ISSN : 0974-8482

Promoting Research

Orissa Journal of Commerce

A Quarterly Peer-Reviewed & Refereed Journal
(UGC-CARE Listed)

Volume 45
Issue 2

April - June
2024

A Publication of
Orissa Commerce Association, Odisha, India

CONTENT

Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.01

Navigating the Legal Landscape of Maritime Industry: Its Contribution to Economic Development and Factors Leading to Maritime Disputes

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Abstract

The study aims to provide a descriptive and conceptual analysis regarding the role of the maritime industry in the economic development of nations and the causes of maritime disputes. The paper also offers suggestions to reduce such disputes. We have used past studies and online articles to delve into this qualitative study. To make this research more insightful, we have used keyword co-occurrence analysis with the help of Vosviewer software. The results of the study show that the maritime industry plays an important role in the economic development of a nation. If proper policy can be adopted to mitigate the challenges, the contribution of this sector can be manyfold.

Keywords: Maritime industry, Economic development, Maritime dispute, Policy adoption

JEL Classifications: K33, N40, F14

1. Introduction

In the vast expanse of global trade, the maritime industry stands as a vital conduit, facilitating the movement of goods and fostering economic development across nations (Askari et al., 2021; Osadume & Blessing, 2020). This dynamic sector not only serves as the backbone of international commerce but also plays a pivotal role in shaping the economic landscape of individual countries. As ships traverse the oceans, laden with cargoes of diverse commodities, they contribute significantly to the growth and prosperity of nations by connecting markets and enabling the exchange of resources. This intricate web of maritime activities, however, is not without challenges, and understanding the legal dimensions becomes imperative. This paper sets the stage to explore the multifaceted contributions of the maritime industry to economic development while laying the groundwork for an examination of the intricate legal frameworks that govern its operations.

The maritime industry operates under a framework that is governed by various international treaties, conventions and national laws. Maritime legislation covers a range of issues, including vessel safety, jurisdiction and venue dichotomy, environmental protection, cargo transportation and labour regulations for those working and dealing at sea. Maritime disputes are caused by a wide range of interrelated and diverse circumstances (Kim, 2008). Dealing with the intricacies of this landscape can be quite challenging for all parties involved in the sector such, as vessel owners, operators, seafarers and port authorities. To successfully navigate through the complexities of legislation, it is essential to have an understanding of the key factors that shape this ever-changing legal domain.

In this context, this paper attempts to explore important factors and themes concerned with the legal framework of the maritime industry contributing to economic development, and at the same time, we analyse the reasons contributing to maritime disputes. The rest of the paper is organised as follows. The next section delves into the important literature; Section 3 deals with Methodology; Section 4 describes the results and Section 5 gives the Conclusion and Policy Implications.

2. Review of Literature

Askari et al. (2021) studied the impact of the Maritime sector on the economic development in the context of Bangladesh and found that effective use of marine resources and smart management could help Bangladesh become a developed nation even before the deadline. However, the study also discovered some challenges that are to be addressed. Similarly, Upadhyay & Mishra (2020) studied the trend of the blue economy in the context of the world and India. The study found that though India has all the potential to benefit a lot from the blue economy, currently it is not utilising 100 percent of it. The study also stated that a few government schemes are working in this direction to maximise the contribution of the blue economy. The study suggested improving the awareness and education level to bring more policies for the blue economy. By analysing the relationship between marine security and blue economy, Voyer et al. (2018) found that the growing importance of maritime security will lead to more investment and expansion in related industries, including shipbuilding, technology providers for Maritime Domain Awareness, and maritime infrastructure like ports. For the Indian Ocean region, this will alone create new economic and job prospects.

Osadume & Blessing (2020) concluded that there is a strong bidirectional causal relationship between maritime trade and economic development, and it suggests that the government provide cheap funding and a favourable environment to promote the expansion of maritime trade. The foundation of the Southeast Asia region's economic growth is its reliance on sea transportation, which has facilitated international trade and societal development (Khalid & Joni, 2009). In the context of China, To & Lee (2018) stated that the expansion of China's tertiary sector—more specifically, the country's coastal tourist and transportation sectors—has driven and will continue to drive the country's maritime economy. China's east and north-east coasts are seeing faster maritime economic growth than the country's southeast coast in terms of spatial development. There is a presentation of the consequences for China's marine economy's sustainability. Kwak et al. (2005) stated that the maritime sector has a number of positive effects, including increased employment, low supply shortfall costs, low forward linkage impact, high backward linkage effect, high production-inducing effect, and low widespread effect of price changes. Igberi & Ogunniyi (2013) concluded that the government should create policies that would encourage real foreign and private investment in the marine sector of the economy if it is to have a positive and meaningful impact on Nigeria's industrialization and economic growth. Fratila et al. (2021) observed that alongside the intensity of economic maritime activities, pollution is positively correlated with economic growth, and thus it is recommended that policymakers and other involved stakeholders act to diminish environmental impacts in this sector using green investment in port infrastructure and ecological ships, in accordance with the current European trends and concerns

Many literature have also studied the reasons and possible solutions of maritime disputes. Østhagen (2021) found that the investigation of maritime boundary-making is linked to current trends and developments that influence related political and legal practices. The ongoing processes of institutionalising ocean space through international legal frameworks, the shifting appreciation of maritime space in terms of its utility and environmental value, and the growing relationship between maritime space and state politics are all particularly pertinent. It would make sense to anticipate that such unresolved boundary conflicts would become more challenging to resolve as marine space becomes more important to states. States' and state leaders' obsession with marine riches, the overall geopolitical importance of expanded maritime space, and technical advancements that allow for increased control over the maritime domain. In the context of Australia, Smith (2010) observed that since the Maritime Union of Australia has always supported global concerns, unions around the world have given the union a great deal of support, mostly because of its left-wing, internationalist principles. The neo-liberal strategy taken in Australia and the intricate connections between the stevedoring industry and other industry sectors were significant external variables that impacted the union campaign's internationalisation. Similarly, Kim (2008) observed that Northeast Asian maritime disputes are caused by a wide range of interrelated and diverse circumstances. The problem of maritime disputes is becoming a crucial element that could jeopardise Northeast Asian peace and stability in an unstable security environment. Given the national interests at risk, it is unlikely that the problem will be settled very soon, and the arguments may even get more heated. If Northeast Asian nations are unable to resolve their outstanding maritime disputes, the region's oceans will probably continue to be a possible flashpoint for violence. Without settling maritime issues, it is highly unlikely that Northeast Asia will have long-term stability. Daniels & Mitchell (2017) observed that the likelihood of diplomatic maritime disputes between pairs of democracies is higher than that of other pairs of countries in the same region or dyads involving great powers.

3. Methodology

The study is descriptive in nature and in addition to our analysis of existing body of knowledge, we have made an attempt to analyse the past literature based on some keyword to study the economic impact of maritime industry and factors related to maritime disputes. We have collected such data from Dimensions database. We have performed keyword co-occurrence analysis to give insight on the mentioned objective. We have used the keywords "maritime industry" OR "maritime sector" AND "economic development" OR "economic growth" for understanding the major themes or keywords on economic development by maritime industry and (maritime AND disputes) to understand the measure keywords in the area of maritime disputes. We got 1293 documents for the first search and 2124 documents for the second search.

4. Results and Discussions

By performing the Keyword co-occurrence analysis for the first search result, we found that maritime sector is the most frequent word used. Similarly, development, challenge and technology are three other important words used in the studies. The red cluster shows the importance of maritime sector in economic development whereas, the green cluster shows the application of technology in solving various problems related to economic development through maritime industry. The blue cluster speaks of risk and safety measures. It is in line with the findings of past literature that maritime industry can contribute a lot to the economic growth if challenges are handled properly.

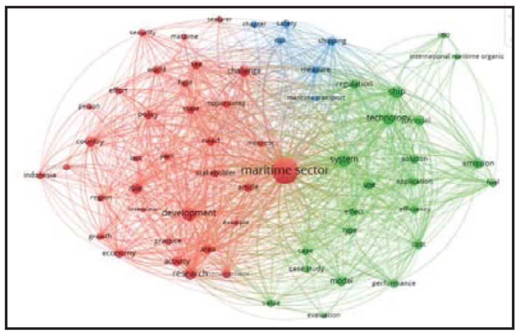

Figure 1: Keyword Co-occurrence Analysis for economic development
Source: Compiled from Vosviewer
Source: Compiled

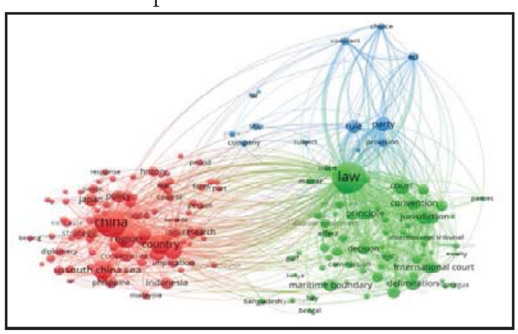

Figure 2: Keyword Co-occurrence Analysis for maritime disputes
Source: Compiled from Vosviewer
Source: Compiled

Similarly, by performing the Keyword co-occurrence analysis for the second search result, we found that law is the most frequent word used. The other important word is China which shows that most of the works are focused on China. The Green cluster focus on the law and related aspects whereas the red cluster represent geographical regions. The blue cluster represent themes like party, act, rule etc. directing towards political aspects. But the blue cluster is very small. So we can conclude that depending on the region, different laws affect the maritime disputes and political interference has a role in solving them.

Factors contributing to the complexity of legislation in the maritime space (Pezoa, 2022).

There are some crucial factors that contribute to the complexity of such legislation in the maritime industry;

International Nature of Shipping; Ships operate in treacherous waters that may traverse from national to international waters. They will then be subject, to the laws of multiple countries. This can create conflicts and challenges for businesses to comply with regulations which can bring into play the jurisdictional challenges.

Advancing Technology; The continuous development and use of technologies like submarines and underwater drones pose legal challenges in the maritime industry. These advancements often do not fit neatly into existing law frameworks.

International Agreements and Treaties: One of the main challenges, in the field of maritime law arises from the complicated web of agreements and treaties. These significant agreements, such as the United Nations Convention on the Law of the Sea (UNCLOS) lay out guidelines for governing activities. Outline the rights and responsibilities of countries when it comes to utilizing our oceans. Comprehending these agreements necessitates an understanding of relations and a knack for finding ground amidst conflicting interests among nations.

Business Aspects I.e. Shipping and Trade: The essence of maritime legislation lies in its regulation of shipping and trade. Various laws govern aspects such as vessel registration, crew management, cargo handling as liability in case accidents or environmental incidents occur. As global trade continues to expand there is an increasing demand for regulations established by organizations like the International Maritime Organization (IMO). These regulations primarily focus on ensuring safety, security and environmental protection.

Environmental Sustainable Practices: During modern maritime legislation structures, there has been a growing emphasis on sustainability within legislation. The industry faces scrutiny regarding emissions control, ballast water management and proper disposal of materials. There is a rising recognition, for eco practices that advocate for developing and implementing technologies aimed at reducing the impact caused by the sector.

Concerns: Maritime activities have an impact on the environment leading to an increasing focus, on preventing pollution and safeguarding marine ecosystems through complex regulations governing ship emissions, ballast water management and waste disposal.

Important set of pre litigation considerations in maritime litigation;

The primary step involves going through the facts and circumstances of the dispute and getting an initial understanding of the same. It is essential to identify the general contractual foundations of the dispute comprehending the facts, relevant laws and potential remedies. A suitable example can be that if the cargo gets lost, destroyed or damaged during shipping, then the liability and damages will be ascertained on the basis of the facts, and more importantly, the legal considerations in the contract- clauses related to indemnity, limitation of liability, force majeure and that if there is specific marine insurance with both the parties.

