos in the form of lacking overview and guardianship (Chan and Gibbs, 2022).

Collapse caused by rule complexity seems to be the only relevant issue in the opportunity structure of concealing wrongdoing as rule complexity prevents compliance. Rule complexity can create a situation where nobody is able to tell whether an action represents a criminal offense (Lehman et al., 2020). It is impossible to understand what is right and what is wrong. Some laws, rules, and regulations are so complex that compliance becomes random, where compliance is the action of complying with laws, rules, and regulations such as the support scheme. The regulatory legal environment is supposed to define the boundaries of appropriate organizational conduct. However, legal complexity is often so extreme that even specialist compliance officers struggle to understand what to recommend to business executives in the organizations. The financial support packages were suddenly introduced as an emergency measure where rules seemed to change frequently regarding issues such as who was entitled and not entitled, what was relevant to get compensated, and how to apply for relief loans and direct subsidies.

It might seem surprising that not organizational decay in the form of institutional deterioration or organizational chaos in the form of lacking overview and guardianship are relevant convenience issues in light of the pandemic. The reason is that both issues relate to internal situations in organizations. If convenience theory was extended to include lack of external overview and guardianship in an outside-in perspective, then such convenience themes would become relevant as well as answers to the research question in this article.

## **PERSONAL WILLINGNESS**

The extent of deviant identity is a convenience theme that has no connection to the outside situation such as government restrictions on the business. Therefore, this theme is

illustrated blank in Figure 1. For example, the phenomenon of narcissistic identification with the business (Galvin et al., 2015), where company money seems to be identical to personal money, has nothing to do with government pandemic policies.

The economical dimension of convenience theory applied the rational self-interest motivation. The rational choice approach also applies to the willingness in the behavioral dimension of convenience theory. The rational choice assumption about offending is based on a normative foundation where advantages and disadvantages are subjectively compared (Müller, 2018). When there is no perceived likelihood of detection or punishment, then there is no deterrence effect to prevent offences (Comey, 2009). The economic model of rational self-interest is all about weighing up the pros and cons of alternative courses of action. The pros in favor of fraud were stronger than the cons against fraud for many business enterprises.

Learning to adapt to a new situation was certainly a convenience theme during the pandemic as indicated in Figure 1. The offender mind is a result of personal differential association as suggested by Sutherland (1983). The differential association perspective suggests that potential offenders make a choice where they associate with those who agree with them, and distance themselves from those who disagree. This perspective suggests that whether individuals engage in white-collar crime or not depends on their socialization within certain peer groups. In an elite setting, interactions with deviant others promote criminal activity. The essence of differential association is that criminal behavior is learned, and the main part of learning comes from within important personal groups. Exposure to the attitudes of others that either favor or reject turbulent legal codes influences the attitudes of the individual. The individual will go on to commit crime if the person exposes himself or herself more to attitudes that favor law violation than to attitudes

that favor abiding the law (Wood and Alleyne, 2010). Learning from others is an active process where a belief quickly settled that others were doing the same during the pandemic.

In a justification, the actor admits responsibility for the act in question but denies its pejorative and negative content (Schoen et al., 2021: 730):

People use justification mechanisms to protect their sense of self. People who sincerely believe that they are a specific kind of person but routinely demonstrate behaviors that indicate otherwise may avoid cognitive dissonance and maintain their sense of self by using justification mechanisms that allow them to “explain away” their behavior.

The explain-away approach for fraud during the pandemic is convenient since negative life events were caused by the government. The perspective of negative life events suggests that events such as divorce, accident, lack of promotion, and cash problems can cause potential offenders to consider white-collar crime a convenient solution (Engdahl, 2015). As argued by McGloin et al. (2021: 740), “a core tenet of the social sciences is that the actions of others can fundamentally change decision-making and behavior”. Innocent justification seems to resonate in many descriptions of offending where group settings incentivize the decision to offend. Group settings can make offending more convenient (i.e., less risky) and more rewarding. Some are willing to commit crime only if other people started doing so first. People who would otherwise not offend, and people who have a low tendency to offend when alone can have a greater willingness to do so in a group setting. Offending might here be a rational choice that seems convenient to justify.

The final theme in Figure 1 is neutralization. It is a matter of lack of or removal of guilt feeling. In fact, white-collar offenders during the pandemic might have felt being victims of government restrictions. There are a number of neutralization techniques suggested by Sykes and Matza (1957) and others that might fit the minds of offenders during the pandemic. First, offenders can refuse damage from the fraud, as they might

claim that there was no visible harm for their actions. Similarly, offenders can refuse victim from crime as they might claim that nobody suffered from their actions. Furthermore, offenders might justify crime by higher loyalties as it was according to expectations such as goal achievement.

## **DISCUSSION**

The Covid-19 pandemic had all kinds of interesting economic impacts that were not all negative. During the pandemic, fewer people went to their regular places to work, and more people stayed at their homes during working hours where they organized various forms of home offices. At daytime then more homes were occupied by residents and the opportunity for property crime like home burglary was reduced for potential offenders. As argued by Rorie et al. (2022), when people spend less time outside their homes, they are less likely to be victimized both personally as well as in terms of property crime like home burglary. In Australia, property crime like home burglary dropped significantly during the pandemic (Payne et al., 2021: 1):

Drawing upon theories from environmental criminology, this study examines officially recorded property crime rates between March and June 2020 as reported for the state of Queensland, Australia. We use ARIMA modeling techniques to compute 6-month-ahead forecasts of property damage, shop theft, residential burglary, fraud, and motor vehicle theft rates and then compare these forecasts (and their 95% confidence intervals) with the observed data for March through to June. We conclude that, with the exception of fraud, all property offence categories declined significantly.

Similar to this property crime observation, it is imaginable that some aspects of white-collar crime by abuse of financial support packages make offenses less convenient. It is conceivable that there are special motives, special opportunities, and special

willingness for compliance by potential white-collar offenders to avoid abuse of financial support packages that occurred during the Covid-19 pandemic. Therefore, it is not obvious that there was a rise in white-collar crime during the pandemic compared to situations before and after the pandemic. It is thus an interesting avenue for future research to study both enablers and barriers to Covid-19 fraud related to government support packages.

## CONCLUSION

This article has presented a one-sided theoretical study of convenience themes that emerged for white-collar offenders during the Covid-19 pandemic by abuse of governments' emergency support packages for business enterprises. Special motives, special opportunities, and special willingness for deviant behavior in abuse of financial aid occurred during the pandemic. Stronger motives – both based on possibilities and threats – were identified. The opportunity was mainly rooted in rule complexity linked to external lack of control and guardianship. The willingness has many convenience themes including rationality, learning, justification, and neutralization.

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## **THE POTENTIAL OF AGRICULTURAL INPUTS ON AGRICULTURAL DP IN INDIAN ECONOMY: AN ANALYSIS**

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### **ABSTRACT**

The purpose of this study is to examine the relationship between agricultural inputs and agricultural GDP in the Indian economy from 1980-1981 to 2011-2021 using a simple regression analysis. The agricultural GDP is the dependent variable, whereas the independent factors include the usage of fertilizers, net irrigated area, pesticides, power, rainfall, and high yield kinds of seeds. Fertilizers and net irrigated area, two elements thought to affect agricultural GDP from 1980–1981, have been shown to have a negligible impact on GDP growth from 2011–2021. Additionally, the study indicates that variables

such as pesticides, electricity, rainfall, and seeds are statistically significant, prompting researchers to conclude that they all had a significant impact on agricultural GDP throughout the time span under consideration. The researchers suggest that the government can impact the agriculture sector by controlling inputs and regulating outputs. Due to its multiplicative effect on the sector's total GCF, the research underlines the need to invigorate public sector investment. Consequently, it is essential to design a long-term infrastructure approach that prioritizes the most effective infrastructure investments.

Key words: Agricultural, GDP, and Rainfall.

## **1. INTRODUCTION**

Agriculture is the most important sector of the Indian economy. The policies of globalization and liberalization have created new pathways for agricultural modernization over the past two decades, which have seen a rapid development. This has led to not only commercialization and diversification, but also sparked many technological and institutional advancements thanks to investments in sector (Gulati, 2009). Most Indian families depend heavily on income from agriculture. As of 2015, agriculture provided over 58% of the income for rural households. One of the greatest contributors to the Gross Domestic Product is agriculture, along with fisheries and forestry.

The vast majority of people worked in agriculture. Subsistent farming, in which farmers produce food primarily for their personal use rather than selling surpluses, was the norm before the Industrial Revolution (Sakhare, 2017). Over the past century, agriculture has seen a dramatic transformation because of modern technologies and the expansion of global markets. Based on this, agricultural practices could benefit from technology



advancements (Wagh & Dongre, 2016). Today, agriculture and its supporting industries remain the single most important source of income for the great majority of India's rural population. It also has a major impact on GDP. The agricultural industry is crucial since most sectors need food and other agricultural products to function (Paudel et al., 2021). The country is now food-independent and has a secure emergency stockpile thanks to the planned approach to development. The supportive policy environment has been crucial to allowing for these successes. Incentives for expansion and fair distribution of food were important tenets of India's agricultural policy (Gil, 2017). Because of this, horrific famines are now things of the past, and agricultural output does not show considerable variance even in the face of adverse meteorological conditions.

The rural areas of India are the backbone of the country's economy (Morgan, 2017). In 1993–1994, this figure had dropped to 64.8%, and by 2011–2021, it had dropped to 48.9%. Between those years, 43% of male workers and 60% of female workers were engaged in agriculture (Veer, 2017). The value of our total exports is equal to the value of the agricultural items we ship abroad. As a result, agriculture plays a key role in our economy. When compared to China (5.3%), Pakistan (4.4%), and Indonesia (4.1%), India's average annual rate of growth in agricultural production from 1951–2006 was 3.0%. During the years following the "green revolution," yearly growth averaged 2.4% (1967–1968 to 2013–2014). In 2012–2013, the growth rate for agriculture and related industries was 1.5%; in 2013–2014, it was 5.6%; in 2014–2015, it was 0.2%; in 2015–2016, it was 0.7%; and in 2020–2021, it was 4.9% (SW & W, 2017). One reason agricultural expansion is unclear is because half of all farm production is directly tied to weather. The percentage of GDP at factor cost contributed by agricultural and related activities, which includes forestry, logging, and fishing, fell from 53.1% in 1950–1952 to 29.6% in 1990–1992, and then to 13.9% in 2013–2014. In 2014–2015, agriculture and related activities accounted for 16.5%

of GVA at basic prices using 2011–2012 as the base year (N. Khan et al., 2021). In 2020–2021, this figure dropped to 15.4%. The share of GCF allocated to agriculture has decreased as a percentage of the total in the years after the market reforms. In 1990–1991, it was 9.9 percent; by 2011–2012 (8.6 percent, at 1993–1994 prices); and by 2020–2021, it was 7.8 percent (Limbore Nilesh V & Khillare Shrirang K, 2015).

The Indian agricultural sector is in crisis as a result of the changes in economic policy made by new administrations. The crisis has culminated as a result of the interconnected effects of dropping agricultural produce prices, reducing per capita income and decreasing per capita (Chanti, 2017). “The crisis in agriculture is exacerbated by government policies that encourage farmers to abandon cash crop staples like rice and corn in favour of more capital-intensive cash crops”. From a high of 74:26 in 1950–1951, the ratio of food crops to non-food crops in cultivated land changed to 80:20 in 1980–1981, before reversing course to 77:23 in 1990–1992, and then falling to its current low of 73:27 in 2020–21. It is indicative of the country's gradual transition from growing non-food to food crops (Himani, 2014). This change is mostly attributable to the fact that, with the help of modern agricultural technologies, Indian farmers can reap considerably higher financial and food rewards from growing food crops than ever before. The government's inconsistent or contradictory policies, as well as the lack of proper and timely financing, have made matters even worse for farmers (Affairs, 2021). Subsidies for farm inputs like fertilizers and irrigation have played a crucial role in boosting agricultural output in many developing countries like India. Large farms profit more from these rules than do smaller ones (Schneider et al., 2011). There has been minor increase in production in recent years (Meuwissen et al., 2019), and as a result, farmers' incomes have dropped dramatically. Agriculture helps the economy expand in a number of ways, including the forward linkage effect (Komarek et al., 2020). The main purpose of this paper is to investigate the impact

of agricultural inputs on India's agricultural gross domestic product. State intervention leads to extensive inefficiencies and distortions in the agricultural sector (Annika, 2006). Input subsidies have been crucial to enhancing food security, but they have also resulted in a number of undesirable side effects (Raina, 2021). Overuse of inputs is the result because “farmers are unable to respond to market signals” when input costs are not accurately reflected in the market price. Since the government is footing the bill, they have no incentive to change their lopsided approach to the inputs they use (Mohammed Arshad Khan, Roy, et al., 2021).

Agriculture commodity prices have shifted during the past decade. It happened because of food restrictions and the detention of merchants. Fruits, vegetables, legumes, milk, eggs, chicken, and meat will constitute the bulk of the diet in the future (F AlKhader, 2015). Therefore, either an increase in imports is necessary beyond the current 4 percent target rate, or the allied sector's growth must accelerate in tandem with agricultural growth. Considering of dwindling land and water supplies, agricultural expansion must be sped up (Abdurakhmonov, n.d.). Using a mix of organic and conventional farming practices will allow us to expand agriculture in a way that is both healthy for the soil and yields enough food to satisfy present demand.(Mohammed Arshad Khan, Zeeshan, et al., 2021).

Agriculture in India is a major contributor to the country's GDP, and this research examines the connection with regards agricultural variables and agricultural GDP from 1980–1981 to 2020-21. The study has also calculated the statistical significance of several inputs used to examine Agricultural GDP. In this so, the current study adds to the body of research on Indian Agriculture in the sense that it uses a straightforward regression analysis to quantify the impact of inputs on agricultural GDP (Mohd Altaf Khan & MINHAJ, 2022). Secondary data are used for this study, which covers the time span from 1980-81 to 2020-2021. In other words, the study shows all the drawbacks associated with using

secondary data. The findings have important implications for the economic growth prospects of countries where agriculture remains the primary source of labor force (Mohammed Arshad Khan, Khan, et al., 2021).

## **2. OBJECTIVES OF THE STUDY**

- 1) Investigate the growth of India's agricultural sector in relation to output and productivity in relation to other economies worldwide.
- 2) The purpose of this research is to examine developments in agricultural inputs from 1980–1981 to 2011–21. It is basically help in analysis previous trend with current trend. Helpful in considering past shortcoming related to agriculture and how it improves in present situation. Overall, it decreases gap between past and present agriculture production.
- 3) The purpose of this research is to analyze the effect of various agricultural inputs on India's agricultural GDP growth rate.

## **3. RESEARCH GAP**

Prior literature reviews have mainly concerned themselves with the function of agricultural inputs and the results of structural change in countries. The few research that have been conducted on this topic in India have produced contradictory findings. Consequently, there is a lack of research on how agricultural inputs affect agricultural GDP in India. This study aimed to address this knowledge gap by providing an answer to the following question: Determine the correlation between farm inputs and agricultural output in the Indian economy.

#### 4. METHODOLOGY

The data for this study were obtained exclusively from secondary sources. Secondary data is information collected by a party other than the original user. Popular sources of secondary data for social science study include censuses, information collected by government agencies, organizational records, and data collected for other research reasons. Here, we apply a standard regression analysis to establish a link between the expansion of agricultural GDP and the expansion of key production inputs. Factors such as fertilizer use, net irrigated area, pesticide use, power use, and HYV seed use are derived from the data and used in the article.

“Agriculture GDP =  $\beta_1$  +  $\beta_2$  fertilizers +  $\beta_3$  net irrigated area +  $\beta_4$  pesticides +  $\beta_5$  electricity +  $\beta_6$  rainfall +  $\beta_7$  seeds +  $\mu$ ”.

The rate of expansion in agricultural output is the dependent variable, with expansion in inputs such as “fertilizers, net irrigated land, pesticides, electricity, rainfall, and high-yield varieties of seeds serving” as the independent variables.

$\beta_1$  = “Constant term (When value of all the independent variables is zero, the value of agriculture GDP)”.

$\beta_2$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in fertilizers”.

$\beta_3$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in net irrigated area”.

$\beta_4$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in pesticides”.

$\beta_5$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in electricity”.

$\beta_6$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in rainfall”.

$\beta_7$  = “Unit/% change in agriculture GDP due to 1 unit/% increase in seeds”.

In this case,  $\mu$  stands for all of the other factors that may have been used as independent variables but were not because of a lack of information during the time frame being considered. To prevent omitted variable bias, our strategy will involve minimizing

the error term. In essence, the inclusion of an error term indicates the existence of all the variables that have an effect on the dependent variable but have not been taken (Mohd Altaf Khan & MINHAJ, 2021). We can get more reliable and objective results by including more variables as controls and reducing the error term. This study accounts for the error term by considering as many confounding variables as feasible that may influence the outcome. This helps us construct more accurate predictions, brings our error term closer to zero, and sidesteps the omitted variable bias issue.

## **5. AGRICULTURAL SECTOR PROGRESS IN INDIAN ECONOMY**

If you look at Table 1, you can see how many people live in the country and how many of them fall into one of the several kinds of agricultural workers that have relied on the agricultural industry since 1951. There were 361,1 million people living in the United States as per the 1951 census. In the 60 years since then, the country's population has grown by more than 850 million people. The accompanying chart shows that the annual rate of population growth was 1.96 percent from 1951 to 1961, and then 2.20 percent from 1961 to 1971. The yearly rate of population increases in the 1980s was 2.16 percent, according to the 1991 census. The population growth rate slowed to 1.97 percent per year between 1991 and 2001, and then to 1.5 percent per year from 2010 and 2021. Since 1951, there has been a consistent downward trend in the rural population's share of the total. From 82.7% of the entire population in 1951, just 68.9% were living in rural areas by 2011. The entire workforce consists of growth from 135.9 million in 1951 to 481.9 million in 2011 is remarkable. In 2021, Agriculture and allied activities employed 263.1 million people, or 54.6% of the total workforce. This highlights the world's reliance on agriculture (Siddiqui et al., 2021).