The process of discovery is when parties collect evidence to support their claims or defences. In disputes related to litigation in maritime space, this often includes production of a lot of documents, conducting depositions and interrogatories. Expert witnesses may also be used to provide knowledge on topics, like safety procedures, fire hazards or accident reconstruction. Gathering evidence beforehand helps both the sides to understand the case and do a SWOT analysis basically strengths and weaknesses of their cases and ensures a transparent process. E.g. in an injury case involving an accident, evidence gathering might involve obtaining records of maintenance statements from witnesses and medical records. It's necessary to collect and preserve all documentation such as contracts, maritime records, correspondence and expert reports and their presence is crucial to support arguments. In the realm of legal disputes accurately assessing the value of claims is a vital part of pre litigation considerations. This involves determining the worth of the losses or damages resulting from an incident or disagreement. Ensuring accurate valuation guarantees that the affected party seeks compensation and that legal proceedings are based on an evaluation of the financial consequences. Furthermore, accurately assessing the value of a claim helps determine litigation costs and prospects for recovery.[1] Considering methods like mediation or arbitration can offer more cost effective solutions, than formal litigation. ADR presents itself as an alternative, to the process of litigation. By considering ADR methods, parties involved have the opportunity to potentially speed up dispute resolution, reduce costs of litigation and maintain positive business relationships. However, it is crucial to evaluate the nature of the disagreement and the willingness of all parties involved before deciding to pursue this option.

Once the decision to pursue a lawsuit has been made there are multiple crucial steps involved;

Determining Jurisdiction and Venue: Jurisdiction refers to the authority of a court to hear a case and give its ruling or decisions on such case while venue determines the court or location where the case should be heard. In litigation both jurisdiction and venue play an important role. The determination of jurisdiction often relies on factors, like the party's location, where the incident or dispute occurred and relevant international agreements or treaties if any.

For instance, if there is a dispute between two Indian parties regarding a collision between their vessels in Indian territorial waters, it is likely that Indian courts would have jurisdiction. However, determining which specific court within India should handle the case depends on factors such, as convenience, expertise and local regulations. Identifying the appropriate court or tribunal that has authority, over the dispute taking into account the parties involved the nature of the claim and the relevant laws is an important consideration.

Filing of Claims: Submitting the documents, such as a Statement of Claim or Petition which outline the legal basis for the claim present factual allegations and specify desired remedies. After making the decision to proceed with litigation, the plaintiff prepares a document called a plaint. This plaint outlines all the details of the dispute including facts, legal claims and what they are seeking as a resolution. Once it is ready the plaint is officially filed in the court marking the start of the lawsuit. The defendant then receives a copy of this plaint and is given a period of time to provide their response pertaining to the same.

In cases involving litigation this initial phase holds significance as it establishes the foundation, for the entire legal process. It is crucial for plaintiffs to carefully draft their complaints in order to clearly express their claims. On the hand defendants usually respond by either addressing each point mentioned in the complaint or, by presenting motions that challenge its validity. Ensure that all documents or notices are properly served to notify the defendant(s) in accordance, with rules. It is crucial to inform them about the action being taken.

Certain pre-trial procedures along with Discovery: The process of discovery is when parties collect evidence to support their claims or defences. In disputes related to litigation in maritime space, this often includes production of a lot of documents, conducting depositions and interrogatories. Expert witnesses may also be used to provide knowledge on topics, like safety procedures, fire hazards or accident reconstruction. During this stage parties involved may also engage in settlement discussions to assess their positions and consider the option of resolving the dispute without resorting to a trial.

In litigation a trial involves the process of presenting evidence arguments, from lawyers and a decision made by either a judge or a jury. This trial process is governed by rules related to evidence and procedures which can vary depending on the jurisdiction.

Key Stages of a Maritime Trial[2]

1. Pleadings; The parties involved in the case file pleadings that include the complaint, answer, counterclaims and replies. These documents outline the claims and defences put forth by each party.
2. Discovery; During this stage the parties exchange information and documents through discovery processes like interrogatories, depositions and requests for production of documents.
3. Motions; Parties have the option to file motions that seek rulings on issues or aim to exclude pieces of evidence from being presented during the trial.
4. Pre-trial Conference; Prior to the trials commencement there is usually a conference where both sides discuss case matters with the court. The goal is to narrow down the scope of issues being addressed in court and establish a schedule, for the trial.
5. Trial; The actual trial begins with opening statements delivered by each party's representatives. Following this, there are presentations of evidence including witness testimonies, expert opinions and documentary proof. Lawyers cross examine witnesses to challenge their credibility or clarify points.
6. Closing Arguments; Once all evidence has been presented lawyers present closing arguments summarizing their case while urging either the judge or jury to rule in their favour.

The judge makes a determination either by delivering a verdict or ruling, on the law, which ultimately decides the outcome of the case.

Enforcement of Judgements/ Decisions of the Court/Arbitral Tribunal: Enforcing judgments can be a tedious legal process that involves various methods and considerations. Common ways to enforce these judgments include executing the judgments themselves, attaching property, conducting proceedings and taking curative actions. The international enforcement of judgments is regulated by conventions such, as the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards. Several factors influence the enforceability of these judgments, including jurisdiction, the finality of the judgment, public policy considerations, reciprocity between countries and legal procedures. To enforce a judgment effectively it may be necessary to seize assets, bank accounts or income streams belonging to the party involved or the defaulter in order to satisfy the judgment. This could involve actions, like placing liens on properties or freezing the assets of the defaulter.

Appeals and Post Procedural Aspects: In marine litigation if either party is unsatisfied with the outcome of the trial or arbitration, they have the option to challenge the judgment through an appeal or post-trial procedures. These processes allow for a review of the trial proceedings and there are chances that it may lead to a reversal or modification of the original judgment or decision.

Appeals

An appeal is a request made to a court asking them to review and reconsider the decision made by a lower court. In litigation cases appeals are typically filed with appellate courts responsible for reviewing lower court decisions.

Reasons, for Appeal: There are various grounds on which a party can base their appeal in maritime litigation. These include;

1. Legal Errors; Claiming that the court misinterpreted or there was an incorrect or arbitrary application of the law. There can also be a situation that the decision was barred by principles of Natural Justice.
2. Factual Errors: Contesting the sufficiency or admissibility of evidence presented during the trial, i.e. basically errors on the facts of the case.
3. Procedural Errors: Questioning any mistakes made by the trial court in conducting and managing the trial proceedings.

Post-Trial Procedures

Once a trial concludes the parties involved in the dispute have options, to pursue post-trial procedures;

1. Filing a request for a new trial with sufficient evidence for re trial; This document is for requesting the court to order a new trial or consider errors or newly discovered evidence in the case.
2. Document to Amend or Clarify Judgment to be submitted to the Court: With this motion one can ask the court to provide clarification or make modifications to the judgment in order to address any ambiguities or inconsistencies that may exist within the judgement which the court may have failed to notice.

What are the International Considerations in Maritime Litigation?

Maritime legal disputes can be complex and challenging as they are governed by a range of conventions, treaties and national laws. When parties involved in disputes contract from different countries or jurisdictions or when the incident occurs in international waters, the international considerations of maritime litigation become particularly significant.

Important International Conventions

International conventions play a vital role, in maritime litigation by providing a framework to resolve disputes and establish uniform rules for maritime activities. Some noteworthy conventions include;

The United Nations Convention on the Law of the Sea (UNCLOS)[3]: The UNCLOS is an extensive convention that sets out the charter for certain activities in large water bodies, more specifically oceans, seas including navigation, exploitation of marine resources and protection of the marine environment.

*The International Convention for the Prevention of Pollution from Ships (MARPOL)***;** The main objective of this convention is to address the issue of pollution caused by ships by implementing rules and regulations that control the release of oil, sewage, garbage and other harmful substances, into the marine ecosystem.

The Convention on the International Regulations for Preventing Collisions at Sea (COLREGS[4]); This convention establishes guidelines and rules, including the "rules of the land " for ships and other vessels to adhere to while at waters and in order to avoid any collisions, between two or more vessels.

Choice of Law and Jurisdiction

Selecting laws and jurisdictions is crucial in litigation as it determines which laws will be applicable to a dispute and which courts will have jurisdiction, over it. Determining the law and jurisdiction in cases involves considering several factors;[5]

1. Nationality of the parties: The citizenship of the parties can impact the choice of law and jurisdiction as some countries may give treatment to their own citizens or businesses.
2. Location of the incident: Where the maritime incident or transaction took place also plays a role, in determining which law and jurisdiction apply.
3. Contract terms: If a dispute arises from a contract the specific terms, within that contract may indicate which law and jurisdiction govern the dispute.
4. Forum non conveniens: This legal principle empowers courts to decline jurisdiction over a case if they believe that another court would be more appropriate to handle it.

Emerging trends and recent crucial developments in Maritime Litigation

The maritime sector is an ever evolving and growing industry which is always adjusting to new technologies, expanding trade routes and developing legal frameworks. Maritime litigation, reflects this dynamic nature. The legal field is adapting to deal with various kinds of lawsuits regarding climate change in the maritime industry. There is a growing number of cases involving harm insurance claims arising from weather events, drastic changes in weather during shipping through waters and conflicts over who should take responsibility, for addressing climate change in the maritime sector. Recent important developments and emerging trends have had a crucial impact, on the field of legal disputes in maritime space.

1. Complexity of Disputes: The complexity of disputes in maritime space is, on the rise, driven by the advancement in operations, the expansion of activities at sea, technological advancements and the complex network of international conventions and national laws that govern these activities. Parties involved in these disputes face challenges as they navigate through complex and multiple frameworks and interact with diverse legal systems.

   A very important example would be of Autonomous ships, also referred to as self-driving vessels are boats that have the capability to function without any human intervention except for certain circumstances or technical issues. Although these advancements offer potential in terms of improving efficiency, safety and cost effectiveness operations, but as we say advancements come at a cost of something and hence they bring about new legal difficulties and intricacies, in maritime litigation.[6]

2. Technological Advancements, good or bad?: Technological advancements in any sector is always good to have. But sometimes there are situations where we might question the benefits of tech advancement in maritime space. Yes, with the emergence of autonomous ships and underwater drones such innovations bring about complexities that the field of maritime litigation must face. One such challenge involves determining liability in case of collisions involving ships which are unmanned or basically autonomous which we discussed in our above example.

3. Cybersecurity threats, cyber pirates: There is this increasing worry in the sector that revolves around cybersecurity threats like cyberattacks which are generally aimed at ships navigation systems, cargo management systems and communication networks. The world is advancing so are the pirates. To tackle the consequences of cyberattacks maritime litigation now focuses on attributing responsibility for damages resulting from cyberattacks and creating guidelines for responding to cyber incidents.

4. Environment protection and sustainability: There is also a growing significance of protecting the environment and promoting sustainability is becoming more prominent in cases. There is a growing emphasis, on preventing pollution caused by ships and safeguarding marine ecosystems. As a result, there has been an increase in disputes related to oil spills, management of polluted water and the effects of hazardous activities on biodiversity. An example can be that in case of an oil spill, the offender may be attributed with a liability to pay for the costs in cleaning of waters or curing of waters along with specific

penalties according to environment laws and on top of that commercial penalties.

5. The significance of having insurance coverage is increasing. Companies, in the industry face risks such, as ship collisions, cargo damage, pollution incidents and cyberattacks. It is essential for businesses to have insurance coverage to minimize these risks and safeguard themselves from setbacks if a maritime incident occurs. Having an understanding of the terms and conditions stated in insurance policies is crucial as it can greatly influence how maritime disputes are resolved. Insurance clauses would sometimes limit insurance coverage for situations of oil spills or marine destruction.

6. Growing Scope of Maritime Labour Law: The field of labour law is constantly evolving in order to address the rights and wellbeing of seafarers. This includes ensuring that they have working conditions, fair compensation and decent living arrangements. Recent advancements, such, as the implementation of the International Labour Organisation (ILO) Maritime Labour Convention (MLC)[7] have strengthened the framework for safeguarding seafarer's rights and have resulted in an increase in disputes related to labour. The MLC, established in 2006 as part of developing maritime law incorporates all the latest standards, from existing international conventions concerning maritime labour.