**Table 1. Population and agricultural workers (In Millions)**

<b>Year</b>	<b>Total Population</b>	<b>Average Annual Exponential</b>	<b>Rural Population</b>	<b>Total workers</b>	<b>Agricultural Workers</b>		
					<b>Cultivators</b>	<b>Agricultural Laborers</b>	<b>Total</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>
1951	221.1	1.05	198.6 (72.7)	149.5	59.9 (61.9)	37.3 (18.1)	87.2 (79.7)
1961	538.2	1.86	260.3 (72.0)	178.7	89.6 (66.0)	30.5 (28.0)	121.1 (68.5)
1971	568.2	2.10	339.0 (70.1)	186.4	88.2 (72.2)	48.5 (36.8)	135.7 (79.7)
1981	583.3	2.58	425.6 (66.9)	247.6	102.5 (72.5)	50.5 (39.5)	141.0 (70.5)
1991	746.4	3.16	530.6 (84.5)	324.1	120.7 (69.7)	64.6 (44.3)	175.3 (69.0)
2011	928.7	3.09	752.6 (79.2)	412.2	137.3 (64.4)	116.8 (55.6)	214.1 (68.2)
2021	1110.8	3.76	733.7 (78.9)	491.9	128.8 (55.1)	134.3 (57.9)	283.1 (64.6)

Source: "Registrar General of India".

Table 1 displays the breakdown of the agricultural workforce into cultivators and agricultural laborers. Around the country in 2011, there were 118.8 million farmers and 144.3 million farmhands. It is clear from the data that the share of cultivators has decreased from 71.9% in 1951 to 45.1% in 2021, while the share of agricultural laborers has climbed from 28.1% to 54.8% during the same time period. It is indicative of the fact that many people have switched careers from farmers to farmhands. Based on 2011 Census data, we know that the number of farmers has decreased by around nine million while the number of farmhands has increased by about 38 million.

Major crop yields per hectare in India since 1950–1951 are listed in Table 2. Compared to the yield of 552 kilograms per hectare in 1950–1951, the yield of 2016 kilograms per hectare in 2015–2016 is an increase of over 3.5 tons. From a yield of 655 kg per hectare in 1950–1951, it has risen to a record-breaking 3093 kg per hectare in 2020–2021 for wheat. The average yield of rice has risen from 1950–1951 to 2020–2021, to a whopping 2404 kgs per hectare. Productivity increases were substantially smaller for jowar and bajra. The growth rate of pulse crops has been very disheartening. We've managed to boost output of both corn and cotton (Mohammed Arshad Khan, Vivek, et al., 2021).



**Table 2. Yield per hectare of major crops (Kgs per hectare).**

<b>Crop</b>	<b>1950-51</b>	<b>1960-61</b>	<b>1980-81</b>	<b>1990-91</b>	<b>2000-01</b>	<b>2010-11</b>	<b>2020-21</b>
Rice	668	765	1336	1740	1901	2390	2404
Wheat	655	765	1290	1765	1986	1769	1789
Jowar	554	559	1489	2011	1598	1760	-
Bajara	332	390	909	1894	1547	2092	-
Maize	412	543	2143	1900	2098	1765	-
Pulses	654	789	1098	1876	1097	1876	1652
Total food gain	654	753	876	1543	1590	1897	2056
Oilseeds	430	531	1234	1709	1778	1290	968
Cotton	309	541	1986	2098	2190	2097	432
Jute	290	389	900	1598	1769	1690	-

Sources: “Various Economic Surveys 2020-21”.

It is significant because to the widespread use of hybrid maize and but cotton in recent years. According to the data presented above, maize yields increased from 547 kg/ha in 1950–1951 to 2557 kg/ha in 2020–2021. Pulse yields have increased by fewer than one percent each year on average during the 1950s, as shown in the above table. Jute's output has also increased, from 1043 kgs per hectare in 1950-1951 to 2627 kgs per hectare in 2020-2021. In addition, oilseed output just surpassed the target, while sugarcane, jute, cotton, etc. fell short.

In Table 3 we see India's 2014 agricultural global ranking. In 2021, India ranked seventh in both total and land area across the globe. India has a total land area of 329,000,000 acres, making it the sixth largest country on Earth. India now produces more jute, pulses, sugarcane, tea, and cotton lint than any other country, and ranks second globally in nut production. Given that India is the biggest market for these goods, export levels will change depending on harvest yields and consumer demand. In addition, it is one of the largest consumers in the world. Exports of these goods, however, will be subject to

fluctuations in both supply and demand. In 2014, India ranked third worldwide in the production of tobacco products, rapeseed, and total cereals.

Table 4 above presents a comparison of India's agricultural output (in terms of both land area and total yield) to that of other countries. From the data presented above, it is clear that there are significant variations in acreage, production, and productivity amongst countries. One percent of the world's landmass was in India.

From the data presented above, it is clear that China accounts for 28% of global paddy output, with India not far behind at 21.19%. After China, India is responsible for the second-most paddy grown anywhere in the world. This country ranks higher than both Indonesia and Brazil.

**Table 3. India's position in world agriculture in 2021**

<b>Item</b>	<b>India</b>	<b>World</b>	<b>% Share</b>	<b>Rank</b>	<b>Next to</b>
1) Total Area (Million Hectares)	349	12467	3.4	Seventh	"Russian Federation, Canada, USA, China, Brazil, Australia"
a) Land Area	397	14009	3.3	Seventh	"Russian Federation, China, USA, Canada, Brazil, Australia"
b) Available Land	147	1317	14.0	Second	USA
2) Crop Production (Million Tonnes)					
a) Total Cereals	255	3819	11.5	Third	China, USA
b) Total Pulses	29	72	24.8	First	
c) Oilseeds					
Groundnut (in shell)	06	49	13.9	second	China
Rapeseed	07	84	11.4	Third	Canada, China
d) Commercial Crops					
Sugarcane	332	1784	17.7	Second	Brazil
Tea	1.11	5.86	20.7	Second	China
Coffee	0.39	8.99	3.6	Sixth	"Brazil, Vietnam, Indonesia, Columbia, Ethiopia"
Jute & Jute like Fibres	3.01	4.05	54.8	First	
Cotton Lint	6.18	24.36	22.7	Second	China
Tobacco Unmanufactured	0.62	8.11	11.87	Third	China, Brazil

Source: Agricultural Statistics at a glance 2021

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d) Commercial Crops					
Sugarcane	332	1784	17.7	Second	Brazil
Tea	1.11	5.86	20.7	Second	China
Coffee	0.39	8.99	3.6	Sixth	“Brazil, Vietnam, Indonesia, Columbia, Ethiopia”
Jute & Jute like Fibres	3.01	4.05	54.8	First	
Cotton Lint	6.18	24.36	22.7	Second	China
Tobacco Unmanufactured	0.62	8.11	11.87	Third	China, Brazil

Source: Agricultural Statistics at a glance 2021

**Table 4. Area production and yield of principal crops in various countries in 2021**

<b>Country</b>	<b>Area</b>	<b>Production</b>	<b>Yield</b>	<b>Production (%)</b>
<b>1. Paddy</b>				
World	153,001	811,010	5546	100.0
China	33,370	307,020	7832	28.94
India	42,920	257,050	4576	20.19
Indonesia	23,810	80,810	6130	8.55
Bangladesh	14,300	62,370	5628	6.16
Thailand	12,710	42,640	2047	3.41
Myanmar	8790	36,430	6888	2.56
Brazil	7741	29,090	5009	3.56
Japan	2341	22,220	6212	2.65
Philippines	1575	11,590	7667	1.32
<b>2. Wheat</b>				
World	320,057	829,060	4314	100.00
<b>China</b>	44,171	257,090	7515	20.57
<b>India</b>	32,588	97,940	4144	14.15
<b>USA</b>	28,861	56,180	3931	8.50
<b>3. Maize</b>				
World	285,080	1,840,090	6622	100.00
China	53,600	461,000	11,744	44.71
India	25,400	89,900	6188	6.68
Indonesia	6837	43,100	7844	5.18
Bangladesh	5627	38,500	7160	3.74
Thailand	10258	33,700	3560	1.28
<b>4. Pulses</b>				
World	75,981	75,653	1099	100.00
India	20,769	29,890	559	35.79
Myanmar	5203	6977	2422	8.72
Canada	3870	6828	2131	9.52
China	5379	5101	1824	10.29
<b>5. Sugarcane</b>				
World	37,125	1,980,700	79,663	100.00
Brazil	15,466	836,080	73,639	49.69
India	6012	452,050	71,289	28.76
China	1860	226,810	81,566	7.73
<b>6. Groundnut (in shell)</b>				
World	36,590	53,965	2657	100.00
India	5604	26,765	4584	47.82
China	7685	7557	2400	24.94
<b>7. Tobacco Unmanufactured</b>				

World	5964	8177	2811	100.00
Brazil	2463	3995	1047	51.74
China	616	962	1074	22.02
India	533	821	1566	11.04
USA	253	598	2496	4.54

Source: FAOSTAT (as on 26-12-2021)

In the world, only Japan accounts for about 2% of the paddy harvest. When it comes to wheat, we can state that India accounts for roughly 13% of global production, placing it in second place, just behind China, which accounts for around 22%. Even though the United States produces only about 8% of the world's wheat, India ranks higher. In terms of global maize output, the United States accounts for the largest share (35%), followed by “China, Brazil, Argentina, Ukraine, and India”. At 2.28 percent of global output, India's maize production places it sixth. In terms of pulses specifically, India accounts for around 26% of global production, trailed by Myanmar, Canada, and China. India produces 39% of the world's sugarcane, making it the second largest producer after Brazil. India is second only to China in terms of groundnut production, accounting for about 15% of global output. India is the world's third largest producer of raw tobacco, accounting for about 10% of the total. China is responsible for roughly 19% of the world's total paddy farming area. India comes in at #2 in terms of land mass, at about 27%. China is responsible for about 11 percent of the world's total wheat cultivation area. When it comes to landmass, India is second only to China. The United States accounts for about 18% of the world's total maize cultivation area. With a landmass of about 5%, India comes in second. India is first in the world in terms of the area devoted to growing pulses, accounting for 35.5% of the total. After Brazil, India is the world's second largest cultivator of sugarcane, with an area equivalent to 18.49% of the total cultivable land in the globe. After China, India is the world's second largest producer of groundnuts, with an area equivalent to 17.67% of the total area used for groundnut production worldwide.

### **5.1. TRENDS IN AGRICULTURAL INPUTS**

The agricultural inputs most often cited as the cause of the agricultural revolution are new and better varieties of seeds and other planting supplies. Many millions of dollars have been spent on irrigation projects since independence. About 18% of the world's total cultivated area (20.9 million ha) was irrigated in 1950–1951. Two of the most crucial components of agriculture are water and soil. The country's irrigation potential rose from 81,1 million hectares in 1991-1992 to 108,2 million hectares in March 2021 as a result of the development and implementation of new irrigation methods. Having access to irrigation during crucial times in crop growth is a major determinant of yield quality. Monsoons and rain are the lifeblood of the remainder of the world's farmland.

The high-Yielding Varieties Program me, which began in 1966, greatly increased the use of fertilizers in Indian agriculture. Overall fertilizer use has climbed from 66,000 tons in 1952–1953 to 125,46,000 tons in 1990–1991, and then to 255,76,000 tons in 2020–2021. After China, India is now the world's largest purchaser of fertilizers. However, nutritional inadequacies have developed in Indian soils due to improper nutrient utilization and the lack of attention paid to organic matter. Over the past two decades, India's fertilizer use has risen from 69.84 kg per hectare in 1991–1992 to 128.08 kg per hectare in 2020–2021. It was not until the middle of the 1960s that pesticide use really started to take off; in the 1950s, it was practically non-existent. While use of pesticides was at about 24.3 kt in 1970–1971, it has increased to 57.4 kt in 2020–2021.

**5.2. EMPIRICAL ANALYSIS AND RESULTS:**

Source	Sum of squares	Degrees of freedom	Mean sum of squares	Number of observations = 36
Model	512.0873	7	78.99	F (6, 30) = 5.05
Residual	429.9834	30	13.4874	Probability > F = 0.0013
Total	761.0077	34	25.108016	R-squared = 0.5458
GDP	Coefficient	Std Error	t value	P value
Fertilizers	-0.0225068	0.0249754	-0.38	0.0883
Net irrigated area	0.000556	0.0005561	0.44	0.0635
Pesticides	-0.0681709	0.0548877	-1.10	0.0338
Electricity	-0.0001741	0.0000738	-0.68	0.0284
Rainfall	0.0530007	0.0086602	4.61	0.000
Seeds	0.0169377	0.0181984	2.57	0.0228
Constant	-31.85378	-12.66425	-1.03	0.061

There is a statistically significant effect from using this model (P 0.05). The above independent variables account for 55.5% of the variance in agricultural GDP, according to a R Squared value of 0.5558.

Statistical analysis of the variables fertilizers and net irrigated area shows that they do not significantly affect agricultural GDP from 1980–1981. The research goes on to show that factors including pesticide use, power, rainfall, and seed availability are statistically significant, leading the authors to conclude that these factors significantly affect agricultural GDP across the time period in question. The use of both pesticides and electricity has been shown to reduce agricultural GDP. In terms of agricultural GDP, both rain and seeds are helpful. An increase of one percentage point in the use of pesticides would reduce agricultural GDP by 0.078%, whereas an increase of one percentage point in the usage of electricity would reduce agricultural GDP by 0.000074%.



#### 5.4. ROBUSTNESS TESTS

All the variable importance functions (VIFs) in Table 5 fall between 1 and 10. “That being the case, we can state categorically that the regression model is not affected by Multicollinearity. Independent variables” are not related to one another in a linear fashion (Mohammed Arshad Khan, 2021).

Next, we use the Breuch Pagan BP test to determine whether or not our regression model exhibits Heteroscedasticity. The results of our statistical test indicate that the P value is less than 0.05, we can conclude that our model does not suffer from heteroscedasticity, often known as unequal variance. In addition, we test our model for autocorrelation using the Durbin Watson DW test. Based on our findings, the DW test value is very close to two, indicating the absence of autocorrelation. Therefore, our regression model is subjected to a robustness hell comprised of all three tests. Therefore, we can confidently assert that the outcomes of our regression analyses are accurate and objective.

**Table 5. The indicator for Variance inflation factor (VIF) for Agriculture GDP.**

<b>Variables</b>	<b>“Variance inflation factor (VIF)”</b>
Fertilizers	2.11
Net irrigated area	3.87
Pesticides	1.98
Electricity	2.83
Rainfall	3.01
Seeds	1.71

## 6. ISSUES AND PRIORITIES FOR AGRICULTURE

### 6.1 CHALLENGES

India's economic growth and the betterment of the lives of the rural poor will rely on the solutions to three difficulties in the agricultural sector:

**1. Increasing agricultural productivity per unit of land will need to be the primary driver of agricultural growth, as nearly all cultivable land has already been cultivated:** Irrigation needs to compete with rising industrial and urban demands for scarce water. “Increasing yields, diversifying to higher-value crops, and building value chains to cut marketing costs” are only some of the techniques that will need to be exploited to enhance production.

**2. Reducing poverty in rural areas by fostering economic growth in agriculture and other non-farming sectors:** The rural poor, landless, women, SC/STs, and tribal communities must all gain from development efforts. The “Eastern Indo-Gangetic plains” and rain-fed regions of India are home to the vast majority of India's poor, and there are also large regional inequalities. Getting across to these communities has proven challenging. Even though the percentage of the rural population living in poverty decreased from almost 40% in the early 1990s to below 30% by the middle of the 2020s (about a 1% annual fall), more needs to be done to meet this goal. As a result, the Government and the World Bank have made poverty reduction a priority in their rural development initiatives.

**3. Making sure that agricultural expansion is in line with food safety requirements:** India was able to become food-grain self-sufficient and prevent a famine because to the dramatic increase in production that occurred during the Green Revolution in the 1970s. Increased demand for rural labor in the 1970s and 1980s contributed to higher

rural earnings and a decrease in rural poverty, as did falling food prices. Cereal yields have increased by only 1.4% annually in the 2020s, while agricultural growth slowed to an average of 3.5% per year in the 1990s and 2000s. There is serious cause for alarm over the deceleration in agricultural growth. India only produces a third as much rice as China and around half as much as Vietnam and Indonesia. It is the similar for the vast majority of farm products.

## **6.2 PRIORITY AREAS FOR SUPPORT**

### **1. Improving agricultural output, business viability, and rural development**

#### **Advancing Agricultural Technology and Changing the Image of Agricultural**

**Research and Extension:** Boosting farm productivity, commercial viability, and rural advancement Changing Perceptions of Agricultural Research and Extension and Advancing Agricultural Technology. The research community can only offer stale, outdated products. The state's agricultural education programs are floundering and failing to provide farmers with cutting-edge information. Neither research nor extension, nor the private sector, are adequately connected.

**2. Improving Water Resources and Irrigation/Drainage Management:** India's major water consumer is its agricultural sector. In the future, there may be less water available for irrigation as urban and other needs increase. We need to figure out how to get far more out of irrigation ("more crop per drop"). Drip irrigation and piped water supply are two examples of more effective water delivery methods. The usage of groundwater must be managed, rather than exploited. Efforts to discourage water consumption by, say, increasing electricity costs or instituting community-wide monitoring have not yet achieved widespread success. Other top concerns include (i) updating the Irrigation and

Drainage Departments so that farmers and other agencies can work together to manage irrigation water; (ii) increasing the efficiency with which costs are recovered; (iii) giving higher priority to schemes with the greatest potential for return; and (iv) providing adequate funding for operations and maintenance to ensure the long-term viability of investments.

### **3. Facilitating agricultural diversification to higher-value commodities:**

Additionally, there is a lot of room for growth in agro-processing and the establishment of competitive value chains connecting farmers and rural communities to cities and international markets. Farmers and business owners should take the lead on diversification efforts, while the government should ease restrictions on distribution, transportation, export, and processing. While being careful not to let this become an obstacle, it can also play a tiny regulatory function. Agricultural sub-sectors with robust growth potential include dairy, one of the commodities that should be promoted. Over 70% of rural families in India, generally poor and headed by women, rely on revenue from the livestock sector, primarily due to the dairy industry. Increased output and a significant reduction in poverty are possible results of a program designed specifically to address these bottlenecks.