7. Emphasis on Effective Risk Management- Effective risk management practices are essential for maritime businesses to identify, prioritize, and mitigate potential legal risks. This involves implementing robust risk management systems, staying informed about evolving legal trends, and seeking legal advice from experienced maritime lawyers. It is always better to hire a lawyer specialising in maritime laws who can give an overview of the legal landscape and who can review contracts in a manner that all loopholes are closed and there are no open ends.

8. Evolving Role of International Law- The evolving role of law is crucial for countries like India that have a wide presence in maritime affairs. Being a signatory to various conventions and treaties, India actively participates in shaping the legal framework for resolving maritime disputes. These conventions play a role in governing how conflicts are resolved particularly when it comes to vessels operating in various waters. Recent advancements in law including the revision of MARPOL and the development of regulations, for deep seabed mining are influencing the landscape surrounding maritime activities.

9. Cross Border disputes and enforcement of decisions: Enforcing

judgments can be a tedious legal process that involves various methods and considerations especially when the issue is cross bordered. Enforcing judgments, across borders in lawsuits is gaining significance as parties aim to enforce their judgments in one country against assets or individuals situated in different countries. International agreements, like the New York Convention help with the enforcement of judgments. It can be a complicated process that may require further legal actions.

10. Are Human Mistakes the primary cause of litigation?[8] After all Humans make mistakes: Maritime operations by their nature involve a human aspect. Seafarers play a role, in navigating waters and handling hazardous cargo ensuring the safe and efficient transportation of goods and passengers worldwide. However, the human element also plays a part in disputes and legal matters often influencing incidents and shaping the legal landscape of such disputes.

Human Errors and Negligence- Human errors and negligence are factors contributing to incidents like collisions, groundings or pollution spills.

Human Fatigue- The maritime industry operates non-stop with seafarers facing demanding work schedules, hours on duty and exposure to environmental conditions. Fatigue, stress and other human factors can affect judgment, decision making abilities and reaction times. These factors increase the risk of accidents occurring while also contributing to disputes.

Communication and Coordination Challenges- Effective communication and coordination among crew members on board ship vessels as with shore based personnel are vital for safe maritime operations. Instances where communication breaks down or orders get misinterpreted along, with differences can lead to misunderstandings or mishaps that ultimately result in disputes.

Training and Safety Culture- Training and fostering a culture of safety are vital, in organizations to reduce error and avoid accidents. When training is insufficient safety procedures are neglected or safety protocols are disregarded it can lead to incidents and a higher chance of disputes, to human factors.

1. Conclusion and Policy Implications

The maritime sector plays a pivotal role in fostering economic growth by serving as a global conduit for trade, commerce, and connectivity. Its contributions extend beyond traditional shipping to encompass diverse industries such as logistics, tourism, and energy. The sector's efficiency and resilience directly impact a nation's economic performance, promoting job creation and technological advancements. As a key facilitator of international trade, the maritime domain enhances a country's competitiveness on the global stage. Governments and stakeholders must prioritize investments and policies that promote sustainability, innovation, and collaboration within the maritime sector to harness its full potential and ensure sustained economic development.

The realm of law is maritime legislation is vast, dynamic and intricate covering a range of international agreements, national laws and international regulations, treaties, customs and conventions. Successfully navigating this framework requires a deep understanding of the crucial elements that influence maritime disputes as well, as an awareness of the emerging patterns that are shaping the field of maritime litigation.

As maritime operations become more advanced and expand into territories the complexities surrounding disputes will continue to evolve. Parties involved in disputes must be ready to adapt to these changing trends by seeking the guidance of maritime lawyers who possess specialized knowledge and skills needed to effectively navigate through the intricate world of maritime legislation and litigation. Keep in mind the technological advancements like AI which can change the course of the dispute like no other. By considering the factors that contribute to maritime disputes keeping up with emerging trends and engaging competent maritime lawyers parties can effectively manoeuvre through the intricacies of marine legislation and litigation. This ensures their rights and interests are safeguarded within the changing landscape of the maritime industry.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.02

Fair Value of Derivative Contracts of NIFTY50 Companies: An Analysis of Cash Flow Volatility and Forex Transaction Value

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Abstract:
The paper examines to assess whether foreign exchange transaction amount (Forex) and cash flow volatility are being hedged using the derivative contracts and whether is there any difference in the value of derivative contracts for manufacturing sector companies and service sector companies with Forex as a covariate. The sample companies are the large non-finance companies that are part of the NIFTY50 index. The statistical techniques OLS regression and ANCOVA are used to study the two objectives. The results disclosed that Forex is the significant explanatory variable for the fair value of derivative contracts but cash flow volatility is not; however jointly Forex and cash flow volatility explain fair value of derivative contracts. It is also found that there is no significant difference in the fair value of derivative contracts for manufacturing sector companies and service sector companies. The findings help create derivative markets systematically.

Keywords: Fair Value of Derivative Contracts, Hedging, Forex, Cash Flow Volatility, ANCOVA
JEL Classification: G1, C1, M4, F3

1. Introduction

In the dynamic global market, companies encounter a wide range of financial risks that have the potential to greatly influence their anticipated profits and overall financial stability. The continuous profitability of the companies is significantly challenged by the volatility arising from various causes, including interest rates, foreign exchange exposures, and the unpredictable fluctuations in commodities prices. In light of the rising uncertainty, companies are progressively placing greater emphasis on the establishment and execution of resilient risk management strategies to protect their financial well-being.

Derivative instruments have evolved into indispensable instruments utilized by the companies to manage and mitigate a wide range of financial risks. Companies confront an extensive array of risks in the dynamic and unpredictable business activities and in response to these obstacles, companies utilise derivative instruments as tactical financial instruments to mitigate the impact of unfavourable fluctuations in prices and interest rates.

Futures, Options, Swaps, and Forwards are the derivative instruments, that are used to successfully control the financial risks. The derivative contract Future is an agreement to exchange assets at a specified price on a certain date in the future, allowing businesses to hedge against changes in the value of the underlying asset. The companies using Options get the right but not the obligation to exchange assets at a fixed price on or before the date of expiry of the contract. It allows them to protect against adverse price changes while capitalizing on favourable ones. Swaps include the exchange of cash flows or financial instruments between parties over a set period, with interest rate swaps, currency swaps, and commodity swaps being the most frequent forms used to control interest rate and currency risk. Forwards contracts, which are similar to futures contracts but are customizable and traded over the counter, give businesses more flexibility in risk management, but with the added consideration of counterparty risk. Companies can use these derivative products to help them negotiate the challenging modern financial landscape.

The researchers have been working on the various facets of use of the derivative contracts by the companies including the identification of determinants of use of derivative contracts. The current research will add to the literature on determinants of hedging with the financial derivative contracts with a new dimension of measuring the financial derivative contracts at fair value. Prior to Ind AS included in the reporting framework, the Indian companies have been disclosing the notional value of derivative contracts in the annual reports voluntarily. The voluntary disclosures have created uneven playing field, with some and not all companies fully disclosing the information to its stakeholders (Bal, 2022). However, with the change in the reporting framework to Ind AS, the converged IFRS, the Indian companies have been disclosing the fair value of derivative contracts in the balance sheet in compliance with Ind AS 109. The Ind AS has been implemented voluntarily with effect from 1st April 2015 and has become mandatory from 1st April 2016.

Given these complexities and the evolving financial reporting landscape, there is a need for a comprehensive investigation into the determinants of hedging practices with financial derivative contracts, with a specific focus on the fair value measurement introduced by Ind AS 109.

The fluctuations in the foreign exchange rate pose the greatest risk to international trade operations (Zakia, 2018). The companies can hedge the forex fluctuation risk with currency derivative contracts. According to Kodriyah, Mahardini, & Rosnia, (2019), companies that deal in foreign currencies should hedge to avoid currency value fluctuations.

Derivative instruments, including futures and options, are frequently employed to alleviate the adverse effects of market volatility on cash flows. Businesses can mitigate the risk associated with their financial flows by engaging into these contracts, which protect them from price fluctuations in commodities, interest rates, and currency exchange rates. According to the findings of Smith and Stulz (1985), companies that experience higher levels of volatility in their cash flows as a result of financial price risks stand to gain more from hedging. When the variability in cash flow for a firm increases it may cause financial distress to the firm and it hedges the risk using the derivative instruments (Chaudhry et al., 2014).

The exchange rate fluctuations in the international business and variations in cash flows cause financial distress for the companies. The current research work is to determine the relationship between fair value of derivative contract with forex transactions and cash flow volatility of the non-financial Indian companies which will give insight into the hedging practice by such companies.

The report prepared by Deloitte in 2021 states that the companies in the manufacturing sector spend more forex than their earnings and according to The Business Standard dated 22nd July 2022, the companies in the service sector led by the IT sector generate more forex earnings. These observations indicate that companies in the manufacturing sector spend more money in foreign currency and companies in the service sector earn more money in foreign currency. So, another research question drags attention that 'Do the companies in both the sectors hedge their forex fluctuation risk using the derivative contracts?'.

In this context, the current research work aims to determine the dependency of fair value of derivative contracts on forex transactions and the cash flow volatility of non-financial Indian companies. The first segment of the work replicates the justification of the work, research question, and literature review while the second part of the work explicates the objective, hypothesis, methodology, and data analysis. The last part specifies the implication and conclusion.

2. Review of Literature

Risk in business is inevitable. The companies can minimize the risk by hedging it. The derivative instruments are used to hedge the risk. The literatures are studied to explore what are the factors that determine the hedging of risk using the derivative instruments by the companies in different countries. Firms hedge to reduce foreign exchange risk from foreign operations, bondholder-shareholder tensions, and higher default risk from lesser liquidity. Forex derivatives lessen currency and investment risk (Goldberg et al., 1994). Joseph (2000) observed that UK firms hedge foreign exchange exposure using derivative contracts. Ameer (2010) conducted a study on the determinants of Malaysian corporations' hedging practices.

The study revealed a significant correlation between the use of derivative instruments and foreign sales. It is also found that liquidity, firm growth, managerial ownership, and firm size are also determinants for the use of derivative instruments. Kim and Kim (2008) studied about American hospitality firms and concluded that users of derivative instruments have more volatility in cash flow and earnings than the non-users of derivative instruments. The study of Säterborg (2010) studied the use of derivative contracts of the Swedish companies listed on the Stockholm OMX. The companies that use derivative has higher mean sizes and higher mean values of exposure to foreign currency. Kintu and Ngugi (2013) investigated the hedging practices of the companies listed on the Nairobi Securities Exchange. The study found that the companies have protected the future cash flow with their hedging policy. The cash flow volatility besides the size of the firm and liquidity of the firm are the determinants for hedging using derivative instruments by the listed Kenyan companies. Chaudhry et al. (2014) did research on the factors determining the business hedging practices and derivative usage in risk management in Pakistan. The results categorised users as having volatile cash flow, foreign exchange, and interest rate exposure. The size and growth potential of the companies are also determining the use of derivative instruments by the Pakistani companies. The result is similar to the findings by the study of Afzal and Alam (2013) for the companies listed with the Karachi Stock Exchange. Paligorova and Staskow (2014) found that the use of derivatives is widespread across all sectors and the Canadian firms can reduce the volatility by using the derivative contracts. Ahmad et al. (2015) studied the hedging by the manufacturing companies listed on the Indonesia Stock Exchange. These companies hedge with foreign currency derivative instruments. González et al. (n.d.) researched to investigate why publicly traded Spanish corporations utilise derivatives to hedge against exchange-rate risk. The research showed that companies use derivatives for currency hedging rather than speculation, and foreign currency debt was used as a complementary hedging tool by companies. The size of the firm is a determining variable for currency hedging. The study of Ali (2017) for 64 Nairobi Stock Exchange-listed firms found that corporate hedging is weakly correlated with foreign exchange. Wahyudi et al. (2019) studied on hedging practices by the listed companies in Indonesia. This study aimed to analyse the effect of factors on hedging policies through the use of derivative instruments by taking the firm size as a control variable during the period 2014-2016. The result of the study shows that cash flow volatility besides liquidity has a significant positive effect on the use of derivative instruments. Oliveira (2023) examined the factors determining the hedging and speculation with foreign exchange derivatives doe Brazilian firms. It was found that large-sized firms with high exposure to foreign currency transactions hedge with derivative contracts.