**4. Developing markets, agricultural credit and public expenditures:** Due of the government's historically heavy hand in agricultural marketing in India, both domestic and international trade are restricted, making the distribution of agricultural products difficult and expensive. However, private sector investment in advertising, value chains, and agro processing is expanding, but at a considerably slower rate than it could. While certain barriers are being removed, much more must be done to promote diversity and bring down prices for consumers. It is still difficult for farmers to receive credit, thus there is a need to make it easier for them to access rural finance.

**5. Poverty alleviation and community actions:** While rising agricultural output will help lift millions of rural poor out of poverty, more needs to be done to ensure that everyone benefits from this expansion. For instance, it has been discovered that a rural livelihoods program that helps people set themselves up for success is both effective and amenable to expansion. To boost incomes and employment, this program encourages the development of self-help groups, boosts community savings, and supports grassroots efforts at the local level. Women and low-income families can benefit greatly from these self-help groups.

## **7. POLICY IMPLICATIONS & CONCLUSIONS**

The preceding discussion suggests that variables like fertilizers and net irrigated area do not significantly affect agricultural GDP from 1980–1981, and into the future between 2020 and 2021. The study also reveals that factors such as pesticides, electricity, rainfall, and seeds all have a significant impact on agricultural GDP across the time frame of the mentioned data set. There is an inverse correlation between the use of pesticides and electricity and agricultural GDP. The agricultural gross domestic product rises when it rains and when farmers plant seeds.

The input and output sides of the agricultural sector are both open to government intervention. Water, irrigation, electricity, seeds, and fertilizer can all be supplied by the government in sufficient quantities at a reduced cost. The government can aid farmers by guaranteeing a fair price for their goods through a combination of procurement and minimum support laws. The government should be held responsible for ensuring a steady market, stable prices, and a steady supply of inputs. In addition to addressing issues of hunger and poverty, the government must get involved in agriculture to generate an

exportable surplus by spending enough money on things like roads, water systems, agricultural laboratories, and extension services.

Since 1951, the central government of India and numerous state governments have spent vast sums on large and medium-scale irrigation projects without making the recipients of these services contribute financially. Users are not even paying enough to cover the initiatives' operating expenses. The government must control the extraction of ground water and require farmers to register their pumping systems. The farming community will be responsible for overseeing water shed projects, building minor irrigation systems, and maintaining historic water sources. There needs to be an immediate emphasis on conserving and consolidating conventional water supplies as a top investment priority.

In the initial stages of development, when the beneficiaries are likely to be from low-income groups, a policy of cheap input may be appropriate. Free electricity for all farmers could have serious unintended consequences, such as the depletion of aquifers from overuse. The government must control the extraction of ground water and require farmers to register their pumping systems. The farming community will be responsible for overseeing water shed projects, building minor irrigation systems, and maintaining historic water sources. The government must invest more in agricultural research and extension if farmers are to be adequately prepared for the problems of the future. The importance of reviving public sector investment is amplified when considering the industry's total GCF. Therefore, it is important to create a strategy with a long-term vision for rural infrastructure, with an emphasis on the most effective and interconnected infrastructure projects.

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## **ROLE OF WORK ENVIRONMENT & WORK LIFE BALANCE IN BANKING: THE TRIGGERING EFFECT ON RETENTION in POST PANDEMIC**

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### **ABSTRACT**

Today's workplace is more informal and emotionally managed than it was a generation ago. Modern managers are more inclined than their predecessors to challenge convention and encourage open communication. There is also a growing interest to offer improved flexibility to employees managing their working day as a way of enhancing their overall job satisfaction and performance. Banking has been considered as the key occupation to examine in studies of 'workers' and it also presents an interesting case for retention issues in post pandemic period. The study says that the factors affecting retention during this post COVID period in order of decreasing significance are long working hours, work environment, uneven workload, a demanding family responsibility or immediate social changes. To ascertain the type of attrition and retention practices including reasons for non take up (e.g. impact on work environment and culture for job satisfaction) by organizations in Indian banking and non banking industry and this is the objective of the study. The study was conducted in Banking companies, with a diverse population via mails & telephonic survey and e-mail from the questionnaire collected from 100 samples, where 52 sample respondents are from bank-I and 48 from bank-2. The tools and technique used in this research are factor analysis and regression analysis with the result that, 29 executives are below 25 years old and 14 among them represent the Female. And

maximum of 78 are male respondent whereas 22 are females. Age, income, gender and occupation(job profile) have been considered as to study the changes in retention value. From that responses, a regression was measured and reported a significant and positive effect on the retention and WLB of the banking system, in post pandemic period.

Keywords: retention, attrition, WLB, banking, job satisfaction

## **INTRODUCTION**

The role of work has changed throughout the world due to economic conditions and social demands. Originally, work was a matter of necessity or survival. It has now evolved and the composition of the workforce has changed. Now work is also a source of personal satisfaction.

Today's workplace is more informal and emotionally managed than it was a generation ago. Modern managers are more inclined than their predecessors to challenge convention and encourage open communication. There is also a growing interest to offer improved flexibility to employees managing their working day as a way of enhancing their overall job satisfaction and performance. The rise of flexible working is undoubtedly helping organizations respond to the changing world of business, in which they need to work across time zones and adapt quickly to changing customer needs. At the same time, this soft management style is being counterbalanced by ever greater emphasis on tough performance measurement and a shift to short term contracts. It is in this context, a study on WLB is the need of the hour.

## RETENTION ISSUE

WLB is about people having a measure of control over when, where and how they work. It is achieved when an individual's right to a fulfilled life is accepted as the norm of the mutual benefit of the individual, business and society.

Striking a balance between the needs of the individual employee, customer and organization demands the following:

- **For Employees:** Different individuals will have different expectations and needs at different times in their life cycle; more particularly in the study during post pandemic period
- **For Customers:** Organizations need to respond to the demands of their customers if they want to be continuously successful;
- **For Organizations:** Organizations need to be able to manage costs, maintain profitability and ensure that teams work effectively together.

The opportunity for individuals to balance their home and work lives is a central component of **good work**.

Retention is the subject of widespread public debate on allowing employees more control over their working arrangements in order to better accommodate other aspects of their lives while still benefiting their organizations during this post COVID period.

## CONTEXT FOR RETENTION STRATEGIES IN BANKING SECTOR

Banking has been considered as the key occupation to examine in studies of 'workers' and it also presents an interesting case for retention issues. Barrett (2001) considers it to be the 'vanguard' of the new working system and the work life separation is to a large extent more 'blurred' than those of other traditional occupations. Software workers have to generally work for long hours (Perlow, 1998). They also have a tendency to expect flexible work

arrangements coupled with a high degree of autonomy and generous rewards in return for their efforts (Barrett, 2001).

One of the fastest growing business sectors that has contributed to an unprecedented economic growth in India since the 1990s, is banking . In the recent past, the Services/Business Process in both NBFCs and in private banks of India has been the center of attention of some research studies in the West.

### **RELEVANCE OF THE STUDY**

The study says that the factors affecting retention in order of decreasing significance are long working hours, work environment, uneven workload, a demanding spouse or immediate family and social changes. The last is considered significant in the case of many professionals who come from small towns and are suddenly plunged into the cosmopolitan culture of the industry.

The long working hours and work overload is typical of the banking industry, according to many human resource managers. Though most organisation have workload is going up during this post Covid Period.

After the 2001-02 slumps, companies that downsized did not always hire more people after business picked up. This means that work on weekends and more hour working hours have become usual process with the sector. There are also long intervals between classes when some of executives are sent to training sessions to keep them occupied. There is also disappointment among newcomers, especially in the banking process. Previous studies have revealed that teachers suffer from deep feelings of inferiority owing to others working during other technical sectors.

The skewed retention affects health and family life. Among the respondents in the study, 80 per cent have some health problem. Considering their age, 78 per cent have heart

problems, 50 per cent suffer from chronic headaches, insomnia and 31 per cent have high blood pressure. Interpersonal relationships are also affected. At least 62 per cent report poor family relations, 28 per cent have strained marital relations, and 7 per cent are either divorced or are on the verge of it.

Under such turbulent environment a study on retention practices will throw a new ray of light on the way new millennium .the authority understand their employees & motivate them by providing family friendly packages for quality work force retention. Balanced work life is the prerequisite of every organization so as to smoothly run for years together by retaining human assets. The need of the hour is “Healthy people will build Healthy Organizations”. People will be healthy when they lead a balanced life & find a happy balance between work, friends and family. retention has become perceptible as a strategic concern for the management of human resources and a significant element of an organization's employee retention strategy.

Therefore, the main concern of the present study is to provide information (vis-a-vis, identification of areas of retention policy development & implementation that may require change; enable response to the changing needs of employees and also ensuring the awareness of the retention policies) that would help the management to evaluate and redesign their current HR strategies in order to retain their existing employees and recruit new ones in a competitive environment.

## **OBJECTIVES OF THE STUDY**

The objective of the present study is to find out the relationship between attrition and retention practices with various performance indicators in organizations. The specific objectives of the study are as follows:

- To ascertain the type of attrition and retention practices including reasons for non take up (e.g. impact on job security and job satisfaction) adopted by organizations in Indian banking and non banking industry during the post pandemic period .
- To study the perception level of executives & non-executives about retention practices and its demand in the organizations.
- To establish a correlation between the retention practices & employee motivation, job satisfaction and work environment in the organizations.
- To establish the extent to which employees perceive the provision of retention practices.

### **SCOPE OF THE STUDY**

The scope of the study is broad and related to:

- Executives working in large scale banking organizations situated in India
- Awareness of retention policies and perceived importance
- Prevalence and practices of retention policies and culture within environment during post covid period .

### **RESEARCH METHODOLOGY**

For the current study responses were collected from the banking professionals of two prominent banking based companies in India. For reasons of confidentiality, the names of the organizations are not disclosed, instead these organizations are referred as organization 1 and organization 2. These organizations were selected on the basis of convenience sampling. The study was conducted in Banking companies , with a diverse population via mails & telephonic survey and e-mail.



**Questionnaire**

In order to gain objective views, guard against faulty assumptions and detect flaws in the questionnaire, consultation with experts and pilot tests were conducted by administering the questionnaire to 10 banking executives. The questionnaire was also given to three experts in the research field for their feedback on the questionnaire.

**Sampling : 100 samples 52 from bank-I and 48 from bank-2**

**Sampling area: Odisha**

**Sampling organisations: ICICI and HDFC**

**Sampling unit: individual executive**

**TOOLS AND TECHNIQUES****Factor scores**

Values for each respondent on each extracted factor. It tests the hypothesis that the variables are uncorrelated in the population.

**Significance test criterion**

It is possible to test the statistical significance of each Eigen value, and retain only those factors which have significant Eigen values.

Regression analysis provides a second piece of information which helps to analyze more precisely the relationship between two variables.

It provides a variety of tests and measures of association for two-way tables. The structure of the table and whether categories are ordered determine what test or measure to use.

Different types of methods are applied in 't' test to measure the sample variables.

## **LITERATURE REVIEW**

In the last few years, the WLB phenomenon has become a source of concern for various organizations. WLB policies (WLBP) and practices are being aligned and integrated with broader and strategic business goals.

Work Life balance is personal, intangible and dynamic factor. Work life balance is about improving people quality of life and widening access to paid employment and career opportunities. Work life balance is about fundamental aspects of “Decent Work”, which is enshrined in the Director – General report to International Labor Conference in 1999.

“The Blueprint for Life – Work Designs” (Hache, Redekopp & Jarvis – 2000) describes a complex interrelationship of life roles. An assortment of “balance wheels” are widely available, typically including such aspects of life as social (e.g. family, friends, and romantic relationships), physical (e.g. physical fitness, environmental conditions, and general health), intellectual (e.g. education, mental challenge), emotional, spiritual, and work (including career, money, home making, and community service).

There are many different ways to define and discuss balance but most seem to include the notion of ‘flexibility’ (Hill, Hawkins, Ferris, & Weitzman 2001); (Papalexandris & Karmer, 1997), ‘juggling’ (Brown, 2004) and ‘sustainability’ (van Eijnatten & Vos, 2002)

According to Limoges (2003), work life balance is “primarily a matter of deciding when to hold on and when to let go”. “In this global industry, the demands on people’s time are more intense than ever. We realize that great people have choices, and it’s our duty to create an environment that works with people’s needs and at the same time promotes and drives business success”. (Sharaon Daley, GE Energy’s Vice President of Human Resources).

The diversity in the definition of the quality in work life generates wide spread disagreement about the measurement and interpretation (Kotze 2005, Nankervis, et al. 2007). Inferences from these positions are suggestive of a need to develop a technique to define the 'quality of work life construct' in the present context and also to formulate a measuring tool.

Competitive Environment and Work Life Balance Staying competitive and managing career can be difficult in a challenging economy however researcher Curson and Skidmore (2010) found that against the odds a public sector organization can attract and retain a high quality workforce in a highly competitive market.

However, researcher Rethinam and Ismai (2008) revealed that it is difficult to separate home and work life in an increasing competitive environment. Bloom et al., (2007) revealed that having established the correlations of Work- Life balance with several factors on competition and productivity.

Researcher Bloom and Reenen (2006) found that tougher product market competition drives higher productivity and at-least part of this seems to work through improving management practices. Ceniza- Levine C. (2013) expresses in an article in —Forbes woman that if you feel undervalued, decide first what would represent the appreciation you are seeking – is it words of praise?, is it a promotion?, is it a raise? However, an importance of considering trust over and above organizational efforts directed at supporting employees through a show of appreciation for their contribution and concern for their well-being (Paille et. al., 2010).

Mohan and Ashok (2011) explained that —Stress is often developed when an individual is assigned a major responsibility without proper authority and delegation of power, inter personal factors such as group cohesiveness, functional dependence,

communication frequency, relative authority and organizational difference between role sender and forcal persons.

Haar et al., (2018); Sirgy and Lee, (2017); Williams et al., (2016) have the research findings on Organizations, who often look for multiple ways to increase positive perceptions of employees responding to their WLB. Furthermore, they also strive to offer a healthy working environment to enable their employees to work effectively and the best out comes out of their as job performance, organizational commitment, job satisfaction etc.

Palumbo, (2020) and Utoft, (2020) reported in their research as, the unprecedented situation suddenly came to the earth as coronavirus disease 2019 (COVID-19) pandemic, which has drastically worsen the health condition of the people , where the notion of WLB for millions of individuals is marked manifolds. The abrupt shifts in the nature of work and operational activities by organizations have inexorably affected the WLB of employees .so corporate have no choice on it except work from home even they closed their offices for a long period as the employees thrive for survival .

Bhumika, (2020) indicates that the exposures to the COVID-19 crisis have put considerable physical, mental and emotional stress on employees in different corporate houses . At the same time, they have been forced to work-from-home and adopt telecommuting practices that have alerted their work-life obligations to satisfy some extent.

The research of Karkouliau et al., (2016); Rashmi and Kataria, (2021); Shabir and Gani, (2020) witnessed profound changes in terms of social, demographic and workplace advancements. These advancements have been made in response to (1) profound changes in the labor market, (2) modification of gender roles, (3) more contribution of women in the labor force, (4) augmented prevalence of dual-earner couples, (5) single parents in the

workforce, (6) longer working hours, (7) 24/7 communication technology obscuring the lines between work and non-work, and (8) increasing desire for the quality of life .

### **ANALYSIS AND INTERPRETATION OF RESULTS:**

The key success factors has been included with the policies, cultures and habits regarding service in, relations with banking companies, preference to employees for their retention and their satisfaction. management, banking practices, HRM system and intra relationship of the employees and their satisfaction are the basic rule in banking companies. These have put the effort at the very heart of their thinking with development strategies during this post covid period

This present research is an attempt to study the measurement of quality service in building brands and emotional attachment (Trust) which is apparent in the system of HRD. The proposed model in compasses the Human Resource Management and service satisfaction. Consistent satisfaction level lead to emotional attachment. This makes the employees bind themselves within the service organizations at an emotional level. This leads to brand loyalty and trust (emotional attachment) with the company.

The proposed study has been made with specific reference to banking and Non Banking companies. In this study the service performance has been measured in terms of the factors.

For this approach, an empirical test have been conducted here to highlight the employee performance of the banking companies through sample collection from 110 employees covering Bhubaneswar city , as most of the employees are in this city. Out of the 110 samples, only 10 employees could not able to answer properly to all the questions. So, a total 100 employees have been included in the study for all purpose.

Further this study includes , some demographic profile of the employees , which have also been collected through logical questionnaires (pre-tested) and includes the factors like : age, income, present position and educational qualifications. experience etc. The component wise results of the factors, Factor analysis has been included in the measurement .The details of measurement has been mentioned below:

Cases; Age and ...	N	Total Percent	N	Missing Percent	Valid Percent
Position	100	100	0	0	5 100
Income	100	100	0	0	5 100
Experience	100	100	0	0	5 100
Gender	100	100	0	0	5 100

*Source : Own compilation*

**Table –2: Age and Position (Cross tabulation)**

	Occupation type						
Age	No	11 Customer care	25 Credit manager	35 manager	17 Dy manager	12 Operati on	Tota l 100
<b>Below 25</b>	<b>29</b>	0	1	0	0	0	1
<b>25 - 35</b>	<b>14</b>	1	0	0	1	0	1
<b>35 - 45</b>	<b>27</b>	0	0	1	0	0	1
<b>45 - 55</b>	<b>22</b>	0	0	0	1	0	1
<b>Above 55</b>	<b>8</b>	0	0	0	0	1	1
<b>Total</b>	<b>100</b>	1	1	1	1	1	5

*Source : Own compilation*

The study indicates(table-2) that out of total response of 100, 11 among them are working as the customer care executives in the bank , where 25 respondents are working there as credit managers. Further, 35 sample executives are working as managers and 17 among them belong to deputy managers and 12 are in operation . so here maximum respondents are in managerial cadre .