From the study of literature, it is found that the companies, having foreign exchange exposure and volatility in cash flow, are hedging using derivative contracts in different countries. The study of Ahmad et al. (2015) was for manufacturing companies only but other studies were covering non-financial firms. The gap is identified as very few research works are on the hedging by Indian companies using derivative contracts. Also, the difference in the value of derivative contracts between manufacturing sector companies and service sector companies needs to be explored.

3. Objectives and Hypotheses

3.1 Objectives

The objectives for the current research work are mentioned below:

a) To assess the impact of foreign currency transactions and cash flow volatility on the fair value of derivative contracts.

b) To compare the fair value of derivative contracts of manufacturing sector companies with the service sector companies when covariate with forex transactions.

3.2 Hypotheses

The null hypotheses are:

H_{01}: There is no significant impact of foreign currency transactions and cash flow volatility on the fair value of derivative contracts.

H_{02}: There is no significant difference in the value of derivative contracts of manufacturing sector companies and service sector companies

4. Research Methodology

4.1 Statistical Techniques

OLS regression is used to study the dependency of the value of derivative contracts with the value of foreign currency transactions (Forex) and cash flow volatility. The cash flow volatility is calculated as the 'standard deviation of the cash flow from operations' over the sample period for each of the sample companies. Forex and cash flow volatility are the explanatory variables whereas the value of derivative contracts is the dependent variable for the regression analysis. The major assumptions of OLS regression - collinearity, homoscedasticity, and normality of residuals are tested and verified.

Analysis of Covariance (ANCOVA) is used to study the relation between the value of derivative contracts for manufacturing sector companies and service sector companies with Forex as a covariate. The value of derivative contracts, the dependent variable is measured in ratio scale; in sectors such as manufacturing and service, the independent variable is categorical; and Forex, the covariate is measured in ratio scale. The important assumption of the test besides the OLS regression assumptions is homogeneity of variance which is tested and verified.

4.2 *Sample Companies*

The derivative market is complex. Large corporations face significant risk as a result of their involvement in geographically diverse regions and a wide range of projects; and also these companies may allocate resources to mitigate their risk through hedging strategies. Hence, the universe for the study is large Indian companies listed on NSE and included in NIFTY50. The universe for the study is NIFTY50 companies. However, eleven banking and financial services companies are excluded being their reporting framework and risk exposure are quite different from other companies. Hence, the sample included 39 companies. Again 7 companies are dropped being their residuals are more than 2.5 times of standard error. The final sample included 32 companies.

4.3 *Study Period*

The listed companies are required to disclose the fair value of derivative contracts in the balance sheet, according to Ind AS 109, since the financial year beginning from 1.4.2016 with a comparative figure for the financial year ending 31st March 2016. The period of current study is from the financial year ending 2016 to the financial year ending 2023 i.e. 8 financial years.

5. Verification of Assumptions

5.1 ***Multiple Regression:*** For the study, multiple regression analysis with two independent variables is used. The regression analysis is to observe whether the value of forex transactions and cash flow volatility of the sample Indian companies explain the fair value of derivative contracts disclosed by the select companies. The regression equation for the study is as follows:

$$Derivative\_FV = \hat{a}_0 + \hat{a}_1 Forex + B_2 Cash\ Flow\ Volatility + \mu$$

Before the discussion on the results of the regression, the assumptions (Panda et al., 2021) discussed in the following sub-sections, are verified.

5.1.1. ***Collinearity:*** The assumption for linear regression is that there is no collinearity among the explanatory variables used in the regression model. In the study, 'Forex Transaction Amount (Forex)' and 'Cash Flow Volatility' are the explanatory variables. For checking the collinearity, the Variance Inflating Factor (VIF) is applied.

Table 1: Variance Inflating Factor

Variables	VIF
Forex	1.002
Cash Flow Volatility	1.003

Source: Authors' Compilation

When VIF>10, the variable is said to be highly collinear. As VIF<10, there is no collinearity for the variables in the model.

5.1.2. ***Homoscedasticity:*** The OLS regression has the assumption of homoscedasticity or equal variance of the error term. The variation around the regression line is the same across the values of explanatory variables. White's test is used to check the homoscedasticity. The result of the test for the null hypothesis of "there is no heteroskedasticity" is the probability of the LM test statistic is greater than 5%.

Since the p-value is greater than 0.05, the test failed to reject the null hypothesis and hence the homoscedasticity test is verified by the regression equation model.

5.1.3. Normality of Residuals: For the OLS regression, the assumption is that the residuals must be normally distributed. The null hypothesis of "Error is normally distributed" for the test for the normality of residuals is verified. For the test, the probability of chi-square is greater than 5%. The test failed to reject the null hypothesis and hence it is concluded that the residuals are normally distributed. Further, the mean and standard deviation of the residuals should be 0 and 1 to qualify for such a test (Panda et al., 2020) which is replicated in the research work as well.

5.2. *ANCOVA*

Analysis of covariance (ANCOVA) is used to study whether there is any significant difference in the means of a dependent variable (DV) across one or more categorical independent variables (IV) with a covariate as a control variable. The dependent variable and control variable need to be measured in a continuous scale. For the current study, the fair value of derivative contracts is the dependent variable, and the value of forex transactions is the control variable; the sample companies are categorised into the manufacturing sector and service sector and this categorical variable is the dependent variable.

The ANCOVA is the blend of ANOVA and linear regression. One of the significant assumptions for ANCOVA other than the assumptions for linear regression is the homogeneity of variances.

5.2.1. Homogeneity of Variances: The significant assumption for ANCOVA is that the error variance of the dependent variable is equal across the groups. For testing this assumption, Levene's Test is used. The result of Levene's test is shown in the following table.

Table 2: Homogeneity of Variances with Levene's Test

F Stat.	df1	df2	P value
0.568	1	30	0.457

Source: Authors' Compilation

The null hypothesis for the test is variance in the fair value of derivative contracts is the same for both manufacturing sector companies and service sector companies. Since the p-value of the test is more than 0.05, it is failed to reject the null hypothesis and hence variance is homogeneous.

6. Results and Discussion

In order to explore whether the value of derivative contracts measured at their fair value is being explained by the value of forex transactions and cash flow volatility, regression results are interpreted. The average of fair value of derivative contracts for the financial years ending from 31st

March, 2016 to 31st March, 2023 is being the dependent variable and the average for same period for value of forex transactions and cash flow volatility are being the explanatory variable. The result of the model is shown in the table below.

Table 3: Result of OLS Regression

Variables	Coefficient	Std. Error	t-ratio	P-values
Constant	102.19	74.29	1.376	0.1795
Forex	0.19	0.03	6.271	0.00
Cash Flow Volatility	0.07	0.06	1.184	0.24
R-squared		0.58		
Adjusted R-squared		0.55		
F (2, 29)		20.05		
P-value(F)		0.00		

Source: Authors' Compilation

Note: Dependent variable: Derivative_FV

The result of regression analysis shows that the value of forex transaction (forex) explains the fair value of the derivative contract for which the probability (t-statistic) is less than 1% but cash flow volatility fails to explain. However, jointly both forex and cash flow volatility explain the value of derivative contracts. Being R^2 is 0.58 indicating 58% of the variation in the value of derivative contract is explained by the two variables. The overall regression model is significant as the probability (F-statistic) is less than 5%. The coefficients of the variables 'Forex' and 'Cash Flow Volatility' are respectively 0.19 and 0.07. This explains that one rupee change in each of these two variables causes rupee 0.19 and rupee 0.07 change in the fair value of derivative contracts.

Analysis of Covariance (ANCOVA) is used to study whether there is any significant relationship between the fair value of derivative contracts for the manufacturing sector and that for the service sector with value of forex transaction (Forex) is being considered as a covariate. The result of ANCOVA is shown in the table:

Table 4: ANCOVA Results

Variables	Sum of Squares	df	Mean Square	F	p
Overall model	3.81e+6	2	1.90e+6	19.190	<.001
Forex	3.74e+6	1	3.74e+6	34.304	<.001
Sectors	70096	1	70096	0.644	0.429
Residuals	3.16e+6	29	108888		

Source: Authors' Compilation

As can be witnessed from the result, the variable 'Forex' is the control variable justified by the Probability value which is less than 5%. The study is made for the categorical variable 'Sectors' having two groups – Manufacturing and Service. For the variable 'Sector', the p-value is greater than 5% and thus fails to reject the null hypothesis for the test. Therefore, there is no significant difference in the fair value of derivative contracts for the manufacturing sector and service sector with value of forex transaction as a covariate.

7. **Implications** and **Conclusion**

Besides adding to the literature on the use of derivative contracts as hedging tool, the current research is expected to give insight that may help companies and regulators in developing and exploring derivative market in managing the risk, particularly foreign currency fluctuation risk.

The derivative contracts are the tools to hedge the risk. The non-financial companies, hedge their risk of fluctuations in exchange rates which affect the payments and receipts in foreign currencies, using currency derivatives and hedging their cash flow volatility using commodity derivatives. From the financial year beginning in 2016, the large listed Indian companies have been adopting the Ind-AS as the financial reporting framework. According to Ind-AS 109, the companies are required to disclose the fair value of their derivative contracts in the balance sheet.

The current study investigated the relationship between the fair value of derivative contracts with underlying risk i.e. forex transaction amount and cash flow volatility. For this OLS regression is used and observed that as an individual variable 'Forex' is an explanatory variable and not 'Cash Flow Volatility' but jointly both are the explanatory variable.

ANCOVA test is used to verify whether is there any difference in the fair value of the derivative contract for the manufacturing sector and service sector with the variable 'Forex' as a covariate. The result of the test led to the conclusion that there is no significant difference in the value of derivative contracts for both sectors.

8. Limitations and Scope for Further Research

The study is valid only for the sample non-finance companies that are part of NIFTY 50 and is to be verified for a large sample. The regression analysis is made with only two explanatory variables and it is to be studied with more number variables.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.03

Economic Insecurity of Sambalpuri Handloom Weavers: A Study

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Abstract

The paper aims to analyse the impact of financial and marketing issues on the economic insecurity of Sambalpuri handloom weavers. The study is based on primary data collected from the handloom weavers of Sambalpur district of Odisha province through a structured questionnaire. The study is based on 104 weaver households. We have used binary logistic regression. The results show that problems like borrowing from private money lenders and transportation issues have a significant impact on the economic insecurity of the handloom weavers. There are also other determining factors of economic insecurity but their impact is not significant. The study will help the policymakers, weavers and the government in decision-making regarding the growth and development of the handloom weavers.

Keywords: Financial issue, Economic insecurity, Sambalpuri handloom weavers

1. Introduction

One of the most significant cottage industries in India is handloom, which is found all over the country (Paul, 2019). After agriculture, it is the largest unorganised sector. The handloom business has maintained a strong cultural legacy and has long dominated the textile industry (Divya et al., 2020). It is observed that a significant portion of the world's handloom products is produced in India. With 15% of the nation's total fabric production, this industry helps India's export revenues (Das, 2021). The handloom sector of our economy is distinctive. The handloom business provides a livelihood for many people in Odisha. According to the Government of India's Fourth Handloom Census, 2019, there are 117836 weavers in the state, of which 53,472 weave and 64,364 are allied workers. This industry is labour-intensive and a large number of people are earning their living through weaving activities. But in recent years, there has been a sharp decline in the production of handloom products (Gowreeswari & Bama, 2019) for which it is important to study problems associated with the weavers like economic insecurity, financial issues etc.

The industry can flourish in a more successful manner only when the weavers are satisfied with the work and the reward associated with it. But in reality, it is challenging for handloom weavers to cover their daily expenses because of the disturbing state of their livelihood (Das, 2021), low income (Rao & Sreedhar, 2017), and community-wide acute scarcity and extreme poverty (Tiwari, 2017). At the same time, there is a lack of awareness of government benefits among weavers (Khatoon & Iffat, 2021). Power looms also made it difficult for weavers to compete, and as a result, their business revenues have been steadily declining (Malarkodi et al., 2020). Many studies also found that handloom weavers face several financial and marketing issues (Jain & Gera, 2017; Barik & Behera, 2017).

In Odisha, Sambalpuri handloom weavers play a significant role. Their contribution to the handloom industry is remarkable as Sambalpuri sarees and dresses are liked all over the world. But here also the weavers are facing many kinds of problems in earning their livelihood (Das, 2021). Considering all the above points, this study focuses on analysing the impact of financial and marketing issues on economic insecurity of Sambalpuri handloom weavers. The study also investigates the relationship between government schemes and income level of the weavers. This study is first of its kind as impact of the said issues has not been explored by the previous studies. Our study has important implications. It will be helpful in understanding the issues relating to financial and marketing that can be resolved to reduce the economic insecurity of the Sambalpuri handloom weavers.

The remaining of the paper is structured as follows. Section 2 discusses the review of literature and research gap. The third segment deals with the methodology. Section 4 is for results and discussion and the last part of the paper draws conclusion and policy implications.

2. Review of Literature

The weavers have been facing many problems and the covid pandemic compounded the problems, and just a few weavers are benefiting from various government programmes (Khatoon & Iffat, 2021). The social status of weavers has been declining over time, both generally and in terms of education level (Panda & Sharma, 2022).In recent years, the production of handloom goods has drastically decreased (Gowreeswari & Bama, 2019). Varghese & Salim (2015) examined the struggles and obstacles faced by the handloom sector in Kerala and discovered that it primarily competes with the power loom sector. Bari et al. (2015) tracked down the weavers who had given up weaving because they lacked schooling and other revenue sources. According to Prathap & Naidu (2015), the handloom weavers in Vontimitta Mandal in Andhra Pradesh's Kadapa area are extremely underprivileged. Panda & Bhuwania (2022) also found Indian handloom weavers who have historically worked as weavers are in a terrible situation as a result of their poor socioeconomic circumstances, health concerns, and business difficulties. Similarly, Patra (2019) found that in Odisha, handloom products face numerous challenges, such as inadequate and inappropriate infrastructure, a lack of raw resources, antiquated technology, etc., which makes them less competitive with machine-made goods.

D'Costa, (2022) studied the employment sustainability in handloom sector and suggested an alternate strategy that is based on cultural valorization of artisanal craft and involves increasing demand for handloom products through commercial branding. Tarai (2020) observed that though there are various government schemes for the upliftment of the weavers in Odisha, none of them have registered themselves as an entrepreneur. So, there is great opportunity to improve the economic condition by developing entrepreneurial attitude. Ghosh & Jena (2018) studied the entrepreneurial aspect of Sambalpuri handlooms and found that the financial situation of artisans is significantly influenced by innovation in indigenous knowledge, yet it does not provide an immediate way out of poverty. According to Mishra & Mohapatra (2021), the majority of the issues are caused by the ignorance of the opportunities and benefits available to weavers. Therefore, educating the weavers about their rights and opportunities is crucial for the development of their economic condition.

Tanusree (2015) conducted research on the state of handloom weavers in Varanasi, India, and came to the conclusion that the development of the power loom, rising yarn prices, poor pay, and labour issues, among other factors, led to the decline of this respected traditional industry. Bhagavatula et al. (2010) assessed the impact of human and social capital on the acquisition of resources and the discovery of opportunities in the Indian Handloom sector. The researchers discovered that human capital influences opportunity identification and resource acquisition both directly and indirectly. In their analytical research, Jain and Gera (2017) identified several issues specific to the handloom industry, including a lack of reliable data, poor yarn quality, a financial crisis, a lack of education, inadequate infrastructure, skills-based training, and research, a scarcity of inputs and their rising costs, and a working capital issue.

Though there are a number of papers in the area of handloom weavers, very few of them have focused on Sambalpuri handloom. Moreover, there is no such study in the context of Sambalpur district that explores the impact of marketing and financial issues on the economic insecurity of the weavers. Hence, it is important explore such impact in the context of Sambalpur handloom weavers.

3. Data & Methodology

The study is based on primary data collected from the handloom weavers of Sambalpur district of Odisha province through a structured questionnaire in Odia language for a better understanding of the participants. This is a census study consisting of 104 weaver households. The respondents are from different blocks of Sambalpur district.

As per the objectives, we have used binary logistic regression to trace the impact of marketing and financial issues on economic insecurity of the weavers. For measuring economic insecurity, we have considered one variable i.e. 'Anxiety of shortage of money in an emergency.' Similarly, for marketing issue we have framed variables like 'no design issue', 'high profit' and 'Transportation problem'. For Financial issue, variables like 'The problem of arranging a loan,' 'Forced to move to private money lenders,' 'Fewer sales because of higher prices' and 'Due to the high cost of raw materials, the cost of production is high' are framed.

We first run the Omnibus test of model significant. When determining if the independent factors have any effect on the dependent variable, the omnibus test is helpful. It's a representation of incremental fit. The null hypothesis for this test is that the model does not exhibit incremental fit. The null hypothesis is disproved in this case. Given that the chi-square value is 25.074 and the "P" value is less than.05, the model's fit to the null model has significantly improved.

The values of the Nagelkerke R-square and the Cox & Snell R-square are pseudo-R-squares. An altered form of the Cox and Snell pseudo-R-square, the Nagelkerke pseudo-R-square has a range of 0 to 1. This Nagelkerke pseudo-R-square indicates that the independent variables may account for a 34.1% change in the dependent variable.

We have also run the Hosmer & Lemeshow test. it tests the 'estimated model to one that has perfect fit' (Pituch & Stevens, 2016). For this test, the model's perfect fit is the null hypothesis. As the results of the Hosmer and Lemeshow test are not statistically significant [$\div^2$ (7) = 7.728, p=.357], the null hypothesis is not rejected in this case.

The classification also showed a favourable result. Here the percentage of accuracy in classification has improved from 81% in block 0 to 83.8 % in block 1 by adding the independent variables. The specificity of the model is 50% and the sensitivity is 91.8%. Overall, the accuracy is 83.8% which is very good. Good sensitivity is exhibited by the model.

4. Results and Discussions

Table 1: Impact of Marketing Issues (MI) and Financial Issues (FI) on Economic Insecurity

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
I have no design issue for my product (MI)	-1.286	.773	2.768	1	.096	.276
I earn a high profit (MI)	-.528	.629	.705	1	.401	.590
Transportation problem (MI)	-1.26	.676	3.502	1	.061	.282
The problem of arranging a loan (FI)	.634	.689	.845	1	.358	1.884
Forced to move to private money lenders (FI)	1.82	.700	6.803	1	.009	6.203
Fewer sales because of higher prices (FI)	1.10	.695	2.507	1	.113	3.005
Due to the high cost of raw materials, the cost of production is high (FI)	-.149	.677	.049	1	.82	.861
Constant	1.40	1.0	1.94	1	.16	4.057

Source: Compiled Output

Note: Dependent Variable; Anxiety of shortage of money in an emergency (Economic Insecurity)

Borrowing from private money lenders is a positive and significant predictor of the anxiety faced by weavers like shortage of money at marriage time or hospital cases (b=1.82, s.e.= .700, Wald ÷^{2}(1) = 6.803, p=.009). The Exp(B) or odds ratio is 6.203 which indicates that for every unit increase in the borrowing from private money lenders, the probability of facing anxiety increases by 6.203 times. Having no design issue is a negative and significant (at 10%) predictor of the anxiety faced by weavers (b=-1.286, s.e.= .773, Wald ÷^{2}(1) = 2.768, p=.096). The Exp(B) is 0.276 which indicates that for every unit increase in the no design issue, the probability of facing anxiety decreases by 72.4% (1-0.276*100). Similarly, transportation problem is a negative and significant (at 10%) predictor of the anxiety faced by weavers (b=-1.264, s.e.= .676, Wald ÷^{2}(1) = 3.502, p=.061). Earning high profits and high production costs are also negative and insignificant predictors of anxiety. The problem of arranging loans with Exp(B) of 1.884 (p=0.358) and fewer sales with Exp(B) of 3.005 (p=0.113) are positive predictors but the impact is insignificant.

Table 2: Canonical Correlation

Root No.	Eigenvalue	Percent	Cumulative Percent	Canonical Correlation	Squared Correlation	Wilks L.	Sig.
1	0.75983	87.4336	87.4336	0.65709	0.43176	0.51229	0.000
2	0.10921	12.5664	100.000	0.31377	0.09845	0.90155	0.177

Source: Self compilation

The table 2 explaines the correlation shared between increase of income and benefits derived from government schemes with income level and level of education. The correlation between the two variables is found to be 0.657. Thus, it is infered that government schemes can enhance income level of the weavers.

5. Conclusion

In this study, we find that financial issues like borrowing from private money lenders has a positive and significant impact on economic insecurity. So, attempts should be made to resolve the problem of arranging loan so that the economic insecurity can be minimized. Similarly, having no design issue is a negative and significant predictor of the anxiety faced by weavers. So, more focus on the improvement design can minimize the economic insecurity. Moreover, if problems with technology, lack of raw materials, power outages, low productivity, unorganised market, wide range in the skill levels of weavers, weak market ties, the dominance of master weavers, etc., are properly addressed and resolved, the condition of handloom weavers will be strengthened appropriately. In addition, it is traced that education is not a factor in availing or not availing of government schemes. Income level has no impact on marketing and financial issues. It has also no impact on economic insecurity and social insecurity.

6. Policy Implications

To address economic insecurity exacerbated by private money lending, policymakers should prioritize accessible and affordable loan options. Implementing transparent regulations and fostering competition in the lending sector can protect borrowers and promote financial stability. Simultaneously, recognizing the link between design issues and weavers' anxiety underscores the need for targeted interventions. Investing in design education, supporting artisan cooperatives, and incentivizing innovative design practices can enhance product value and market competitiveness, thereby mitigating economic insecurity among weavers. Comprehensive policies addressing both financial access and design concerns are vital for fostering economic resilience and reducing anxiety in vulnerable sectors. To address marketing and financial challenges irrespective of income, tailored support mechanisms and skill-building initiatives can enhance economic resilience. Advertisement of the handloom product can also be improved which can attract more customer (Kewat et al., 2023) and can also help in overcoming marketing issues. A holistic approach, beyond education and income considerations, is crucial for effective and equitable policy formulation. The government needs to develop a variety of policies and programmes to deal with the changing environment and problems, including schemes like technology advancements, design improvements, and raising weavers' pay levels.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.04

A Systematic Literature Review on Financial Inclusion using PRISMA Framework

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Abstract

The purpose of this paper is to systematically review the financial inclusion literature using PRISMA review framework. It is discovered that a number of studies emphasize the definition as well as the assessment of this idea, that a number of items are used in the existing literature, and that items are typically related to the study topics. Based on documents sourced from Scopus, EBSCO, and ProQuest, this study reviews a total of 41 research papers that explore financial inclusion practices across rural household communities of developing countries. As financial inclusion practices are implemented by the governments to promote the financial literacy and socio-economic development of rural households, these practices are divided into six categories and meaningfully discussed in this review paper, such as (a) financial inclusion; (b) financial literacy; (c) digital financial inclusion; (d) social empowerment; (e) socioeconomic development; and, (f) both social empowerment and socioeconomic development. Finally, this review paper discusses some avenues for future research direction, implications, and concludes the study.

Keywords: Financial inclusion; Financial literacy; Rural households; Literature review; Socioeconomic development; Digital financial inclusion

JEL Classification: E23, E44

I. Introduction

Financial inclusion (FI) is a process of economic transformation that strives to fight against poverty, end social exclusions, and reduce income inequalities among societies (Omar & Inaba, 2020; Singh, 2020). FI is an important development strategy that predicts the financial levels by different combinations of demand and supply of financial services (Geraldes, Gama, and Augusto, 2022). FI has now been regarded as a key policy instrument of several developing countries for ensuring the participation of diverse social groups in economic activities, as well as the long-term expansion of an economy (Ashoka & Aswathy, 2021; Shabir & Ali, 2022). Several factors such as interest rates, infrastructure, employment opportunities, age, income levels, level of education, and occupation affect financial inclusion significantly (Raichoudhury, 2020; Ogechi & Olaniyi, 2017; Shabir & Ali, 2022). Apart from these factors, the quality of FI is determined by gender, education, geography, financial literacy, family income, and closeness to another place, e.g., cities, districts, towns (Chipunza & Fanta, 2021).