**Table –3: Age and Income per month of Executive (Cross tabulation)**

	Income per month (in Rs.)						
Age	No	Below 20000 (18)	20000- 50000 (32)	50000- 75000 (36)	75000- 150000 (10)	150000- above (4)	Total <b>100</b>
<b>Below 25</b>	<b>29</b>	0	1	0	0	0	1
<b>25 - 35</b>	<b>14</b>	0	0	0	0	1	1
<b>35 - 45</b>	<b>27</b>	0	0	0	1	0	1
<b>45 - 55</b>	<b>22</b>	1	0	0	0	0	1
<b>Above 55</b>	<b>8</b>	0	0	0	0	1	1
<b>Total</b>	<b>100</b>	1	1	1	1	1	5

Source : Own compilation

As the income of an Executive plays an important role for continuing anyone in his attitude because salary belongs to motivate one. For this relationship measurement, age has been cross tabulated with income per month of the sample respondents. Table –3 explains this relationship between age groups of the executives of and their income per month. In this table total number of both the factors has been classified into five groups. So, no missing cases arise in the measurement. From the suitability point of view, the income per month have been categorized into five groups as less than below Rs. 20000, Rs.20000 –50,000, Rs.50, 000 – 75,000, Rs.75000-1,50,000 , Rs.1,50,000 – above.

The study shows that 29 respondents are in the age group of below 25years and 18 among them earn below Rs.20000 per month. Similarly, 32 sample respondents are earn in between Rs.20,000-Rs.50,000 per month. Where as 36 respondents earn Rs. 50, 000 – 75,000 per month and 4 employees earn Rs. 1,50,000 – above per month those are above 55 years of age.

**Table-4: Age and experience of Executive (Cross tabulation)**

	Experience of Executive						
Age	No	Below 1 years 15	1-3 years 13	3-5 years 14	5-7 years 29	Above 7 years 29	Total <b>100</b>
<b>Below 25</b>	<b>29</b>	0	0	0	0	1	1
<b>25 - 35</b>	<b>14</b>	0	0	0	1	0	1
<b>35 - 45</b>	<b>27</b>	0	0	1	0	0	1
<b>45 - 55</b>	<b>22</b>	0	0	0	1	0	1
<b>Above 55</b>	<b>8</b>	1	0	0	0	0	1
<b>Total</b>	<b>100</b>	1	1	1	1	1	5

Source : Own compilation

Out of the total 100 Executive(table-4), 29 are in the age group of below 25 years, out of total 15 executives represented that they have only the experience of below 1 years in the profession, 13 are having an experience of below 1-3 years. Similarly, out of 14 respondents, those have responded that they have an experience of 3 to 5 years in that profession, what they are now engaged, a maximum of 29 in each group have experience of 5 to 7 years and 7 years or more . It also indicates a percentage of more than 50 of the total respondents of that group.

**Table –5: Age and Gender (Cross tabulation)**

	Occupation type			
Age	No	Male (78)	Female (22)	<b>Total 100</b>
<b>Below 25</b>	<b>29</b>	0	1	1
<b>25 - 35</b>	<b>14</b>	1	0	1
<b>35 - 45</b>	<b>27</b>	0	1	1
<b>45 - 55</b>	<b>22</b>	1	0	1
<b>Above 55</b>	<b>8</b>	0	1	1
<b>Total</b>	<b>100</b>	2	3	5

Source : Own compilation



The study indicates(table-5) that out of total response of 100, 29 executives are below 25 years old and 14 among them represent the Female. And maximum of 78 are male respondent whereas 22 are females.

## 1. WORK CULTURE

### Factor analysis :

**Table-6 : Communalities**

	<b>WORK CULTURE</b>	Initial	Extraction
1	How many days in a week do you normally work?	1.000	.944
2	How many hours in a day do you normally work?	1.000	.730
3	Are you an expatriate?	1.000	.966
4	How far you are placed from your parents and home town?	1.000	.978
5	Do you think staying away from your home town/parents creates a problem at your work and family life	1.000	.794
6	Would you like to relocate in future?	1.000	.949
7	What is your mode of transport to your office?	1.000	.947
8	How many hours a day do you spend travelling to work?	1.000	.854
9	Do you think the mode of transport is a hindrance for you	1.000	.954
10	Does your job involve frequent travel?	1.000	.921
11	Does your travelling create discomfort at your work and family life?	1.000	.966
12	Do you work in shifts?	1.000	.978
13	How comfortable you are in shift system of work?	1.000	.794

Extraction Method: Principal Component Analysis.

Table - 6 indicates communalities of factors, which indicate the proportion of the variance in response to the factors important for the process of Work culture and Environment. The extraction communalities are estimates of the variance in each variable accounted for by the components. The initial values are also high and equal to 1.000 in all the cases. Further, in the extraction values in the communalities in this table are reflected high, which indicates that the extracted components represent the variables well. If any

communalities are very low in a principal components extraction, it is needed to extract another component. Small values indicate variables that do not fit well with the factor solution, and should possibly be dropped from the analysis., which are insignificant.

**Table-7 : Total Variance of work culture**

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.026	60.260	60.260	6.026	60.26	60.260	5.61	56.12	56.12
2	3.011	30.108	90.367	3.011	30.10	90.367	3.42	34.24	90.36
3	.825	8.246	98.614						
4	.139	1.386	100.00						

Extraction Method: Principal Component Analysis.

Table – 7 indicates total variance analysis with initial Eigen values which shows the variance explained by the initial solution and sum of squared loadings. In the initial Eigen values for factors were taken those were above one. So it indicates that, two factors were responsible for the question ‘recruitment and selection’ out of the total ten factors. Here it is mentioned in the leftmost section of this table-7. The second section of the table-7 shows the extracted components. They explain nearly 90% of the variability in the original ten variables, So it suggests the two latent influences are associated with ‘recruitment and selection’, but there remains unexplained due to lot of variations. Here, the complexity of the data set by using these components can be considerably reduced the, with only a 10% loss of information. Thus, about 10% of the variation explained by the initial solution is not lost due to the factors uniqueness to the original variables.

The rotation maintains the cumulative percentage of variation explained by the extracted components, but that variation is now spread more evenly over the components.

**Table-8 : Component Matrix of work culture**

	Component	
	1	2
How many days in a week do you normally work?	.954	-.184
How many hours in a day do you normally work?	.510	-.686
Are you an expatriate?	.533	-.825
How far you are placed from your parents and home town?	.675	.723
Do you think staying away from your home town/parents creates a problem at your work and family life	.878	-.149
Would you like to relocate in future?	.868	.108
What is your mode of transport to your office?	.779	.584
How many hours a day do you spend travelling to work?	-.149	.912
Do you think the mode of transport is a hindrance for you	.931	.296
Does your job involve frequent travel?	.855	-.095
Does your travelling create discomfort at your work and family life?	.510	-.686
<b>Do you work in overtime?</b>	<b>.979</b>	<b>.584</b>
How comfortable you are in overtime system of work?	.675	.723

Extraction Method: Principal Component Analysis.

Table -8 reveals the component wise values those are mostly correlated with the ‘recruitment and selection’, which are indicated in the matrix form.. Out of ten factors, two factors have been extracted those have more values in both the columns of components. As per the initial value exhibited in the table -.8 total variance , In the first column it shows higher i.e. 0.979, which is based on “**Do you work in overtime?**”, where as in the second shows higher on “How many days in a week do you normally work?”. Although the linear correlation between the components have been measured the related component values, which are higher, but it is also required to measure the component scores to check for outliers and nonlinear associations between the components.

## 2. FAMILY IMPACT ON WORK

**Table - 9 : Communalities**

<b>FAMILY IMPACT ON WORK</b>	<b>Initial</b>	<b>Extraction</b>
1. Being an employed man/woman who is helping you to take care of your children?	1.000	.933
2. How many hours in a day do you spend with your child/children?	1.000	.624
3. Do you regularly meet your child/children teachers to know how your child is progressing?	1.000	.883
4. Does your work and work environment becomes a constraint in bringing them up?	1.000	.978
5. Do you take care of your family as desired ?	1.000	.998
If yes, how many hours do you spend with them?	1.000	.951
6. Do you generally feel you are able to balance your work life?	1.000	.998
7. How often do you think or worry about work (when you are not actually at work or travelling to work)?	1.000	.997
8. How do you feel about the amount of time you spend at work?	1.000	.833
9. Do you ever miss out any quality time with your family or your friends because of pressure of work?	1.000	.624
10. How frequently you carry work to your home?	1.000	.883
11. How often you take extra work hours beyond your normal work hours at the work place?	1.000	.978
12. How often will you prefer to over work as means of securing enough pay to enjoy life outside the job?	1.000	.998
13. Will you prefer to take a pay cut in return for a reduction in the amount of their working time to undertake family related commitments?	1.000	.951
14. Will you prefer a dual earner household to overcome financial crunches in lieu of family related commitments?	1.000	.997

Extraction Method: Principal Component Analysis.

Table - 9 indicates communalities of factors on “family impact on work”, which indicate the proportion of the response to the factors important for the process of Work culture and Environment. The extraction communalities are estimates of the variance in

each variable accounted for by the components. The initial values are also high and equal to 1.000 in all the cases. Further, in the extraction values in the communalities in this table are reflected high, which indicates that the extracted components represent the variables well. If any communalities are very low in a principal components extraction, it is needed to extract another component. Small values indicate variables that do not fit well with the factor solution, and should possibly be dropped from the analysis., which are significant. Here all factors are representing a significant positive values , more than 0.5, which indicated all factors can be taken for further study.

**Table-10 : Showing the Total Variance of the components**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.818	75.76	75.761	6.81	75.76	75.761	6.52	72.44	72.44
2	1.377	15.30	91.066	1.37	15.30	91.066	1.67	18.62	91.06
3	.689	7.658	98.724						
4	.115	1.276	100.00						

Extraction Method: Principal Component Analysis.

Table -10 indicates total variance analysis with initial Eigen values which shows the variance explained by the initial solution and sum of squared loadings. In the initial Eigen values for factors have been taken those represent above the value one . Here, it indicates that, out of the four factors only two factors are responsible for the question **‘family impact on work’** out of the total factors as these two are having more than one value in total variances. Here it is mentioned in the leftmost section of this table-10. The second section of the table-10 represent the extracted components. These explain nearly

91 percent of the variability in the original ten variables, So it suggests the two latent influences are associated with the factor. But there remains unexplained due to lot of variations. Here, the complexity of the data set by using these components can be considerably reduced only by a 9 percent loss of information. Thus, about 9 percent of the variation explained by the initial solution is not lost due to the factors uniqueness to the original variables .

**Table-11 : Component Matrix**

FAMILY IMPACT ON WORK	Component	
	1	2
Being an employed man/woman who is helping you to take care of your children?	.689	.169
How many hours in a day do you spend with your child/children?	.777	-.145
Do you regularly meet your child/children teachers to know how your child is progressing?	.902	-.182
Does your work and work environment becomes a constraint in bringing them up?	.945	.321
Do you take care of?	.799	.037
If yes, how many hours do you spend with them?	.784	-.202
Do you generally feel you are able to balance your work life?	-.293	.955
How often do you think or worry about work (when you are not actually at work or travelling to work)?	.861	.505
How do you feel about the amount of time you spend at work?	.687	.178
Do you ever miss out any quality time with your family or your friends because of pressure of work?	<b>.977</b>	<b>.145</b>
How frequently you carry work to your home?	.788	-.182
How often you take extra work hours beyond your normal work hours at the work place?	-.293	.955
How often will you prefer to over work as a means of securing enough pay to enjoy life outside the job?	.824	.505
Will you prefer to take a pay cut in return for a reduction in the amount of their working time to undertake family related commitments?	.810	.178
Will you prefer a dual earner household to overcome financial crunches in lieu of family related commitments?	.917	-.182

Extraction Method: Principal Component Analysis.

Table - 11 reveals the component wise values those are mostly correlated with the **'family impact on work'**, which are indicated in the matrix form. Out of total factors, two factors have been extracted those have more values in both the columns of components. As per the initial value exhibited in the table - the total variance, In the first column it shows higher i.e. 0.977, which is based on "Do you ever miss out any quality time with your family or your friends because of pressure of work? followed by "Does your work and work environment becomes a constraint in bringing them up?", which value shows 0.945, Although the linear correlation between the components have been measured the related component values, which are higher, but it is also measured the component scores to check for outliers and nonlinear associations between the components and found these two statements are significant.

The rotation maintains the cumulative percentage of variation explained by the extracted components, but that variation is now spread more evenly over the components. Here it has a smaller change in the values of the factors than unrotated. That also represent all most similar result as per the second column .

### **Q3. RETENTION & SATISFACTION WITH WORK LIFE BALANCE POLICY & WORK ENVIRONMENT :**

Employee satisfaction depends upon the factors like work life balance policy and work environment of the employees in the organisation. So here these two variables have been taken as independent variables and employee satisfaction as dependent variable.

In team building, the statements were used as :on conducting of training programmes for satisfaction, by the work life balance measurement policy of the organizations and helping in the job, where as in the retention policy , the statements were

used by organization for a better way. The statements were collected from the employees under satisfaction on work life policy . The responses were properly arranged in two parts i.e. ‘from strongly agree to strongly disagree in 5 point Likert scale , where 3 is mean of the score. From that positive responses, a regression was measured to know the relationship among the variables. So, in the following tables it has been depicted.

**Hypothesis-:** Work life balance policy and work environment are significantly responsible for employee retention.

**Table-12: Regression value**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Change Statistics				
					R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change
1	0.819	0.671	0.177	8.518	0.671	1.933	1	1	0.011

a Predictors: (Constant), work life balance policy & work environment

df: degrees of freedom

In the process of measuring variables in the regression analysis of employee satisfaction and work life balance policy and sensitivity training have been made and the results are shown in output table -12. Here in the output table -12, the correlation coefficient shows 0.819, which indicates a strong and positive relationship between these two variables. Further, the coefficient of determination in this case shows about 95 percent. This model explains the different levels of employee satisfaction depending upon the variations in work life balance policy and sensitivity training. As a further measure of the strength of the model the standard error of the estimate is compared with the standard deviation of responses reported 8.518. The employee satisfaction revealed in shape of adjusted R square, which is 0.671 with a F value change of 1.933 which is much higher with the change in work life balance policy and work environment .



**Table-13 : ANOVA**

MODEL	Sum of Squares	df	Mean Square	F-value	Significance.
Regression	140.258	1	140.258	1.933	.011(a)
Residual	72.560	1	72.560		
Total	212.818	2			

a Predictors: (Constant), work life balance policy & work environment

b Dependent Variable: Employee retention

The ANOVA output table -13 reports a significant F statistic, indicating the significance value to be zero. But here it indicates 0.011, which is much lower and creates a difference in between the two variables that means the regression value has a less impact on work life balance policy and work environment. Further, nearly 64 percent variation has been marked in residuals which are explained by the change in employee satisfaction in banking and non banking companies. It signifies that better employee satisfaction could be expected from employees as it varies with the change in the responses on work life balance policy and work environment.

**Table-14 : Coefficients**

	Unstandardised coefficient		Standardized coefficient		Sig.
	B	Std. Error	Beta	t	
<b>Work life balance policy &amp; work environment</b>	292.028	103.745		2.815	0.017
	-0.902	0.601	-0.902	-2.329	0.011

Dependent variable : employee satisfaction

The output table -14 shows that, determining the relative importance of the significant predictor i.e. satisfaction, is having a high standardized negative coefficient Beta value i.e. -0.799 (output table -14). Further, the standard error reveals 0.011 which is very lower and significant. So these two variables are more inelastic in nature, which

means a less impact with the employee satisfaction and retention on overall basis depends upon these two variables.

**Testing of Hypothesis :** Work life balance policy and work environment are significantly responsible factor for employee retention and here it is accepted as most of the employees responded it positively.

## **FINDINGS AND SUGGESTIONS :**

**From this study the following findings have been drawn :**

Maximum employees are from the age group of 35 years and more and maximum are male employees and having an experience of more than 5 years in the same banks and have no change in their locality. So, it is found that even if they are not satisfied with the work culture, environment and WLB practices, they are forced to work for their personal reasons and the effective rate is marked also under utilized by the banks during the post covid period. so necessary steps be changed with their policies of WLB to find a better outcomes and value out of their services.

## **SCOPE FOR FUTURE RESEARCH**

The variables used in the research are not occupation specific and can be used to assess the retention policies in other professions also. Furthermore, focus groups can be used to gather more detailed information on the importance of certain policies among specific minority groups of professionals. Future investigations may include more policies of retention and also study its relation with employee retention, work related attitudes, etc. Similar studies can also be conducted in other cities as well as in other banking organizations. Some of the post pandemic well-being studies that can be extended to a global study. In addition, in this research it is found, that a limitation of the study covers a

small respondent group and that further studies can be extended with a larger sample base with more classifiers and optimizers .

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## **DIGITAL INFORMATION RECORDING IMPROVEMENT: SERVICES FOR DISABLED**

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### **ABSTRACT**

The aim of the research was to set a project management approach to analyze improvements in the effectiveness of the current information recording processes in homes that provide support and assistance services for individuals with disabilities. Findings indicate that the effectiveness of information recording processes would be significantly improved by digitization. A Lean approach is helpful and effective in developing an improved information recording process. The data for this study of information recording in care homes was gathered using qualitative methods, triangulated by autoethnographic, observations, interview, and secondary data. The study was carried out in cooperation with the department of a public municipal organization in Iceland, which oversees multiple homes for disabled individuals. These assisted living houses are homes to a wide range of different individuals, which all have varied personal needs. Due to the unique needs of the homes' residents, a high amount of information recording and sharing takes place by



employees within the care homes. Results can be useful for homes who want to implement digital information recording processes using the Lean approach.

Keywords: digital information recording improvement, Lean approach, autoethnography, services with disabilities.

## **1. INTRODUCTION**

The past few decades have seen significant changes in digital technologies and advancements in most, if not all, facets of organizational functions. With improved technology and tools, combined with richer knowledge, organizations have been able to make improvements to processes that once were considered complicated and time-consuming. These processes are now able to be enhanced with increased efficiency and reliability.