The majority of the populations in the Asian continent are deprived of access to formal financial services (Malik et al. 2022). Global economic disparity has been steadily expanding, and women's financial inclusion has a greater impact on inequality (Fouejieu et al. 2020). Additionally, women frequently lack the confidence and understanding of men in financial matters in rural regions, which can be quite challenging for them when they need to make decisions regarding their income or fortune. Unfair opportunities, laws, and regulations that place an additional obstacle in the way of women being able to even open a basic bank account can all be traced back in order to explain the gender gap in FI (Amari & Anis, 2021). Both Men and women contribute to reducing the inequality of FI (Fouejieu, 2020).

Spurred by the background above, this systematic review research throughs light on difficulties faced by rural households to be financially inclusive. Further, this study explores the key variables that are associated with financial inclusion. Its specific goal is to discover and investigate the key factors of financial service and product access, the strategies for achieving financial inclusion, and the implications of financial inclusion on individuals, businesses, and the wider economy. Additionally, this study will assist researchers in determining regions in need of more research and prioritizing such areas. For anyone interested in learning more about the current state of research and knowledge on this significant subject, a systematic literature review on financial inclusion might be a useful tool.

This paper is intended to review the primary approaches taken in the research to gauge people's financial literacy. It is discovered that a number of studies emphasize the definition as well as the assessment of this idea, that a number of items are used in the existing literature, and that items are typically related to the study topics. To establish the themes, sub-themes, and gaps in financial inclusion and financial literacy towards socioeconomic development and to provide context for this study, a comprehensive review of the literature on FI is carried out.

Consequently, it is obvious that the review of systematic studies that have been done thus far, where FI is linked to financial literacy and socioeconomic development, are constrained and are centred on rural households' socioeconomic condition. In light of the preceding paragraphs stated that, the sole purpose of this systematic review is to investigate the difficulties and evidence of financial inclusion in rural households. In this way, the goal is to provide a response to the following question:

What are the issues and background knowledge related to the financial inclusion described in the scientific literature?

II. Materials and Methods

This literature review adopted a systematic approach of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). At first, articles were extracted from notable databases such as Scopus, EBSCO, and ProQuest. These sources are used for locating scientific and peer-reviewed research papers. In this database, for example, Scopus, scientific rigour is used to evaluate research articles. The scientific community regards them as trustworthy databases for presenting results. Hence, the databases chosen for retrieving research papers for systematic reviews are justified.

A search cord was created in both sources using the default phrases and the Boolean connectors "AND" and "OR" to carry out the study selection: Financial inclusion" AND ((Financial Inclusive AND Financial Literacy)) OR (Rural "Households" OR "Rural People"). The process for selecting the articles started on August 13, 2022, from all sources (ProQuest, EBSCO, and SCOPUS), and the data from all sources was extracted into a Comma Separated Values (CSV) file, which was then formatted in a Google Spreadsheet. This file contains: Author, Year, Tile, Journal, Publisher, Source, Type of document, Language, Abstract, Keywords, Citations, and DOI are the headings for the pertinent information. In addition, new columns with the following data were added: country name, population size, and sample size, because the main objective of the research has been to focus on financial inclusion, rural households, and socio-economic development status without discriminating against the country in which it is studied, sample size, population, gender participation, financial education level, and profession they have. Both primary survey articles and secondary study articles are included in this systematic literature review. Articles are organized, categorized, and evaluated using several tools and techniques. Reference citation software such as Mendeley was used for writing citations in different formats. Finally, the PRISMA flowchart is utilized to illustrate the papers, which generally comprises the three phases of the literature review development, such as identification, screening, and inclusion.

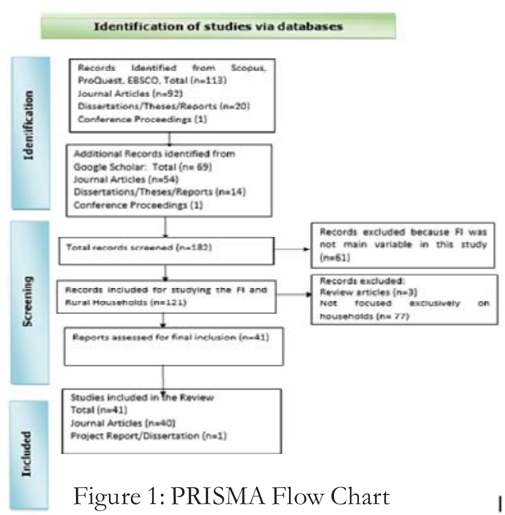

Figure 1: PRISMA Flow Chart

The PRISMA flow chart started with an identification phrase, which established the research characteristics based on an existing search string. In the screening stage, the articles were discarded because financial inclusion was not the main variable in this study. The articles that did not focus on rural households were discarded. Furthermore, the inclusion stage was concluded with the presentation of the entire number of papers.

Selection of studies

The procedures for document identification, screening, and inclusion are shown in Figure 1. In the first stage of identification, a total of 182 publications were produced that fit the search criteria for this study, both for financial inclusion and the elements connected to financial inclusion, were found when looking for and identifying papers published in scientific journals. Then, journal articles, dissertations, theses, reports, and conference proceedings were considered for documentation. After that, 121 studies were assessed by removing 61 documents where FI was not the primary variable that passed the initial screening step. In the very next step, 82 studies were not solely focused on families, and 3 publications were review articles; hence, those documents were disqualified throughout the screening process. Thus, a total of 41 research articles were selected which have focused on exclusively financial inclusion status of rural households.

III. Study Characteristics

This section lists 33 countries where research was conducted: (a) India has 42 research studies; (b) Uganda, having 10 research papers; (c) China, having 9 research studies; (d) Nigeria, with 6 research studies; (e) Latin America, the Caribbean, Pakistan, and Bangladesh, each including three research studies; (f) Kenya, Vietnam, Ghana, Indonesia, Tanzania, Tunisia, Turkey, Poland, and South Africa, each with two research studies; and (g) other countries such as Russia, Brazil, Mexico, USA, Zimbabwe, UK, Ethiopia, Laos, etc.

The majority of studies in this field has been done in Asian nations, according to this list. It's also vital to remember that certain research was carried out in multiple nations. It should be emphasized that certain research was carried out across borders in places like the BRICS, Asian countries, the MENA countries, etc. It has to be noted that the above list relates to where the data was acquired rather than the countries where the research papers have been published. Figure 2 displays the number of publications that investigated financial inclusion practices with rural households and were also submitted to an evaluation procedure according to predetermined exclusion criteria. From 2014 to 2016, an average of just one publication per year came out with these qualities, following a positive trend from 2016 to 2017, a downward trend from 2017 to 2018. There is same number of publications in 2019, 2020 and 2022, and the highest productivity is 10 which published in the year of 2021. But again, it is sloping downward in 2022.

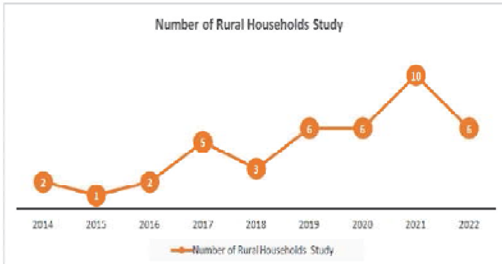

Figure 2: Annual publication count

IV. Financial Inclusion Practices associated with Rural Household Socioeconomic Development

Following an investigation of the articles considered for analysis and categorization of various FI practices and their correlations with major aspects impacting rural households, the numerous activities were discovered to be classified into six groups based on how they were employed or studied in the various research investigations (***Appendix A***). The list of categories such as (1) FI practices in rural households; (2) FI practices involving financial literacy; (3) FI practices involving digital technology; (4) FI practices involving social empowerment; (5) FI practices involving socioeconomic development; and (6) FI practices involving socioeconomic development with social empowerment as a moderating variable.

The financial inclusion practices with key variables, and hypotheses related to rural households are presented in ***Appendix A***. All the factors and determinants have a positive effect on FI except age among the sociodemographic variables (Amari and Anis, 2021). According to financial literacy, networks, social capital, social networks, and intermediaries have played a mediating role between FI and FL, which has a positive and significant effect (Okello et al. 2017; Okello & Ntayi, 2020; Okello and Munene, 2020; Okello et al. 2016). Also, FL and general education have a positive effect on investment decisions, saving decisions, borrowing propensity, and FI but a negative and significant effect on borrowing quality, as well as an insignificant effect on retirement planning (Kodongo, 2018; Bongomin et al. 2018; Kumare & Singh, 2019; Biswas & Gupta, 2021).

Financial Inclusion

The study's findings first concentrated on rural families' financial inclusion practices and factors that influence them. Better indicators of financial inclusion among households are financial innovation and financial literacy. As a result, financially literate households are more likely to make sound decisions concerning new financial services and products. According to the numerous studies the study reviewed, increasing the supply of monetary products and services may not contribute to wider financial inclusion unless conscious efforts are undertaken to improve financial literacy. This is because financially educated people are more likely to understand the worth of financial assistance and, as a result, use financial products. However, comprehending various financial service features has a big impact on being able to obtain money.

A variety of criteria, including profession, income level, experience with putting down and taking out money, and interest rates, all had a substantial impact on the wider availability of credit. When compared to male-headed households (MHH), female-headed households (FHH) occasionally have a higher likelihood of obtaining non-institutional finance (NIF) and a lower likelihood of receiving institutional finance (IF). In general, factors that favourably affect FHHs' access to IF include literacy levels, monthly family spending, property holdings, irrigated regions, and penetration of scheduled commercial financial institutions. However, FHHs from castes with poor social standing are less likely to access IF. As a result, MFIs are more effective across a range of categories. In terms of social behaviour, it is determined that MFIs primarily serve women and operate in rural areas for those who have neglected issues like health and education (Raichoudhury, 2020; Fanta & Mutsonziwa, 2021; Hasan, Le & Hoque, 2021; Kaur and Kapuria, 2020; Akileng, Lawino & Nzibonera, 2018; Arora and Kumar, 2021; Natarajan and Sulaiman, 2021).

Financial Inclusion and Financial Literacy

Secondly, financial literacy (FL) among rural households was the focus of financial inclusion practices. It has been demonstrated that FL and FI are significantly related. However, there is a pressing need for financial literacy education across the country because women and people in rural areas have difficulty accessing financial services, and literacy rates are low. Savings decisions, investment choices, borrowing propensity, and quality of borrowing are all significantly impacted by financial literacy. Because of this, the social network and financial intermediaries play a mediating role in fostering the link between FL and FI. Financial intermediaries, such as finance houses, microfinance banks, and other similar licensed financial organizations, connect savers and borrowers by collecting funds from savers and disbursing them to borrowers who invest the money. This encourages unbanked people, particularly in rural areas, to acquire and use loans (Bendre and Singh, 2017; Biswas and Gupta, 2021; Bongomin et al. 2018; Morgan & Trinh, 2019; Yoshino et al. 2017).

Financial Inclusion and Social Empowerment

Fourthly, strategies whose goal is to improve rural households' social empowerment through financial inclusion. In terms of social empowerment techniques, the requirement for bank accounts among women has been used as an intermediary variable to examine the extent to which broader financial inclusion has empowered women. Women who are employed and those who participate in household financial decision-making are more inclined to need a banking account. In a similar vein, women who receive social support from governmental or non-governmental organizations (NGOs) are more likely to need a bank account. A bank account is not only for women in rural India; however, it is either an instrument or a status of self-assurance, independence, financial maturity, and responsibility that she can use when necessary.

Through a variety of social welfare programs, including the Pradhan Mantri Jan Dhan Yojana, Ayushman Bharat Yojana, and Pradhan Mantri Ujjwala Yojana, the Indian government is working to improve women's socioeconomic position. However, it has been demonstrated that the PMJDY program has proven more successful in states with higher percentages of illiteracy, which contradicts prior research that pinpointed illiteracy as an obstacle to financial inclusion. The studies examined indicate the following results in terms of the association between financial inclusion and social empowerment: (a) income capacity; (b) involvement in home financial decision-making; and (c) recipients of societal assistance schemes by women (Madan & Inumula, 2019; Ambarkhane et al. 2020).

Financial Inclusion and Socioeconomic Development

Fifthly, studies on financial inclusion and socioeconomic growth have shown that the latter has a significant favourable impact on household well-being. However, middle- and upper-income families benefited more from financial inclusion than households with low incomes. Education, income, wealth, deprivation, or occupational position are typically used as indicators of a household's welfare or SES (socioeconomic status). Along with basic amenities and social well-being, which may be used to gauge the socioeconomic situations of rural households, financial capability and financial well-being are also indicators of economic condition. But as a result of demonetization, people's behaviour today has altered in terms of how they conduct financial transactions. Therefore, it is critical to promote inclusive financial services among rural and lower-income consumers. By developing agency banking and microfinance in rural regions, this can be accomplished. Financial literacy, understanding banking services (UBS), online banking (OB) and other FI promoters (Pradhan Mantri Jan DhanYojana Scheme) that can help rural communities improve their economies (Madan & Inumula, 2019; Ibrahim et al. 2019; Murendo et al. 2021; Rastogi and Ragabiruntha, 2018; Soyemi et al. 2020; Raha and Shil, 2021).

Financial Inclusion, Social Empowerment, and Socioeconomic Development

Last but not least, practices that promote social empowerment as a means of bridging the gap between financial inclusion and growth in the economy. Social empowerment is increased via financial inclusion and thus enhances economic growth. Additionally, it has been found that, via the medium of social empowerment in rural areas, financial inclusion has an immediate and considerable influence on the development of the economies of marginalized populations. The study's findings indicated that marginalized households that use financial services and products more frequently—such as opening bank accounts, applying for loans, receiving pensions, and using insurance—are more socially and economically empowered, which leads to socioeconomic development (Lal, 2021; Chakraborty and Abraham, 2021).

V. Concluding remarks

The systematic review has examined a series of literature focusing the key variables that are associated with financial inclusion in rural household perspectives. The key variables such as financial literacy, DFI, social empowerment, socioeconomic developments are closely associated with rural households. The study has used PRISMA review framework for the identification and screening of documents through Scopus, EBSCO, ProQuest and Google Scholar. A total of 182 documents were found, and the final selection was 41 papers. The study has elaborated a series of unexplored area which need to be instigated further are discussed in discussion section. Demand side financial inclusion, gender gap, digital literacy, senescence effect, rural poverty, women empowerment, women's income potential, rural financial markets are few unexplored areas that need to be explored in rural house perspective.

Implications of the study

The recommendation of an empirical model is the research's main contribution and strength, derived from FI practices identified in the scientific literature, that enables the recognition of the challenges associated with financial inclusion for the establishment of socioeconomic development. FI practices are implemented by the government to promote the financial literacy, social empowerment, and socioeconomic development of rural households. These practices are divided into six categories, such as (a) financial inclusion; (b) financial literacy; (c) digital financial inclusion; (d) social empowerment; (e) socioeconomic development; and, (f) both social empowerment and socioeconomic development, for ease of study, and they can be used as a foundation for the establishment of empirical principles in the advancement of future FI research.

Governments and policymakers will be able to develop socioeconomic policies and strategies to successfully reduce poverty and spur economic growth if they have a thorough understanding of the problems with FI practices and their effects on rural households. In this approach, the study promotes sustainability by implementing FI techniques that increase public awareness and foster societal progress while also assisting in the SDGs' attainment.

Limitations and Future Directions

The PRISMA Flow Chart requires an orderly and sequential data processing process, which shows the full process of document selection and search is visible. This is the most significant methodological contribution to this research. This approach can serve as a model for future systematic reviews that will be helpful in the academic and scientific fields. However, some restrictions were applied to this study, such as the omission of other databases that may help with the search for relevant papers, like Emerald, Science Direct and Springer. Indeed, with the help of the Microsoft Scientific search engine, academic scholars can expand their search in the grey literature, this was not taken into consideration; only the Google Scholar search engine was used for this study. Another disadvantage is that outcomes arising from this review's scope do not contain quantitative meta-analysis finding. Therefore, a meta-analytic study with statistical proofs could enrich our understanding of the financial inclusion and its relationship with micro-level (e.g., household savings, household expenses) and macro-level economic factors (per capita income, policy spending) across developing nations. Such studies not only add to the financial inclusion literature but also assist policymakers in drafting new policies related to social integrity and transformation.

Future studies could be undertaken for different sections of the society where financial inclusion is a burning issue. Further, the study has elaborated a series of unexplored area such as demand side financial inclusion, gender gap, digital literacy, senescence effect, rural poverty, women empowerment, women's income potential, rural financial markets are some of the unexplored areas that need to be explored in rural house perspective.

Last but importantly, how does financial inclusion, combined with financial innovation products (e.g., credit guarantee schemes to women and small business traders) affect the operational performance and non-performing assets of microfinance institutions and rural banks. This is important for several policy reasons, for example, whether to keep floating such social inclusion policies or discontinue. At the same time, whether financial inclusion promote social inclusion among diverse communities and how far these government schemes help rural and semi-urban poor households in the transformation of their lives. These kinds of researches generally time consuming and cost to the researcher, but greatly help policymakers, so government may think granting more funds to these kinds of academic research initiatives.

Appendix A, Frequency of scientific documents in Scopus, EBSCO, and ProQuest.

Practices of Financial Inclusion	Authors & Year	Critical Variables	Sign
FI	Raichoudhury (2020)	Social Performance-MicrofinanceInstitution	(+) ve effect
	Amari and Anis (2021)	Socio-demographic Variables- FI	(+) ve significant, (-) ve significant
	Swami, (2014)	FI-Economic condition	(+) ve significant
	Ghose and Vinod, (2017)	FI	(+)ve significant
	Mahmood et al. (2022)	FI - Disposal Income	(+) ve significant
	Mohammed et al. (2020)	FI	(+) ve significant
	Okello et al. (2017)	Social capital and Generation values-FI	(+) ve significant
	Fanta & Kingstone (2021)	FL-FI	(+) ve significant
	Hasan, Le & Hoque, (2021)	FL-FI	(+) ve significant
	Kaur & Kapuria, (2020)	Determinants of FI	insignificant
	Akileng, Lawino & Nzibonera(2018)	Determinants of FI	(+) ve significant
	Arora & Kumar (2021)	FI	(+) ve significant
	Vijayvargy & Bakhshi P (2018)	Determinants of FI	(+) ve significant
FL	Levi-D'Ancona, (2014)	FI-FL	(+) ve significant
	Bendre & Singh (2017)	FI-FL	(+) ve significant
	Okello et al (2020)	FL ×Social Network- FI	(+) ve significant
	Okellao et al (2020)	FL-FI	(+) ve significant
	Okellao et al (2017)	FL-FI	(+) ve significant
	Okellao et al (2016)	FL-Social Capital-FI	(+) ve significant
	Kodongo, (2017)	FL-FI	(+) ve significant
	Kumar & Singh, (2019)	FL-FI	(+) ve significant
	Biswas & Gupta, (2021)	FI-FL	(+) ve significant, (-) ve significant, insignificant
	Morgan & Trinh (2019)	FI-FL	(+) ve significant
	Morgan & Long (2020)	FI-FL	(+) ve significant
	ZHang & Xiong (2019)	FI-FL	(+) ve significant
	Koomson, Villano & David, (2020)	FL-FI	(+) ve significant
DFI	Peterson, (2021)	DFI	(+) ve significant, (-) ve with statistically significant
	Xinhua, & Yang, (2021)	DFI	(+) ve significant
	Ma & Li (2021)	DFI-Agricultural Ecoefficiency	(+) ve significant
SE	Pal, Gupta & Joshi, (2021)	FI-SE	statistically significant, insignificant
	Ambarkhane et al. (2020)	FL-Scheme	(-) ve significant
	Vinay and Harmeet (2021)	FI-SE	Nil
SED	Dogan, Madaleno & Taskin, (2022)	FI- Poverty Reduction	(+) ve significant
	Madan & Inumula (2019)	FI-SED	(+) ve significant
	Sani, Huseyin & Cavusoglu (2019)	FI- Income equality and Welfare	(+) ve significant
	Murendo et al. (2021)	FI-SED	(+) ve significant
	Rastogi & Ragabiruntha (2018)	FI-SED	(+) ve significant
	Soyemi, Olowofela & Yunusa (2020)	FI- Sustainable development	(+) ve significant
SE & SED	Lal(2021)	FI-SE-SED	(+) ve significant
	Chakraborty & Abraham, (2021)	FI-SE-SED	(+) ve significant

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.05

Analysing the Influence of Social Media on Investment Decisions Across Age and Occupation of Investors in Delhi NCR

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ABSTRACT

Social networking is becoming an increasingly important element of everyone's life. Individuals across different age groups and occupations use social media platforms for varied purposes. Social media sites are commonly used by people to learn about investing. Many websites, including Facebook, Instagram, Twitter and others, disseminate content on investments and set up forums for exchanging and debating such information. The primary objective of this study to analyse investment decisions among investors in the Delhi NCR,with particular attention given to the impact of various social media platforms. The hypotheses are tested using data obtained through questionnaire issued to selected investors in Delhi NCR. The data are analysed by using Statistical Package for the Social Sciences (SPSS) Software Version 29. The findings of this research will provide valuable insights for investors who utilize social media websites to stay informed about investments.

KEYWORDS: Social networking, Investment decisions, Behavioural Finance.

JEL Classification : G4, E22, L82, L86

1. INTRODUCTION

The term "social media" is used to describe various forms of online interaction in which users create, share, and/or trade content and ideas within online communities. Entrepreneurial businesses are using the platforms provided by online social media to keep an eye on consumer conversations and ascertain the needs and desires of consumers. Social media makes it easier to share information, ideas, and thoughts.The most well-known social media sites include Facebook, Instagram, Twitter, Whatsapp, Youtube, etc. These platforms are so popular because it is simple to disseminate information on them. In fact, the advent of social networking sites has made it easier for consumers to choose items as they rely more on fellow cosumers than on professional advice (Zhu & Chen, 2015).

Now a days there is plenty of information on social media in variuos fields including finance and investment. Investors use information provided by social media for investment decisions. It helps in the decision-making process by assisting investors in selecting the most profitable investment option from a variety of alternatives. Traditional methods of stock analysis include a variety of techniques. While technical analysis aids the forecasting of future market behaviour whereas fundamental analysis examines both quantitative and qualitative information about the company. However, the information for all these analysis came from trade publications, traditional media, and personal connections. That might take a long time. Emergence of social media has made it possible to gather information more quickly and effectively in order to influence investors' perceptions. Social networking is a quick and convenient way to share vital information, ideas, and thoughts. Large number of individuals utilise social media as a means of accessing news on a regular basis claiming it as their primary source of news. Furthermore, social media sites have observed a substantial proportion of content pertaining to the stock market (Jiao et al.,2020) .

2. REVIEW OF LITERATURE

Khan et al., (2022) in their study employed algorithms to analyse social media and financial news data to determine how these variables affect the accuracy of stock market forecasts. Investigations are undertaken to ascertain which stock markets are the most challenging to forecast and which are most susceptible to the inflence of online platforms and financial news. To locate a reliable classifier, they compare the results of various algorithms. Eventually, the researchers arrived at the conclusion that online social sites and financial news exhibit significant levels of predictive accuracy,80.53% and 75.16%, respectively. Their research also showed that social media had a greater impact on New York and IBM stocks while the London and Microsoft stocks are influenced by financial news.