While production focused organizations have been able to make substantial improvements in efficiency, service organizations have generally not been as effectual due to limited options regarding standardization, especially in services tailored to the consumer (Suárez-Barraza, Smith & Dahlgaard-Park, 2012; Andrés-López, Gonzalez-Requena & Sanz-Lobera, 2015). This has required service organizations to think creatively when rethinking processes that are aiming for improvement.

The paper consists of four parts. The first part presents the Lean approach in the public service sector. The second chapter includes presentations of three prominent Lean tools, namely the PDCA cycle, five Ss of Lean, and root cause analysis including the five why method. The third chapter disclose the methodological aspects of the paper. The fourth chapter presents the main findings of the research.

## **2. LEAN CONCEPTUALIZATION**

### **a. LEAN thinking in the public sector**

Continuous process improvements in the project management field are usually associated with Lean thinking, a philosophy linked to the Lean approach.

Radnor, Walley, Stephens, and Bucci (2006) have proven that using Lean thinking in service environments has resulted in an improved process flow, waste reduction, and increased value for customers. Carlsborg, Kindström & Kowalkowski (2013) disclosed that when applied correctly, and in the right context, adding Lean principles may add to service productivity. According to Suárez-Barraza et. al. (2012), Lean service can be understood as “an approach to improvement and continuous innovation in work progress”, and it can also foster customers’ experiences of effectiveness.

Ragnarsson, Zailskaitė-Jakštė, & Minelgaitė (2021) analyzed Lean methodology in a public sector organization and emphasized the importance of education and training of staff of the organizations seeking to implement mentioned methodology.

The most common public sector service that involved Lean implementation is healthcare (Radnor & Boaden, 2008). A considerable number of health care organizations have reported improved results after undertaking process reconstruction to apply Lean thinking (Chandrasekaran & Toussaint, 2019). Whilst some of this research is applicable in the setting of supported living homes, this is so to varying degrees. However, Lean thinking and Lean tools may be applied to the rethinking of management initiatives.

It must be noted that while there is evidence of the benefits of Lean thinking implementation in different public sector services, especially in increasing efficiency, there is very little evidence of a complete Lean philosophy being applied (Radnor & Boaden, 2008). However, this may not be all that uncommon, as a study by the Lean Enterprise Institute showed that only a small number of organizations can implement Lean completely (AlManei, et. al.,

2018). Rather, there is evidence of the effective utilization of Lean tools to implement change and improvement initiatives (Radnor & Boaden, 2008). Ansari, Fiss & Zanjac (2010) maintained that Lean adaption will, and should, be tailored towards each organization's specific needs and goals, and in some cases, these adaptations will only borrow the philosophical thoughts and tools from Lean, and this will bring benefits to their bottom-line.

#### **b. CHALLENGES Related to Lean Thinking Implementation**

Implementing Lean thinking can be a challenging endeavor that requires careful management (Asnan, et. al., 2015) and requires the interplay of many different stakeholders, such as employees, customers, and suppliers, all whose needs must be considered when attempting successful implementation (AlManei, et. al., 2018).

During a Lean approach implementation process, an institution / company has to enter a transition phase (Asnan, et. al., 2015). This phase will effectively bridge the gap between the previously existing processes and the newly improved processes.

The interplay between different stakeholders is crucial because groups may be opposed to the change (Asnan, et. al., 2015). It is important that the Lean perspective should be shared in various levels of organization, because without a shared commitment across all management areas, the initiative is likely to fail (Chandrasekaran & Toussaint, 2019). Despite interest in Lean thinking and the best intentions, many Lean implementations fail. The main reasons are insufficient commitment from leadership and management and/or a lack of employee participation (AlManei, et. al., 2018).

A team needs to develop a vision and strategy which will guide the changes (Al Manei, et. al., 2018; Kotter, 2012). When planning is completed, the team must inform all stakeholders groups (Kotter, 2012), including informing employees of what is expected of them during the change, which, of course, means that the organizational managers must be on board. If

managers are not interested in the initiative, it will be difficult to achieve success in the implementation process (Chandraseka & Toussaint, 2019).

The role of the administration is to remove the obstacles that hinder transition and to support employees during the process (Kotter, 2012). It is important to identify outcomes and short-term achievements, and to motivate everyone who is involved (Kotter, 2012). Finally, when the change is made and process is continuing, the organization can introduce further changes which support the overall goal of the changes made to ensure the newly implemented changes become part of the new norm within the organization (Kotter, 2012).

### **3. TOOLS for improvement**

The Lean thinking management philosophy proposes numerous effective and useful tools that can be employed by managers and the organizations they belong to. These tools have many distinct roles and aims, all of which have been developed with Lean philosophy in mind. The fundamental Lean tools are the five Ss of Lean, the root cause analysis, the why method, and the PDCA cycle.

*The Five Ss of Lean* (5S) is a methodology, which like other Lean tools, aims to identify waste in the work environment so it may be eliminated, increasing efficiency and productivity (Bicheno & Holweg, 2016). The main aim of the methodology is to construct a superior work environment, in a conceptual and physical way, by removing waste from the space. Like other Lean thinking tools, 5S facilitates continuous improvement if it is successfully and fully integrated (Sarkar, 2006; Van Patten, 2006).

*Root cause analysis* (RCA) aims to explore and classify the *causes of an outcome*. This is done so investigators can distinguish what happened, how it happened, and why it happened (Rooney and Vanden Heuvel, 2004). This is important because understanding why something happened is the key to making provisions that determine whether they happen again.

*The five whys* technique begins with a reflection of the *final outcome*, where the examiner contemplates what caused it and then in turn questions the answer five times. It is typical for the method to require five rounds of asking why until the core of the problem is revealed (Andersen & Fegerhaug, 2006). The technique is especially advantageous because of its adaptability.

*PDCA cycle* includes four steps: plan, do, check, and act (Johnson, 2016; Pietrzak & Paliszkiewicz, 2015). Bicheno & Holweg (2015) stressed that for the method to be hugely beneficial, all steps must be given proper contemplation).

*Planning* includes developing *plans* which benefit the organization, as well as identifying prospects for change and appropriately planning for them (Rooney & Rooney, 2005; Srivannaboon, 2009). Planning must include careful identification of the customer's needs and determining how these needs will be met (Bicheno & Holweg, 2015). The success measurement during the checking phase should be implemented later (Pietrzak & Paliszkiewicz, 2015).

*Do* means implementing the change and testing it. It involves carrying out the plans according to the decisions made in the planning stage (Bicheno & Holweg, 2015).

When testing is finished, the outcomes must be *analyzed* and outlined (Johnson, 2016). Organizations must carefully define what the desired outcomes are during the planning phase and if possible have determined metrics by which success may be measured, which is done during checking (Svirannaboon, 2009). If the methods used to implement the change have not led to the desired outcomes, the project team must do a root cause analysis to determine why that is and then necessary steps are determined (Pietrzak & Paliszkiewicz, 2015).

*Check* stage can lead to particularly important learning opportunities for the organizations as it explores the causes of the complications encountered during the stage *do* (Bicheno & Holweg, 2015). Even when an acceptable change has been implemented (which

has been deemed successful during initial checking), it must be periodically rechecked to ensure that it is still generating the desired outcomes (Rooney & Rooney, 2005).

*Act* stage refers to taking action according to the results which were discerned during the check phase, adjusting and refocusing efforts as needed (Rooney & Rooney, 2005; Bicheno & Holweg, 2015). While a project may have reached the standard, which was determined during phase *plan*, with time the standard will change so action will be needed to support continuous improvement (Bicheno & Holweg, 2015).

Periodic checking should be done with a set of prepared assessment dimensions or standards which should be clear to all involved, even when assessment is not explicitly being carried out (Mann, 2014). When standards and expectations are made as clear as possible for personnel working on the project/implementation, it is easier to gather information on the rollout as it is happening (Mann, 2014).

#### **4. METHODOLOGY**

##### **a. APPLIED methods**

In this study the triangulation method was implemented to verify the obtained data (Guest, et. al., 2012). The data were collected with four traditional qualitative methods: secondary-data analysis, interviews, observations and autoethnographic self-reflection. Triangulating the data was deemed to be suitable to gain a deeper insight into the experiences of the managers, as well as to add to the credibility of the findings (Braun & Clarke, 2013; Rothbauer, 2008).

**Secondary data.** The researcher analyzed minutes of organizational meetings, organizational reports, and policy documents, as well as public reports and policies.

**Observations.** Observations were organized at Home A, B, and C. Home D was not observed because the manager, who took part in the testing project, now manages another home.

The observations were all conducted between 8<sup>th</sup> and 18th February 2021. They took between approximately 30, 50 and 90 minutes. The researcher took diligent memos in a notebook during observations.

Interviews. Immediately following observations, the managers at Homes A, B, and C were invited for interviews. A project manager associated with the program testing acted as gatekeeper and put the researcher directly in contact with the manager at Home D through a group email. Once the first four interviews were conducted, the remaining four participants were sent invitations via email by the researcher. During the semi-structured interviews, the researcher made use of a pared-down interview frame.

Interviews lasted from 40 to 74 minutes and were conducted from 15th February to 7<sup>th</sup> of April. Each interview was recorded and subsequently transcribed.

**Autoethnography** the researcher worked as a support service representative for seven years and at the time of research. The interest in the research emerged from the researchers own experience with information recording processes at a home that was similar to those included in this study.

## **b. DATA processing and analysis**

Once all notes, memos and interviews were gathered and carefully typed up, the researcher conducted an in-depth thematic analysis of the dataset (Braun & Clarke, 2013). Traditional codification of data, where recurring themes are drawn forth and codified (Bryman, 2012), was performed so that definitive and well-grounded findings could be presented.

Braun and Clarke (2013) have outlined a seven-step process of thematic analysis: the **1<sup>st</sup> step** involves the transcription and familiarization of the data. The thematic analysis of secondary-data and autoethnographic data began early in the research, while interviews and observations were transcribed as they were collected; the **2nd step** is the coding of the data; the

3<sup>rd</sup> **step** is identifying themes in the coding by identifying patterns in the coded data and to clarify what themes represent the patterns. As themes were being reviewed as per **step 4 and defined, step 5**, a choice was made to organize the identified themes according to the PDCA improvement cycle, where stages *plan, do, check, and act*, make up the overarching themes of the findings. Presenting the findings in the context of the improvement cycle was undertaken in line with the pragmatic philosophy which guided the research.

*Coding.* All participants were given pseudonyms and no specific details were stated regarding the specific services provided at the homes which they managed, which are referred to as homes A, B, C, D, E, F, G, and H. Participants were all university educated and experienced in their position, either having held it for at least a year and/or had held a comparable position before. The eleven respondents work in 8 different homes (A, B, C, D, E, F, G, and H) and are employed in such roles as managing director (8), developmental therapist (2), and team leader (1) (Table 1)

**Table 1. Research participants.**

<b>Participant pseudonyms</b>	<b>Workplace</b>	<b>Role</b>
Charlie	Home A	Managing director
Frankie	Home A	Team leader
Robin	Home A	Developmental therapist
Murphy	Home B	Managing director
Perry	Home C	Managing director
Joey	Home C	Developmental therapist
Logan	Home D	Managing director
James	Home E	Managing director
Harley	Home F	Managing director
Codie	Home G	Managing director
Pacey	Home H	Managing director



## 5. FINDINGS

After analysis of the entire dataset, which is made up of the collected secondary data, observations, interviews, and autoethnographic data, the findings were presented. It was organized with respect to the overarching themes: *plan*, *do*, *check*, and *act*.

### a. STAGE “Plan”

The first overarching theme is *plan*, the first phase of any successful improvement cycle. During this phase, a phenomenon must be chosen for improvement. In this case, the information recording processes were chosen for improvement. The themes associated within the overarching *plan* aspects are *traditional information recording processes*, *identified problems*, and *proposed solutions*.

#### i. *TRADITIONAL information recording processes*

The theme *traditional information recording processes* explores the different methods which are or traditionally are used for information recording within these homes. Information recording refers to all information which is recorded either for sharing information or tracking information, e.g., using checklists. An important level of information recording was shared between the homes, which was apparent mainly in the *planning*, *task tracking and descriptions*, and *information sharing* processes employed within each home. Despite the homes' operations all requiring these processes, there was no formal standardization of the homes approach to the processes. The similarities of the homes' recording processes were mostly coincidental or are traditional processes within these homes.

## ***ii. Planning methods***

Generally, each workplace used similar planning methods. Five participants from eight described using handwritten plans found in diaries or on printed-paper stored in folders. The other three described using digital methods, either Word documents, Excel documents, or Outlook calendars. All participants described using daily plans, which usually repeat themselves weekly unless there is a holiday.

Logan, Pacey, Codie, Murphy, and Charlie all have their schedules printed on paper, which are kept in folders or notebooks. In the researcher's experience, daily plans were kept in a folder. Therein, a set weekly schedule is stored. The schedule is then updated periodically according to changes in the resident's weekly schedule. These updates take place a few times a year.

James, Perry, and Harley have employed different methods from the other managers. The home Perry manages uses an extensive Word document where each page has a new day with the residents' daily schedule along with information regarding the shift. Harley and James describe trying to sporadically use Outlook Calendar. They explain that they have also printed out set schedules.

## ***1. Task tracking and descriptions***

All homes have compiled copious amounts of detailed task descriptions which employees are meant to refer to. The employees can perform specific tasks correctly and according to predetermined best practices compiled by the home management team. Participants of five homes explain that specified task descriptions are important to create a routine and to coordinate services practices.

Task descriptions are generally kept in folders. Folders detailing task descriptions for specific residents are often kept in their private areas i.e., apartments. Information in these task

documents can be incredibly detailed, down to the time which the user is to wake up, what they are to eat that day, do their exercises, and when the employee is to administer medication. The degree to which the daily tasks are mapped out at the homes is varied and dependent on each patient's respective need for physical support. Managers at all homes stressed the importance of monitoring all medications.

Overall, task descriptions and task lists used for recording are stored in many ways and in different formats. Methods used in one home can be completely different to the next. Having schedules for basic needs, which the service users need help completing, makes it possible to plan shifts accordingly and assign specific tasks to employees.

## ***2. Information sharing***

It was prevalent in participants' narratives that communication and information sharing are important in the homes, as due to shift work not all employees regularly work together. Managers do not necessarily get the chance to verbally relay information to their employees for the same reason.

Participants in six of the homes use notebooks in which both employees and managers handwrite almost anything that is considered prudent to pass along, for example, shift reports, alerts to service changes, and notes on residents' mood or well-being. There are multiple communication books in many of the homes. It is common for one communication book to be shared between staff and then separate ones for information that pertains directly to all service users. Only Perry and Harley describe the main information sharing to take place in shared Word documents, accessible through a shared computer in designated employee spaces.

The homes also have a prominent level of documentation which is related to task descriptions but also highly detailed descriptions of service users' descriptions and sensitive

service information. This includes what was referred to as ‘personal plans’, which are regularly updated in collaboration with the service users.

### **iii. IDENTIFIED problems with the traditional methods**

During the analysis, it became apparent that the traditional methods are seen as faulty by a majority of the managers and are in part deployed as no other better solution has been developed by the organization. Many managers described having put effort into improving them themselves but with little success. There were several codes associated with the problem in the traditional methods: *unreliable and inefficient, inaccessible, and paper*.

#### ***1. Unreliable and inefficient***

*Unreliability* was associated with all three main information recording methods. James explained that messages are not regularly received by all employees. He believed that there are far too many clumsy oversights when relaying information. It is common in the homes that employees are expected to make verbal shift reports at shift changes. However, this responsibility isn’t reliable since employees will say that they were unaware that it was needed or unaware of important incidents which may have transpired. The shifts are often split up in a way that an employee will mainly service a designated service user. If one employee fails to share pertinent information, it will cause a chain reaction.

Even if the information is written in the communication books or documents, it does not necessarily mean that it will be received by the employees. When using handwritten communication, it is difficult for the employees and managers to indicate what should be prioritized.

Another frequent problem is tasks not being completed without being ‘rescheduled’. There were a whole host of reasons identified by the managers as to why, including

understaffing, the absent-mindedness of employees, something more urgent coming up and taking precedence, or because the resident simply did not want it to be done at a certain time. Tasks being postponed is common and generally not an issue. According to James, the problem is that updates on task statuses are not properly shared between employees and shifts. Furthermore, he explains that even if employees diligently write down information that is deemed important by the employee, there is no guarantee that all employees will receive the message.

## ***2. Inaccessible***

The identified problem of the current methods is grouped as they are considered by the participants to contribute to each other. In fact, the perceived issue of inaccessibility is seen by the managers as a contributing factor to service mistakes. Participants were concerned with inefficiency in their traditional methods. Perry explains how their recording process is too time-consuming. Perry, whose workplace uses a series of computer folders and documents, believes that the process of clicking through “six or seven clicks before you are brought to the information about each resident” means that employees do not bother looking for the pertinent information. According to her, the employees are not reading important documents such as resident’s personal plans because “it’s such a long way to get to the plan”. Written task descriptions and tracking also have similar identifiable issues but instead, the distance is physical.

Perry explains that employees make mistakes especially when they provide support out of the house. Employees at Home C will often support residents while doing chores out-of-house. She says that because task descriptions are so inaccessible, the employees are likely to not follow guidelines, which leads to mistakes being made. Perry believes that because the employees must gather the information often way before they need it, they simply forget.

Similarly, James says because the employees work on shifts, they will not necessarily take care of the out of homes service users regularly. This causes issues because they do not have access to user and task descriptions outside of the homes themselves, which can result in tasks not being wholly completed or errors in service.

Other participants shared that because of protocol, documents regarding a resident's personal information must be kept in their personal areas or in a secure area with access control. Harley says that getting concrete answers from the organization about what information may be kept where and what is considered to be secure is unclear. Murphy, who stores documents and task lists with sensitive information within resident's apartments, complies with these guidelines. For her, the only way to know if tasks are completed is to enter each apartment to review the task lists. Perry explained, that in order to know about completed tasks, she has to crosscheck many different documents, all located in various places on different formats. Codie continues by saying that she can't have a proper overview "unless I'm walking between all the different apartments and examining all the checklists daily". Perry feels that because the process is so awkward, it causes the service to be less professional. James, who manages service for a large number of individuals spaced around multiple homes, says that as the number of residents increases employees, it has become increasingly difficult for employees to have proper oversight of services. Despite having input information, task descriptions, and planning into Excel and Word documents, James express his frustration about a lot of mistakes "jumping from one document to the next".

When managers go on vacation or leave, regularly a team leader or middle manager will assume their duties while they are away. James expresses concern over them not being able to have a complete overview when they are responsible while he is away.

### **3. Method “Paper”**

Due to regulations set by the organization, the homes are prohibited from discarding paper that has information about the service provided. According to these regulations, this information must be stored on physical paper for several years before it can be archived.

Information recording and documentation is, however, a cornerstone of the service provided because without it, according to James, the homes cannot demonstrate that they are doing their job properly. According to Codie, there is excessive paperwork. Both she and Perry describe those storage areas in the homes as drowning in boxes filled with paper. Murphy and Charlie both say that they just could not see how else they could do it with what they are provided with by the organization. Furthermore, Murphy states that these home’s methods must be modernized.

#### **b. STAGE “Do”**

The doing phase was mainly collected through secondary data, interviews, and observations. The following chapter will discuss the theme which relates to the overarching theme of *do*, which is identified as the *proposed solution*, *what the stakeholder has to gain*, and *testing*. During data collection and analysis, it became clear that implementation during the testing phase had not been particularly successful despite interest in the program.

#### **i. PROPOSED solution**

A solution to the identified problems was proposed by the organization in the fall of 2019. The organization decided to initiate a testing project, during which a team was assembled by the organization to make plans for the proposed digitization of the information recording process. The intention was to congregate communication and planning processes into one digital program to improve them.

All participants specified a reason they would prefer a digitized information recording process. Three participants described having made official requests for changed methods in the five years leading up to the introduction of the new digitized process. James recounts how he has actively requested a better system for years and says that he was disappointed when nothing was done concerning the matter. Codie and Murphy have similar expectations. Perry needed modernization of the processes.

The first meeting of the group took place during the beginning of August 2019. A program that was initially developed for nursing homes was chosen. The four participants who took part in choosing the program said that while the program was not expressly developed for the homes, they felt it would be of use. They were also interested in the option of being able to make specific requests of the programmers associated with the program. Logan said that it became clear rather quickly that what the managers here hoping to get from the program varied greatly between them. Finally, it was decided that each manager would determine what the needs of his home were and report back. Additionally, it was decided that testing should last for three months and then be reevaluated.

During the second meeting, taking place at the end of August 2019, it was decided that all managers would begin implementing the new program the following month. It was also discussed and approved by all managers that the goal was to be able to guide managers of comparable homes once testing concluded and experience using the new process was secured. However, testing did not begin until three months later.

The third meeting took place at the beginning of January 2020. It was decided that implementation should begin, and the group would meet regularly to discuss progress. During the same meeting, decisions were made about what resources would facilitate the new process. The managers requested different tools according to how mobile they felt their access to the program needed to be. These tools were either computers or handheld devices.



The fourth progress meeting was held at the end of January 2020. During the final meeting, the discussion addressed the topic of personal privacy and whether the program met the precedents set by the current laws. Project managers determined that with adequate access control, i.e., all employees having access to it through their work email, the program was judged a satisfactory process. Charlie said that they deemed this to be pertinent as the information should be considered safe and ultimately belongs to the homes, even if it is stored in a program provided by an external organization.

## **ii. What the stakeholder has to gain**

With projects like these, there are a few groups that have a stake in the project. These stakeholders may have unique needs and reasons to be concerned about the outcome. This specific process of change has three main stakeholders: *the service user, managing directors, and the employees.*

In the homes, the service user takes on the role of consumer. The value of the process change would be varied between users as some can appreciate its use, while others will not. Perry believes that a digitized process would create “a shorter route to information which you [employees] would need with residents and it would lead to service becoming much more professional and that employees would conduct the work in the same way”. Charlie, who manages a home for individuals, says that the service users would benefit from being to be able to see which employees are working each day.

If possible, Perry believes that the program may help create a more dynamic information exchange with resident support in their workplaces. Perry believes that with proper access control, where certain information would be made accessible to the proper individuals, using a digitized information sharing system would increase dialogue between the residents of the homes and workplaces, ultimately leading to better service provision. Pacey believes that

increased collaboration between home and work would create a more fulfilling environment for the service user.

Codie sees the program as a way for the residents to have more independence because they can have the appropriate information on their own devices prior to doctor's appointments. A recurring theme was the participant believed that having a digitized program would greatly increase oversight so they would be better informed about everyday operations. Participants expressed being excited by the prospect of being able to easily look up information regarding particular days, events, weekend shifts or service users.

Finally, the employees would benefit from having easier access to information. Murphy believes it would even increase teamwork within the workplace as employees would be able to hold each other accountable for their tasks. Participants also spoke of believing that modernizing work processes would create a more attractive and dynamic workplace for the employees who are most apt at using technology.

### **iii. Testing**

Of the four homes which took part in testing, Home A was effectively the only one who had fully implemented use of the program and was still using it at the time of research. Home A had been the only one to stick with the project. Charlie said that she could not be sure but believes that it made all the difference that she had employees who had been highly motivated. Charlie describes having a team manager and developmental therapists, Frankie, and Robin, who were working on inputting the residents' schedules and had then initiated employee use. For the first week, they kept the old processes along with the digitized process. However, Charlie says that it had only taken that week for the employees to express to her that they did not feel they needed the old communication books and scheduling folders. Even so, the implementation process was not without its challenges. Charlie mainly cites technical issues with the program. These issues

were mainly solved by having direct contact with those who owned the program, which she felt worked fairly well.

Murphy, Perry, and Logan all described several distinct reasons for why they believe the implementation had not been as successful at their respective homes. A common answer from all three is that complications due to the Covid-19 pandemic had been at least partly responsible for implementation being abandoned. Murphy explains that she and her team leader had felt they wanted all the information to be in the program before employees starting using it. Everything includes all personal plans, task descriptions, task checklists, daily and weekly plans, and so forth. Murphy explains that she isn't sure if this approach had been the right one. Murphy recalls "there was some sort of implementation plan which we were supposed to have completed but I did feel that it was maybe it wasn't managed well enough".

Despite not having ever fully implemented the program/new process, Perry recounts having expressed to her employees that a new process was imminent, and after explaining its features she said that "they [employees] were very pleased with it [the program]; it was mainly those that were my age or older which were a little more nervous, but I think that everyone was just very excited for it". Charlie also admitted that older employees had been less confident than younger employees.

### **c. Theme "Check"**

During this phase, information about the outcomes was gathered from participants through interviews and observations, while findings from secondary data were also used to support the overall findings. Participants provided information on the degree to which the proposed solution was implemented, what went well and what they felt had been unsuccessful (Table 2).

According to documents, the group involved in the test project had decided during planning that testing would take place over three months and that regular meetings would be

conducted to discuss progress. These objectives were not fully met. The test project began in January 2020 with the last group meeting being held at the end of January. The project was implemented following the introduction of Covid-19 restrictions. According to Logan and Charlie, a lot of time was dedicated to asking programmers to improve some features which were not working.

**Table 2. Digital information recording process implementation status**

Home	Manager	Status of implementation	Main functions used
Home A	Charlie	Still in use	Communication functions and scheduling
Home B	Murphy	Never implemented	The attempt at using all functions
Home C	Perry	Implementation abandoned	Daily planning, task tracking
Home D	Logan	Implementation abandoned	Task tracking and planning

Murphy explains that while she did not meet any serious technical hindrances, her main issue had been a lack of time to input information. The employee tasked with helping her with input quit and without a team leader, she explains that no time was available to go forward with implementation. This corresponds with Charlie's insistence on the difference it made having dedicated coworkers, who drove implementation forward with her.

Overall, Charlie describes the outcomes as positive: they have reduced the number of folders and books from nine to one. As they do not have to input task descriptions into the digitized process, there still exists a physical folder with the printed-out descriptions. Since the process was introduced in Home A, paperwork has been significantly reduced. Issues with written messages have been eradicated and now all communications are legible. Since the process has been implemented, she has made it a part of the procedure that when employees

arrive for their shift they log into the program, read any latest information updates, message, and observe the shift objectives and tasks. Charlie recounts that three new employees began work since implementation, and that training and acclimating the new employees has taken a much shorter time than usual.

Perry explains why they were never able to fully implement the program at Home C. Perry and her team leader had begun inputting information on the residents, task lists, and daily planning. The program had been verbally explained and shared to the employees. According to Perry, it was all but ready for implementation. The intention had been, according to Perry, to “remove the day planners because I knew that we couldn’t be using two different recording processes at the same because the older employees would just start using the old methods”. According to Perry, they did not progress to implementation because Covid-19 had made it impossible for the employees to be trained in using the program. During the pandemic, the morning and evening shifts did not overlap as a part of a safety protocol enacted by the organization. Perry and her team leader had intended to use the two hours a day where the shifts normally overlap to train employees and introduce them to the program.

Respondents mentioned at some point another large project they had been tasked with during Spring 2021. They all expressed significant frustration at the demands made of them on top of their regular duties. Codie explains that implementing a new project takes time and there needs to be time allocated for the managers to tend to new projects. When asked what aid would be needed to progress with implementation, Perry says that implementation would always take time as input and training would have to take time during downtime, but that without managerial support the time would never, in her opinion, be enough.

She and Codie also believe that there needs to be a designated individual, a manager, who oversees the implementation process across all the homes.

#### d. Theme “Act”

All participants expressed a clear interest in implementing new processes and had interest in distinct functions (Table 3). The features are divided into five groups: planning, communication, safety, information, and tasks. Each group has at least two subgroups, which represent different facets of the feature.

While the identified issue had been deemed by the organization to be urgent enough to initiate the testing of the solution, the test project was not given adequate resources once setbacks (like Covid-19) occurred. Of the two project managers who were associated with the testing project, one left employment shortly after the homes began implementation, while the other went on to manage another project which became more critical in the new climate. Furthermore, the project manager who continued to be associated with the project in some capacity, mainly focuses on technological management and not process implementation. The project manager expressed that while she believed that the process change was needed and the program constituted an adequate solution, the testing had been mismanaged due to not having the appropriate team members and there were insufficient resources or time allotted.

**Table 3. Requested functions of a digitized recording program**

		Charlie	Frankie	Robin	Murphy	Perry	Joey	Logan	James	Harley	Codie	Pacey
Planning	Calendar	X	X	X	X	X		X	X	X	X	X
	Differentiated shifts			X	X	X	X		X		X	X
Communication	Share messages	X		X	X	X		X	X	X		X
	Alerts for important messages				X			X	X			X
	Received confirmation				X				X			X
Safety	Access control	X		X	X				X		X	
	Emergency contact info.				X	X			X	X		
Information	Resident descriptions	X		X	X	X				X	X	
	Residents personal plans	X		X	X	X		X		X	X	
	Employee handbook				X			X	X			
Tasks	Lists	X	X		X	X	X	X	X	X	X	X
	Descriptions	X	X		X	X	X	X			X	X
	Alerts		X		X	X		X			X	X

*Planning* includes calendars and differentiates shifts. All participants described using some type of calendar, some using diaries and other methods. All but one participant explicitly stated the need for an interactive calendar which allows for daily planning, as well as to manage future dates.

*Communication* includes sharing messages, alerts for important messages, and receiving confirmation for important messages. It should be noted that while sharing messages was not explicitly stated by all participants, they all use written communication currently.

*Safety* refers to access control and emergency contact information. While other group features would also contribute to increased safety, these two features were purely safety based. Some participants mentioned that it would be beneficial for employees to have a clearer channel to emergency information.

*Additional information* that participants mentioned would be beneficial to have readily accessible was the residents' descriptions and personal plans. Some felt that this would help employees be more in tune with the residents' personal objectives and help them stay informed about whatever the residents would wish employees to communicate regarding either their history or service preferences.

*Task* lists were deemed a much-needed feature in all the homes, with most participants feeling that there must be descriptions and alerts.

## **6. CONCLUSION**

Applying a Lean approach to service provision provides a feasible opportunity for a service organization that aim to minimize variability by standardizing the appropriate processes, increasing efficiency and consistency. This may be done by implementing measures that improve service process flow and reduce waste, resulting in a more standardized and streamlined process. The actual service provided by these homes does not apply to traditional

standardization due to the individualized feature of the service. The service itself needs to maintain its personalized facet, however, the information recording processes which are used to manage this service are ideal for improvement via adoption of a Lean approach.

The application of the Lean approach starts from the value definition of their product or service. The value can be anything that is of value to the organization's stakeholders. The processes which are under examination in this research create a value, both for management and the service user. Without information recording in the form of planning, task descriptions, task tracking, and communication, the service provided would not be able to function. However, there are several wastes identified in the current processes. Any mistakes which are regularly made during service processes are waste.

The exploration of the current information recording processes used in the homes made it noticeably clear that at least according to managers, there is a real need for process change. The traditional approaches to information recording and communication within the homes are largely considered antiquated by the managers. Identified problems with the current information recording processes were outlined in the findings, where they were presented under the themes: *unreliable and inefficient, inaccessible, and paper*. The major problems identified in the data are related to each other, where one may influence the next.

The research suggests that the proposed solution of digitizing information recording is an appropriate solution to the problems identified in the current information recording methods. There is concrete evidence that the solution is deemed not only useful and needed by the managers, but also that overall, it achieved the goals that had been set.

The PDCA cycle, which was used to present the research's findings, can support the development of both the process as well as the implementation.

By applying the cycle, many different issues and opportunities linked with both have been identified and analyzed. The framework is specially developed to support continuous



improvement (Bicheno & Holweg, 2015), and while the program is being developed, it would ideally become a framework for the organization to manage the implementation of the process into the homes. The program which makes the process possible will need monitoring, at least for the time being, to ensure that it is fulfilling the needs of the homes, for which the PDCA cycle is an ideal tool (Pietrzak & Paliszkiewicz, 2015).

## **7. LIMITATIONS**

For this study, the Lean approach was used for the analysis of improvements to the digital recording process in public sector, in homes that provide support and assistance services for individuals with disabilities. The analysis of the digital recording process improvement in other public sectors can give us valuable insights as well.

The similar analysis in other countries could give opportunity to compare the research results and to make conclusions based on cultural differences.

The process still needs to be improved so that it meets the needs of the public services (homes), and thus continuous improvement cycles would be of great benefit. The implementation process, based on the experience of managers of the homes, would ideally benefit employees, managers and most importantly service users by creating a basis for increased independence and security in the form of consistently performed service processes.

The research was conducted in accordance with the University of Iceland's ethics guidelines (University of Iceland, 2014). The researcher was dedicated to employing methods up which were up to the university's academic standard.

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## **SPATIAL DISPARITY IN CSR EXPENDITURE: A STUDY ON HEALTHCARE SECTOR IN DELHI - INDIA**

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### **ABSTRACT**

Corporate social responsibility (CSR) refers to the business's responsibility toward society's well-being. CSR is a gesture that companies show their responsibility toward society. The research goal is to see spatial disparities in CSR spending among various districts of Delhi during the period 2017-2019. The government spends 1.5% of overall GDP on healthcare, which is significantly small in comparison with other countries. The study was based on secondary data such as the National CSR portal, official websites, articles, and journals. The study discovered that there are geographical disparities in CSR expenditure in Delhi. Additionally, Companies are not paying much attention to Shahdara, south Delhi zone, while

central Delhi got more attention in the healthcare sector in Delhi. As a result, it can be seen that spatial Disparity occurs in Delhi in the healthcare sector regarding CSR. Furthermore, Shahdara obtained the lowest amount of CSR compared to other districts of Delhi. The study will aid government officials, decision-makers, and corporations in implementing effective CSR strategies.

Keywords: CSR, Healthcare sector, Spatial Disparity, CSR Expenditure.

## **INTRODUCTION**

Healthcare is a serious concern not only in India but also globally. Moreover, the government cannot address the healthcare sector alone. Corporations should take the initiative and indulge in health-related sectors like blood donation camps, health camps, health activities, and policy implementation. More and more, from the perspective of society, the health care system needs to have a well-disposed Government and citizens and, at the same time, present a sustainable development that could increase the CSR in the system (Khetan, 2021).

The Corporate social responsibility guidelines 2014 were announced by the Ministry of Corporate Affairs under Section 135 of the Companies Act 2013 on April 1, 2014. India is the first to mandate CSR worldwide (Mehta, 2021). All the companies having Rs.1,000 crore turnover, and more or companies have a net value of Rs 500 crore and above, or net profit should be Rs.5 crore and more. Companies will have to spend at least two percent of the average net profit of 3 years on CSR activity (Singh & Verma, 2014). The act applies to Indian and foreign companies and private or public limited companies. According to the Act, CSR initiatives should not be carried out in the ordinary business area and should be related to any initiatives listed in Schedule VII. Healthcare sectors have not gotten much attention from the researcher regarding corporate social responsibility and healthcare. However, CSR in

healthcare is not a new area, and still didn't get much scientific literature related to CSR and health because of the limited availability of resources.

Corporate social responsibility shows concern in all sectors and should be a manifestation of improving human life (Abreu & David, 2015). This paper analyzed Delhi's CSR activities in the healthcare area and pointed out spatial inequality in Delhi's districts. Companies should prefer a local area where they operate their business. Moreover, India's spatial disparity has dramatically increased, and imbalance has grown with differences in per capita output and access to essential public services (Bourrousse et., 2017). However, the spatial disparity in the sector of CSR can bring unbalanced development in certain regions; on the other hand, some regions accelerate development (Thadikaran & Chellaswamy, 2021). This paper investigates the spatial disparity that exists in CSR spending in Delhi. Moreover, also evaluate section 135 of the companies act 2013 contribution to the worsening spatial inequality in Delhi CSR.

## **BACKGROUND OF STUDY**

Delhi's total population is around 16,787,941 as per the 2011 census. Moreover, Delhi is the largest city among cities in the world and a densely populated city in India. Its population is continuously multiplying due to internal migration from rural areas. Delhi's population is overcrowded, creating poverty and making public health challenges. According to the survey, Delhi's people spent at least 9.8% of their household income on health-related issues, that is, 1,16,887 per household on health as per capita income according to GDP (2018). The government has contributed to healthcare and provided various facilities despite the healthcare sector being a serious concern due to the lack of centralized monitoring mechanism and poor policy structure. Corporations should actively participate in the healthcare sector through CSR activities. The government of India spent 1.5% of the total GDP on healthcare, which is very

low compared to other countries. This is an alarming situation for Indians. However, the population of India is increasing day by day. Section 135 clearly shows that companies must do CSR in the local area where they operate their business. Nevertheless, this section adds fuel to the fire for the unbalanced regional development or spatial inequality of the healthcare system in Delhi. Delhi, compared to other global capital cities among BRIC nations, Delhi's per capita GDP is significantly lower than the BRIC nations and cities to which we are comparing them. (Gusmano, 2017). CSR can play a significant role, which can be leveraged to fill health infrastructure gaps in public facilities across the country. The private sector should play a significant role in using CSR funds to make people aware through campaigning on blood donation, occupational health, health-related issues, and others. In north India, Delhi NCR is a hub of hospitals, and 100 km from Delhi, we struggle to find good hospitals, which is why Delhi hospital is overloaded with people coming from other states. The geographical analysis demonstrates inequality in Delhi's distribution of hospital facilities that affect the person who lives there. Even though resources are finite, the healthcare sector requires permanent attention from society, the corporate sector, and the government (Abreu & David, 2015).

According to the WBCSD (2000), the consistent commitment by a company or organization to act responsibly and contribute to social progress while enhancing the life quality of the workforce and families, and also the local people and society as a whole.

## **REVIEW OF LITERATURE**

- David and Abreu (2004) pointed out that social responsibility is a reality or an illusion.

This research paper aims to determine the healthcare system in Delhi NCR in terms of CSR and to investigate the reasons behind the challenges and equality of CSR expenditure distribution in the Delhi NCR region. Furthermore, the study tries to determine the cause of Delhi's spatial inequality healthcare sector.



Nowadays, companies are more sensitive towards some sectors, such as healthcare and poverty but before, CSR was limited to sustainable environments and corporations.

- Thadikaran, G.B. (2021) This paper focuses on determining spatial inequality in CSR spending among various states in India (2017-2018). The study used secondary data published in the National CSR portal by the ministry of corporate affairs. A sample was taken from 10 states, and the researcher did an in-depth analysis. Researchers found that the northeast state got the least amount compared to other states, and the study pointed out the weakness present in the 135 companies act 2013.
- Desai & Chandrawarkar (2016) said that the government should initiate with private healthcare providers to tackle healthcare needs. The private sector should take appropriate steps to reduce its carbon footprint on the environment and raise awareness among private sectors, particularly those in the manufacturing, transportation, and healthcare sectors, as they share equal responsibility for the nation's development.
- Kumar, Naresh, Rani, and Ritu (2019) The study's findings showed that India's districts and states/UTs have enormous discrepancies. Regarding social progress, Kerala got the highest rank among all the Indian states. Moreover, researchers pointed out that India divides into northern-southern in terms of development.
- Gusmano & Rodwin & Weisz (2016) state that investment in public health and healthcare has not been sufficient to alleviate poverty and inequality in Delhi. Residents' premature deaths are rising yearly because they can be treated with public health and healthcare intervention. Without increasing public health spending, monitoring the health system's performance, and improving the government's capacity to adopt policies & implement various programs that address the cause of extreme deprivation.

- V.V.Nishandar (2015) states that the government can't be involved in all social concerns and public welfare. Hence corporations should invest more & more funds for society's well-being. Furthermore, CSR is the framework that enables social upliftment with the help of companies' involvement.
- Al Sharafat, A. (2019) The study says that spatial inequality can slow down economic development and also points out that it can kill democracy and nationalism. Hence spatial inequality and economic growth depend on each other.
- Greenberg, P. (2016) Studies reveal that companies will have to identify areas and frame policies based on geographical location rather than the entire site to balance spatial inequality.
- Russo, F. (2016). Healthcare sector responsibility also relates to many people because the health act is an interconnected act that requires everyone to perform their duties to the greatest of their ability.
- Guha, P. (2020) Section 135 of the Companies Act 2013 mandates the implementation of a required CSR policy to reduce disparity exists, balance the economy, and make resources available for the development of society.
- Kumar, V. S. (2017) Studies show that under section 135, which mandates CSR expenditure in local areas where companies operate their business, it can create huge disparity. However, if an area has a high number of companies. As a result, that area has increased CSR investment.
- Ramesh, B., & Mendes, S. (2015) Section 135 of the companies act 2013 limits the companies to invest in that area which is a specified area mentioned in schedule 7. Moreover, the paper investigates the expenditure pattern of companies toward CSR activities in India.

## **RESEARCH METHODOLOGY**

### **Objective of the study**

- To know the distribution process of CSR activities in the healthcare sector in Delhi, and
- To find out the reasons for spatial inequality in healthcare CSR expenditure.

### **Research Gap**

We have read through a number of research articles and discovered that there has not been much study done on CSR in the healthcare industry. The study shows that despite the need and expectation to develop healthcare contributions to CSR, most companies do not focus on the Delhi districts, which also reveals disparity. As a result, it is evident that there is a spatial inequality in Delhi's healthcare sector with regard to CSR.

## **RESULTS AND DISCUSSION**

### **Results**

District-wise analysis of CSR spending on healthcare areas received by the district was undertaken for five financial years, 2016-17 and 2020-2021, to know the amount of CSR contribution received by the district in Delhi.

**Table 1: Amount spent on the healthcare sector (INR LAKH)**

S.No.	Name of District	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	Total
1	Central Delhi	196	168.45	298.81	5435.32	197.92	6296.5
2	North Delhi	20	0	20.42	27.29	16.25	83.96
3	South Delhi	139	102.86	762.56	3408.1	322.21	4734.73
4	East Delhi	54	19.9	4.81	50.48	4	133.19
5	Northeast Delhi	0	0	1	34.98	6	41.98
6	South West Delhi	61	62.5	0	120.97	56.92	301.39
7	New Delhi	1892.47	2,909.16	2,017.87	46677.3	2394.63	55891.43
8	North West Delhi	0	18.11	24.04	724	232.86	999.01
9	West Delhi	13	14.37	281.33	90.65	0	399.35
10	South East Delhi	0	0	0	0	28	28
11	Shahdara	0	0	0	0	0	0

**Source:** Data were taken from the website of the National CSR portal by MCA

Table 1 shows the district-wise CSR contribution received by the district in Delhi in the financial year 2016-2017 and 2020-2021. The above table clearly shows that New Delhi, central Delhi, and south Delhi received the highest CSR contribution in the healthcare area, and north Delhi, East Delhi, northeast Delhi, southwest Delhi, northwest Delhi, and west Delhi received less CSR contribution compared to other districts. While Shahdara didn't get any CSR contribution in the healthcare area. However, southeast Delhi and northeast Delhi received the least CSR contribution in healthcare. Subsequent year analysis shows consistency of the CSR spending in the districts. The CSR contribution in the healthcare area is increasing from 2375.47 lakh in FY 2016-2017 to 3258.79 lakh in FY 2020-2021. This depicts that companies are now concerned about the healthcare area and their CSR obligation and have started contributing more to CSR activities in FY 2020-2021.

**Table 2: Number of companies that contributed to CSR**

Districts	2016-17	2017-18	2018-19	2019-20	2020-2021
Central Delhi	96	70	52	40	34
North Delhi	35	24	5	2	7
South Delhi	155	120	71	41	41
East Delhi	42	26	20	15	14
North East Delhi	15	14	1	2	3
South West Delhi	54	27	1	8	9
New Delhi	560	544	401	249	374
North West Delhi	36	16	2	17	3
West Delhi	53	29	23	10	14
South East Delhi	7	2	1	20	15
Shahdara	0	0	0	0	0

**Source:** Compiled by the Researcher

Table 2 shows the number of companies contributing to CSR in Delhi's districts. New Delhi has a higher number of companies that contribute towards CSR, while Shahdara did not get any contribution towards CSR. This represents the geographical inequality prevailing in Delhi's district regarding CSR in the healthcare area. The main reason for this inequality is the higher number of companies contributing to the district.

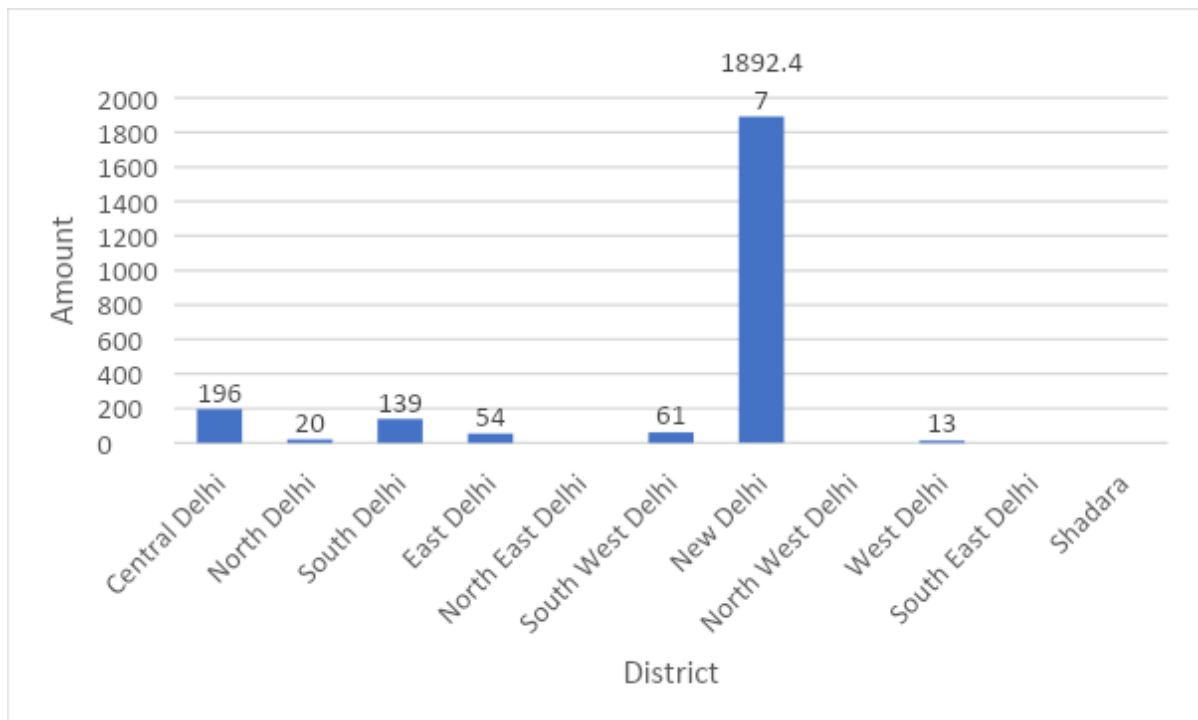
**Table 3: Total population of Delhi (District wise)**

Sl.NO	Name of District	Area (sq. km)	Population
1	Central Delhi	23	5,78,671
2	North Delhi	59	8,83,418
3	South Delhi	249	27,33,752
4	East Delhi	49	17,07,725
5	North East Delhi	56	22,40,749
6	South West Delhi	421	22,92,363
7	New Delhi	35	1,33,713
8	North West Delhi	2,344	36,51,261
9	West Delhi	131	25,31,583
10	Shahdara	_____	3,22,931
11	South East Delhi	_____	6,37,775

**Source:** National CSR Portal  
<https://www.csr.gov.in/content/csr/global/master/home/home.html>

Table 3 depicts the total population and area of Delhi district-wise. The table shows that northwest Delhi has the highest population and New Delhi has the least population. Furthermore, northwest Delhi has more area, and Central Delhi has the least area compared to other districts. However, there is no data available for Shahdara and southeast Delhi.

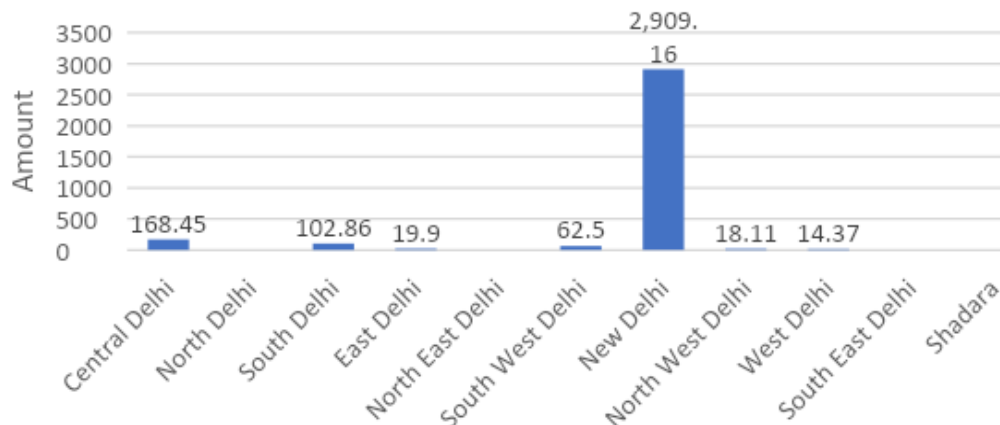
**Figure 1: Amount spent on the healthcare sector in FY 2016-17 (INR LAKH)**



**Source:** Compiled by the researcher

Figure 1 depicts CSR contribution district-wise in the FY 2016-2017. It is clear that in the FY 2016-2017, New Delhi received the highest amount of CSR contribution of 1892.47 lakh in the healthcare area, and northeast Delhi, northwest Delhi, southeast Delhi, and Shahdara did not receive CSR contribution in the healthcare area. After that, Central Delhi got 196 lakh of CSR contributions, and south Delhi got 139 lakh of CSR contributions in the healthcare area.

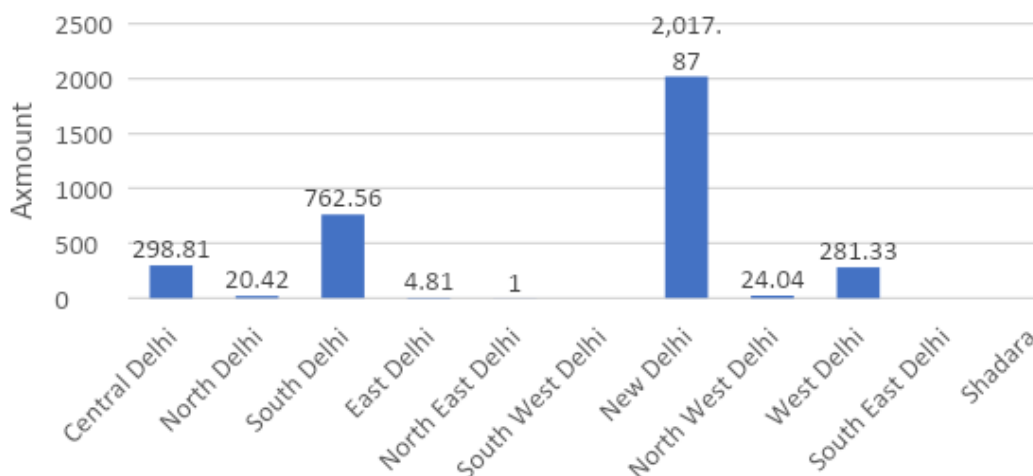
**Figure 2: Amount spent on the healthcare sector in FY 2017-18 (INR LAKH)**



**Source:** Compiled by the researcher

Figure 2 depicts CSR contribution district-wise in the FY 2017-2018. It is very clear that in the FY 2017-2018, New Delhi received the highest amount of CSR contribution of 2,909.16 lakh in the healthcare area, and northeast Delhi, North Delhi, southeast Delhi, and Shahdara did not receive CSR contribution in the healthcare area. Furthermore, the results indicate that New Delhi, Central Delhi, and South Delhi are ranked in the first three positions. After that, Central Delhi got 168.45 lakh in CSR contribution, and south Delhi got 102.86 lakh in CSR contribution in the healthcare area.

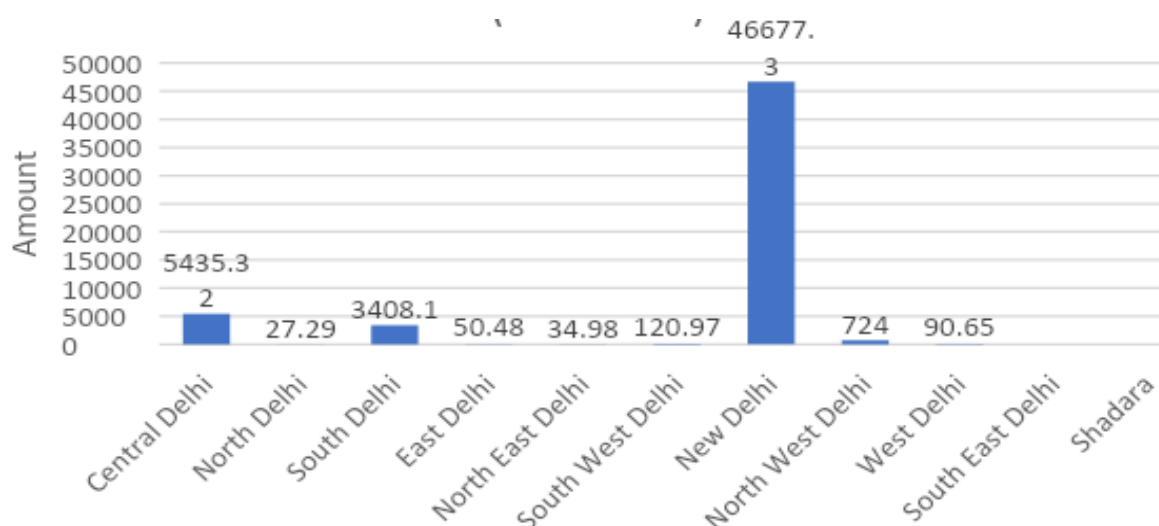
**Figure 3: Amount spent on the healthcare sector in FY 2018-19 (INR LAKH)**



**Source:** Compiled by the Researcher

Figure 3 depicts CSR contribution district-wise in the FY 2018-2019. It is clear that in FY 2018-2019, New Delhi received the highest amount of CSR contribution of 2,017.87 lakh in the healthcare area, and northeast Delhi, southeast Delhi, and Shahdara did not receive CSR contributions in the healthcare area. Furthermore, the results show that New Delhi, Central Delhi, and south Delhi are ranked in the first three positions. However, Central Delhi got 298.81 lakh in CSR contribution, and South Delhi got 762.56 lakh in CSR contribution in the healthcare area.

**Figure 4. amount spent on the healthcare sector in FY 2019-20 (INR LAKH)**

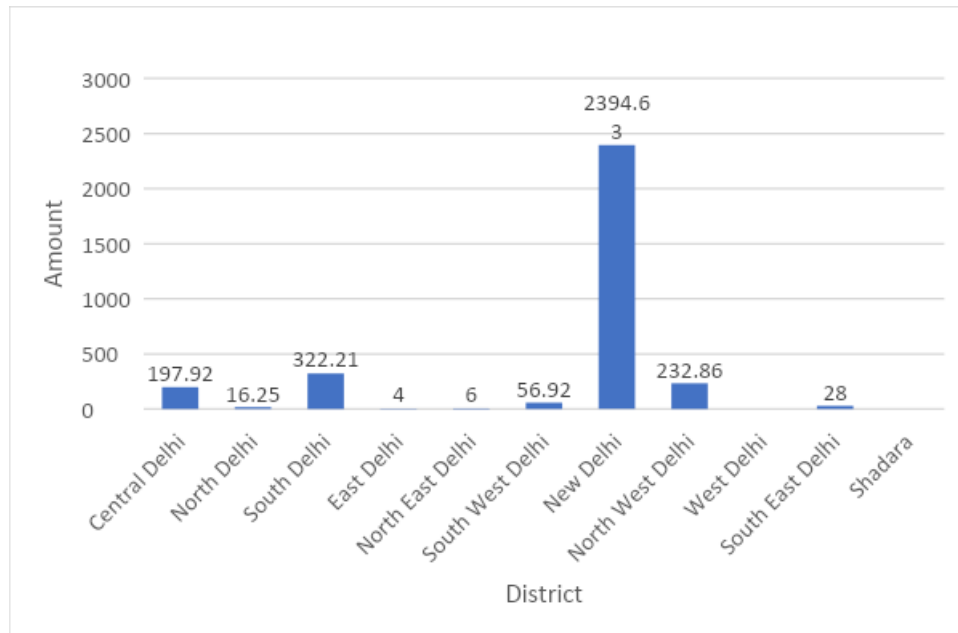


**Source:** Compiled by the Researcher

Figure 4 depicts CSR contribution district-wise in the FY 2019-2020. It is clear that in FY 2019-2020, New Delhi received the highest amount of CSR contribution of 46677.3 lakh in the healthcare area, and southeast Delhi and Shahdara did not receive CSR contribution in the healthcare area. Furthermore, the results indicate that New Delhi, Central Delhi, and South Delhi are ranked in the first three positions. However, Central Delhi got 5435.32 lakh in CSR contribution, and south Delhi got 3408.1 lakh in CSR contribution in the healthcare area.



**Figure 5: Amount spent on the healthcare sector in FY 2020-2021 (INR LAKH)**

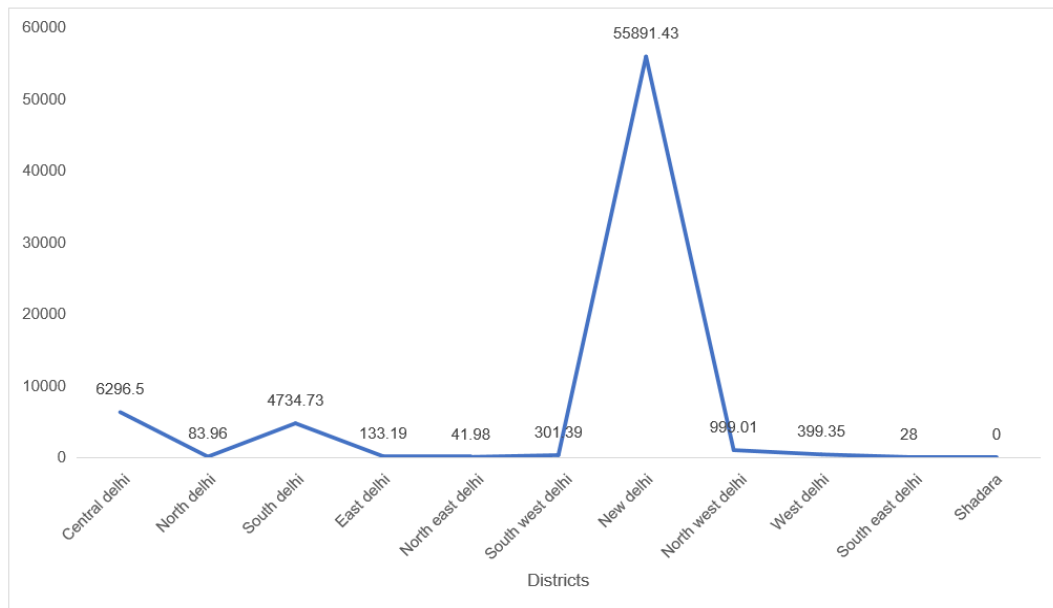


**Source:** Compiled by the Researcher

Figure 5 depicts CSR contribution district-wise in the FY 2020-2021. It is clear that in the FY 2020-2021, New Delhi received the highest amount of CSR contribution of 2,394.63 lakh in the healthcare area, and west Delhi and Shahdara did not receive CSR contributions in the healthcare area.

Furthermore, the results indicate that New Delhi, North West Delhi, and South Delhi are ranked in the first three positions. Moreover, North West Delhi got 232.86 lakh in CSR contributions, and South Delhi got 322.21 lakh in CSR contributions in the healthcare sector.

**Figure 6: Total CSR spent on the Healthcare sector (2016-2021)**



**Source:** Compiled by the Researcher

The figure clearly shows that New Delhi receives the highest CSR contribution from the companies in healthcare sector, which is 56569.09 lakh. Furthermore, as the figure presents, CSR expenditure spending has been increasing yearly. However, the companies have increased their contribution towards CSR from 2016-2018 to 2020-2021 except 2020-2021, causing pandemic companies' contribution towards CSR has decreased.

## Discussion

The study's first objective is to know the process of the distribution of CSR activities in the healthcare sector in Delhi. Table 1 indicates disparities in CSR expenditure spending among districts. The study shows that the districts of New Delhi, Central Delhi, South Delhi, Southwest Delhi, New West Delhi, and West Delhi received the highest CSR contribution. North Delhi, Northeast Delhi, Southeast Delhi, and East Delhi were the districts that received the least CSR investment. It is noteworthy that Shahdara did not get CSR contributions over the years.

The study's second objective was to determine the cause of spatial disparity in CSR expenditure in healthcare. As per table 2, most companies' CSR spending is focused in South Delhi, New Delhi, and Central Delhi. However, South Delhi, New Delhi, and central Delhi have many companies contributing to CSR. This study demonstrates that the main cause for disparity in CSR spending is that most of the companies located in these districts; therefore, districts are more likely to receive CSR funds. Companies should spend more on needed areas rather than just some favorite areas.

## **CONCLUSION**

The study findings revealed that CSR spending has been increasing yearly in the healthcare sector from 2375.47 lakh in FY 2016-2017 to 3258.79 lakh in FY 2020-2021. Further study showed that companies' expenditures increased, though the amount of CSR spending is unevenly distributed. The study clearly demonstrates a geographic disparity in CSR spending in the Delhi districts in the healthcare area. Undoubtedly, rising the amount of CSR expenditure will boost social and economic development. The finding shows that the New Delhi district obtained the highest CSR fund. On the contrary, Shahdara did not receive CSR funds. CSR spending can contribute to Delhi's holistic development if spatial disparity reduces.

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**COMBAT MINDSET TRAINING FOR MILITARY STUDENTS:  
SHOWCASING A NEW COLLABORATIVE COMIND EU PROJECT**

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## **ABSTRACT**

The purpose of this article is to present the research project CoMind which focuses on combat mindset training for military students. The first deliverable in the project is to develop the internationally validated physiological mapping tool: MSCS (Multidimensional Self-Control Scale). and collecting data in a military context. The CoMind Project was developed by the following partners: UM 01932 Air Force Academy “Henri Coandă” Braşov (Project Promoter – PP) University of South-Eastern Norway (USN) - USN School of Business, Institute of Business, Strategy and Political Sciences (Partner 1 – P1) and Society for Military Psychology (Partner 2 – P2). It is financed through the EEA Grants, Program Area 3 “Education, Scholarships, Apprenticeship and Youty Programme in Romania”, Cooperation Projects in the Higher Education Area (project reference number: 21-COP-0012)

The project has a strong innovative character in the context of military higher education because it aims to introduce combat mindset training for military students, for the first time in Romania.

This type of training was successfully developed in the Norwegian army and will be accompanied by the adaptation in Romanian of a psychological assessment tool, The Multidimensional Self-Control Scale.

The main target group consists of military students and the staff of the project promoter, and the secondary target group of military psychologists.

## **GENERAL CONTEXT**

The army has always had the trust of the Romanian population, compared to other authorities, according to national opinion surveys. For example, in June 2021, Romanian people entrusted the army with 67,9% for high or very high trust. This percentage alone is a remarkable one, compared with the percentages registered by other Romanian authorities and institutions, but

also compared to numbers registered in similar surveys by EU or NATO. We believe that this high percentage was entrusted to the army institutions due to its constant concern for professionalizing the institution and multiple international missions.

Starting with 1993, over 55,000 military soldiers participated in international missions (according to Army Press Trust; <http://presamil.ro/11-noiembrie-ziua-veteranilor-din-teatrele-de-operatii>) and were exposed to extreme and challenging events. Romanian soldiers have now the opportunity to have multiple career opportunities, in both the national and international context where the militaries are deployed. Moreover, they can also work in other professional contexts, like private ones, before and after they finish their military service career (i.e. after the age of 50). Therefore, a military officer's career is considered by most as desirable and recommends militaries for other career opportunities because: a) there is a high trust Romanians have for the army, in general; b) there is a rigorous selection of militaries, including a psychological one, a medical and a physic one; c) competition is high and d) military students are given a motivating salary and they already know their uprising career evolution. Still, their career trajectory includes hardship and challenges. In fact, although most people see the military career as a sure and a lifetime job, the military service usually includes psychological risk in the form of different types of disorders (i.e. posttraumatic stress syndrome).

Nevertheless, a military career is extremely desirable for young people and there is higher competition in the military universities, compared to the usual national universities, especially for those from disadvantaged or vulnerable groups. Therefore, CoMind project is focused on democracy and citizenship topics because it will include a teaching module in a field with a strong inter-disciplinary component (i.e. combat mindset training). The curriculum of this module for continuous training will target and update what has already been acquired as knowledge, like for example basic military training, but also new thorough and specific military training of the primary target group (military students). In the case of multiplier events, the



project also includes staff learning mobility between the donor and beneficiary countries, including the professional development of teachers. Specifically, these opportunities will be accessible for on-site activities and on an e-learning platform, integrated on the website of the Romanian Society of Military Psychology Association (P2).

## **COMIND OBJECTIVES AND ACTIVITIES**

O1: Adapting in the Romanian language the psychological test „The Multidimensional Self-Control Scale (MSCS) and collecting data in the military context, during first 8 months

O2: Developing a training module regarding combat mindset for military students, in 18 months.

Enhancing collaboration between the three partners, through common activities like staff meetings, joint events, common publication, etc.

We believe these goals are important in order to assess and manage psychological problems. The main specific risk of military activity within the international missions is that of having posttraumatic stress syndrome (PTSD) and comorbid conditions. These kinds of psychological problems are defined in the Romanian Law (i.e. Law 168/2020, art 2., pct. i) as "disorders developed by the participant personnel during military action, missions and operations, that trigger a significant disruption of thought, emotional management and behavior, that reflects an associated disfunction like emotional distress or significant disability within the professional, social and family roles, that are ascertained by the medical and military expertise commissions, by the occupational doctor and by the medical expert of work capacity, when suggested by the clinical psychologist and/or by the psychiatrist".

PTSD affects between 5% and 18% of military personnel involved in international missions and NATO state members. When computing the actual number of what this percent reflects, PTSD could be registered for around 2750 and 9900 out of 55,000 military officers

involved in international missions. Still, in 2018, only 19 military officers were registered officially with the PTSD diagnosis, according to the minister of defense at that time: <https://www.libertatea.ro/stiri/19-militari-2133380>

Therefore, improving the way future officers can manage their own psychological state is a pressing matter for military students. Thus, our main goal within this project is to adapt an instrument relevant for psychological testing of self-control and develop a training module for mindset control to better understand the psychological state associated with debilitating diagnosis (i.e. PTSD). Self-control is psychological construct that predict PTSD and comorbid impairments associated with PTSD, like addiction-related disorders (Breslau et al., 2003; Brosowsky et al., 2022; de Ridder et al., 2012; Walter et al., 2010).

Moreover, we also address activities relevant to the secondary group target participants that will assist the two multiplier events (i.e. MSCS and combat training module). The secondary group target is the staff from the military universities coordinated by the National Defense Ministry and psychologists certified for practice in the National Safety and Defense Applied Psychology. Therefore, the practitioners can facilitate the collection of data using MSCS on a relevant group and refer to the training module in their professions.

The self-control scale and the combat mindset training are an absolute novelty within the Romanian university context and also in the military context. To our knowledge, there are no available educational resources regarding the training of combat mindset and neither a psychological test as MSCS (according to the methods and techniques certified by the Romanian College of Psychologists - <https://www.alegericpr.ro/index.php/metode-si-tehnici>).

O1: A first result of the project consists the adaptation of the Multidimensional Self-Control Scale (MSCS) in Romanian language. The instrument is co-authored by two experts involved P1 (USN). The assessment has been previously empirically tested: 2020 - <https://doi.apa.org/record/2020-66284-001?doi=1>, as: Multidimensional Self-Control Scale

(MSCS) and the Brief Multidimensional Self-Control Scale (BMSCS) The 29-item MSCS consists of 6 first-order factors (Procrastination, Attentional Control, Impulse Control, Emotional Control, Goal Orientation, and Self Control Strategies), 2 second-order factors (Inhibition and Initiation), and a third-order self-control factor. Overall, results indicate that the new scales are useful measures that integrate recent theoretical and empirical findings of trait self-control.

Translation and adapting in the Romanian language will be done by the experts of Partner 2, military psychologists practitioners, and in collaboration with the experts from P1. The new psychological assessment will be tested within the military students population, as well with the help of other military experts and respecting the legal conditions specific to the country. The intellectual product will be available as open educational resource to every practitioner certified to use these kinds of psychological assessments in the military domain. To ensure proper collection of data and dissemination, the P2 will organize a multiplier event with 50 participants.

Adapting and testing the psychometric properties of the MSCS will be drafted in a research manuscript with the intent for publication in a academic publication co-authored by specialists of the partners.

O2: The second main goal of the project is to develop a training module for combat mindset (1 semester long training) and train 40 students enrolled in the bachelor and master studies of the PP (20 students / group training, 2 groups in implementation period). The training will be eventually included in the educational offer of the university, a minimum of 18 month after the finish of the project. The students enrolled will be given a certification signed by both PP and P1.

This programme will be elaborated by adapting a interdisciplinary model of training, developed by P1 where the coordinator of the project has a remarkable expertise. He has

multiple publications and served as an expert for multiple projects. Details about publication and work can be found here: in CRISTIN Current Research Information SysTem In Norway (<https://wo.cristin.no/as/WebObjects/cristin.woa/wa/fres?sort=ar&pnr=603087&la=en&action=sok>). The training module combines military psychology knowledge, especially cognitive approaches, applied martial arts and military sciences and in section 9, below.

As an intellectual product, the team will elaborate a trainer's manual for combat mind setting. To create the possibility that this training model to be adopted by other military universities, there will be organized a multiplier event (M2) where 50 participants teachers from the military universities will participate, and also other specialist from other military institutions (i.e. human resources department, medical department, etc.). We aim at extending the period of implementation of the training program above 18 months and we aim at extending this approach nationally. PP will provide a laboratory for the training specific to combat mindset training (see „Exceptional costs” budget line)

Beyond the classic training of this program module, like the „on site” method, military students will be provided with the opportunity to access online the training, through open education system and using and e-learning platform provided by P2 (platform integrated in [www.militarypsychology.ro](http://www.militarypsychology.ro) site and already includes various training materials). Support materials for the training module and also video resources and bibliographic resources will be provided online. Based on the experience of this training module and collection of psychological and / or medical data from the participants, a scientific publication will be drafted and sent for publication, through the contribution of experts from PP, P1 and P2.

The Romanian version of the Multidimensional Self-Control Scale (MSCS) will be adapted by collecting data from military students and other military category of participants by P2 experts, while considering the norms and legislation specific to testing psychologically

military staff. Participation will be voluntary and will not be used for psychological evaluation in this phase.

Participants on the multiplier event dedicated to MSCS will be selected from the active practitioner psychologists and certified nationally in the Applied Psychology Commission for National Defense and Security. Practitioners will be invited by email as registered in the National Registry of Psychologists, Part 1 (<https://www.alegericpr.ro/index.php/registre>) and through posting online on PP and P2 sites. They will be selected based on a common methodology elaborated by the experts involved from all partners.

Participants for the training module will be selected amongst military students enrolled in bachelor and master studies within the PP university. At the beginning of the 2021-2022 academic year, 421 students were enrolled.

The selection of participants at the training will be made based on the methodology elaborated by experts of the 3 partners, in the first 2 month at the implementation of the project. The selection announcement will be posted on the official site of the PP, on the visible spots of this university and will be promoted through all electronic means of communication (e-mails, social media, instant messaging).

After selecting the participants, they will participate on the training program, withing the PP program and this will be supported by experts of PP, P1 and P2. Training participants will have access on all e-learning resources elaborated in this project. For more information, please visit the following website: [www.comind.education](http://www.comind.education).

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