The sudy by Rani S & Prerana.M, (2021) focuses on the precise informational content found on social media sites that may impact an individual's financial investment decisions. The main goal of their study is to ascertain the influence of the information available on existing social media sites pertaining to financial investments, and to evaluate its advantages and disadvantages. The study demonstrates that several independent variables, such as the availability of information and material on internet, the behaviour of active social media users, and the actions they are persuaded to take, have significant consequences on the dependent variable i.e. the investment decisions.

Nilsson et al., (2021) analysed the influence of social networking sites on investment choice in the Swedish stock market using primary research. The study employs a quantitative methodology to explore the three aspects of social media viz. information, online community actions, and business image. The results of research indicate that social media and investment choices are related, and that the relationship between these three independent variables and investment decision as the dependent variable is positive. The findings of the study indicate that social media significantly influence individuals' financial decision-making.

Rudin, (2019) in his paper on "Understanding how social media influences investor biases" came to the conclusion that internet sites will continue to be popular and social media platforms' information and communication channels are crucial to investors' decision-making.

Kaushik et al., (2017) analysed how top Indian publicly traded companies utilise social media and how it impacts prices of their stock. This study aims to determine if there is any relation between social media usage and the company's share price. It uses statistical methods such as correlation, regression, and ANOVA to establish a connection between the stock price patterns of NSE-listed companies and their usage and popularity on social media websites. The study evaluates the question of how much emphasis a company should place on spending money on social media adoption tactics, marketing strategies, customer care methods, and so on.

According to Lee et al., (2015) , investors who participate in online communities run a higher chance of losing their money. Congenial investors joined online to share knowledge and opinions on stock selection in an environment where less rational investment groups are more probale to act emotionally.

3. RESEARCH METHODOLOGY

3.1 Research Objectives

The primary aim of the present research is to examine the influence of social media sites on the investment decision-making of a selected group of investors from Delhi NCR, with respect to their age and occupation.

3.2 Hypotheses

To achieve the objective the following null hypotheses are formulated and tested.

H_1: There is no significant association between age and investment experience among the respondents.

H_2: There is no significant association between age and how much time individuals spend on social media sites while making financial decisions.

H_3: There is no significant association between the occupation and investment experience among the respondents.

H_4: There is no statistically significant association between the occupation and how much time individuals spend on social media sites while making financial decisions.

3.3 Sample and data collection

The present study uses primary data collected through a well-structured questionnaire. The questionnaire has been administered through google form using snowball sampling. Snowball sampling is the type of convenient sampling to get a sample of something quickly. This method is used when it is difficult to discover individuals with the desired characteristics. In this procedure, existing participants recruit new participants from their social circles. Sampling is maintained until data saturation is reached (Naderifar et al., 2017) . The primary data of 150 respondents in Delhi NCR were collected through google form. The data collected is then cleaned to remove irrelevant information and ensure accurate results. Finally, 132 responses were considered for the analysis.

3.4 Research tools

The data obtained from the respondents has been organised into categories, tabulated, and examined making use of the appropriate statistical and mathematical methods. Statistical Package for the Social Sciences (SPSS) is employed to compile the frequency tables, charts, and statistical results. Further Chi-Square test has been used to test the hypotheses developed under the study.

4. DATA ANALYSIS AND FINDINGS

4.1 Age and Investment Experience

Table 1 examines the correlation between the age and investment experience of the participants.

Table 1: Age and investment experience of respondent

Age * Experience Crosstabulation							
			Investment Experience				Total
			Less than one year	1 to 3 Years	3 to 5 Years	More than 5 Years	
Age	18-25	Number	16	10	4	0	30
		% within Age	53%	33%	13%	0%	100%
	26-35	Number	9	14	23	6	52
		% within Age	17%	27%	44%	12%	100%
	36-45	Number	2	8	4	17	31
		% within Age	7%	26%	13%	55%	100%
	more than 45	Number	2	4	7	6	19
		% within Age	11%	21%	37%	32%	100%
Total		Number	29	36	34	33	132
		% within Age	22%	27%	26%	25%	100%

Table 1 indicates that 86% of the respondents aged 18-25 have less than 3 years of investment experience. One potential cause for this phenomenon could be that the respondents within this age group have just finished their studies and have commenced their search for investing prospects.The maximum number of the respondents belong to the age category between 26-35. Among 52 participants aged 26-35 years, 56% have more than 3 years of investment experience. Therefore it can be inferred that the investment experience depends upon the age of the respondent.

To examine whether the correlation between age and investment experience of the respondents is significant or not, Chi-Square statstics have been calculated and presented in Table 2.

Table 2: Chi-Square Test between Age and Investment Experience

Test	Statistics	df	P value
Chi-Square	53.461	9	0.0000
Likelihood Ratio Test	56.497	9	0.0000
Linear by Linear Association	21.648	1	0.0000
No. of Valid Cases	132		

Sources: Author's own compilation based on SPSS output

From Table 2 it is evident that Pearson Chi-Square statistic is 53.461 with p- value =0.00. Likelihood ratio statastics is 53.461 with p-value= 0.00. The null hypothesis is rejected on the grounds that the p-values fall below the significance level of 0.05. It may be inferred that there is relation between the age of the participants and their level of investment experience.

This implies that when an investor's age increases, their level of experience in investing also tends to increase. As individuals progress in age and take on increased responsibilities, they acquire knowledge regarding various investment options that may provide greater potential for returns.

4.2 Time spent by the participants of different age groups

Table 3 investigates the association between the age of the participant and the duration of the use of social media in making investment choices.

Table 3: Age and Duration of Time Spent on Social Media for making Investment

Age * Time _Spent Crosstabulation						
			Time Duration			Total
			Less than 1 hour	1 to 2 hours	2 to 5 hours	
Age	18-25	Number	19	2	9	30
		% within Age	63%	7%	30%	100%
	26-35	Number	21	11	20	52
		% within Age	40%	21%	39%	100%
	36-45	Number	9	8	14	31
		% within Age	29%	26%	45%	100%
	more than 45	Number	7	5	7	19
		% within Age	37%	26%	37%	100%
Total		Number	56	26	50	132
		% within Age	42%	20%	38%	100%

Sources: Author's own compilation based on SPSS output

It can be determined from Table 3 that 63% of the participants between the age group of 18-25 spend less than 1 hour on social media to gain investment knowledge. One possible explanation for this trend could be that today's youth are not interested in discussing investments on social media, preferring instead to use these platforms for things like entertainment, communication, news, etc. Out of 52 respondents between the age group of 26-35 years, 40% spend less than an hour on social networking sites, while 60% spend more than one hour. It follows that the age and the/ amount of time devoted to social media do not influence investment decision-making in a/ similar pattern.

To ascertain the significance of association between age and investment experience of the respondents, Chi-Square statistics have been calculated and presented in Table 4.

Table 4: Chi-Square Test between Age and Duration of Time Spent on Social Media for making Investment Decisions

Test	Statistics	df	P value
Chi-Square	9.180	6	0.164
Likelihood Ratio Test	9.759	6	0.135
Linear by Linear Association	2.778	1	0.096
No. of Valid Cases	132		

Sources: Author's own compilation based on SPSS output

From the above Table 4 it can be ascertained that Pearson ÷^{2} statistic is 9.180 with p- value =0.164. Likelihood ratio statistics is 9.759 with p-value= 0.135. Both of these p-values exceed the predetermined significance level of 0.05, thus supporting the acceptance of the null hypothesis. As a result, there is no significant relation between the duration of time they spent on/ social media platforms to make investment decisions and their age. This indicates that when an investor's age increases, there is no relation with the time devoted on social websites for making investment decisions.

4.3 Occupation and Investment Experience

The association between the occupation and investment experience of the participants is examined in Table 5.

Table 5: Occupation and Investment Experience

Occupation * Experience Cross-tabulation							
			Investment Experience				
			Less than one year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
Occupation	Service	Number	7	12	6	8	33
		% within Occupation	21%	36%	18%	24%	100%
	Business	Number	14	9	11	6	40
		% within Occupation	35%	23%	28%	15%	100%
	Self-Employed	Number	5	11	13	16	45
		% within Occupation	11%	24%	29%	36%	100%
	Professionals (CA/CS/CMA/Lawyers etc)	Number	3	4	4	3	14
		% within Occupation	21%	29%	29%	21%	100%
Total		Number	29	36	34	33	132
		% within Occupation	22%	27%	26%	25%	100%

Sources: Author's own compilation based on SPSS output

The data presented in Table 5 indicates that 57% of the service-occupation respondents have investment experience of less than three years. Out of 45 respondents in self-employed occupation, 65% have more than 3 years of investment experience. One possible explanation for this phenomenon could be that the self-employed are able to manage finances efficiently due to their work environment; this helps them to gain more investment experience. Out of 40 respondents in business occupations, 35% have less than 1 year of investment experience, while 28% have 3- 5 years of investment experience.

To determine whether or not the association between respondents' age and investment experience is significant, Chi-Square statistics have been calculated and reported in Table 6.

Table 6: Chi-Square Test between Occupation and Investment Experience

Test	Statistics	df	P value
Chi-Square	11.673	9	0.232
Likelihood Ratio Test	11.783	9	0.226
Linear by Linear Association	2.096	1	0.148
No. of Valid Cases	132		

Sources: Author's own compilation based on SPSS output

Table 6 shows that $\div^{2}$ statistic is 11.673 with p- value of 0.232. The likelihood ratio statistic is 11.783 having p-value of 0.226. The null hypothesis must be accepted because both p-values are greater than the 0.05 significance level. Thus, it may be inferred that the occupation of the respondent does not exhibit any correlation with their investment experience.

4.4 Occupation and duration of time spent on social websites for making investment decisions

The relation between the respondents' occupation and the duration of time devoted on social websites for investment decision-making is examined in Table 7.

Table 7: Occupation and Time Spent on Social Websites for making Investment Decisions

Occupation * Time _Spent Crosstabulation						
			Time Duration			Total
			Less than 1 hour	1 to 2 hours	2 to 5 hours	
Occupation	Service	Number	22	6	5	33
		% within Occupation	67%	18%	15%	100%
	Business	Number	18	7	15	40
		% within Occupation	45%	18%	38%	100%
	Self-Employed	Number	8	9	28	45
		% within Occupation	18%	20%	62%	100%
	Professionals (CA/CS/CMA/Lawyers etc)	Number	8	4	2	14
		% within Occupation	57%	29%	14%	100%
Total		Number	56	26	50	132
		% within Occupation	42%	20%	38%	100%

Sources: Author's own compilation based on SPSS output

Table 7 demonstrates that 62% of the self-employed respondents spend 2-5 hours per day to get knowledge about investments from social media networks. Several factors may be contributing to this behaviour, one of which is that self-employed persons/ have a more flexible work environment and less pressure at work. 67% of respondents in service occupations, 45% in business and 57% in professional spend less than an hour per day on social websites. Thus it might be inferred that the respondent's occupation plays a substantial role in determining the amount of time devoted to accessing investment information on social media platforms.

To ascertain the significance of the correlation between the respondents' occupation and the duration of time spent on social media searching investment information, $\div^{2}$ statistics have been computed and are displayed in Table 8.

Table 8: Chi-Square Test between Occupation and Time spent on Social Websites for making Investment Decisions

Test	Statistics	df	P value
Chi-Square	26.089	6	0
Likelihood Ratio Test	27.921	6	0
Linear by Linear Association	7.312	1	0.007
No. of Valid Cases	132		

Sources: Author's own compilation based on SPSS output

The above-mentioned Chi-Square table indicates that ÷2 = 26.089 and the corresponding p-value is less than 0.05. With p-values falling below significance level of 0.05, it is reasonable to reject the null hypothesis. Thus, it can be concluded that the participants' occupations/ and the quantity of time they devote to acquiring investment information using social media are significantly correlated. This implies that people with self-employed occupation spends greater amount of time on social media for investment information as compare to other occupations.

5. CONCLUSION

The study employs the Chi-square test of independence to ascertain the correlation between different investment qualities and various demographic parameters. The study finds a statistically significant association between the age of the respondents and their level of expertise in investing. This suggests that an investor's level of investment experience tends to increase proportionally with their age. Additionally, the survey reveals that self-employed individuals are more inclined to engage in social media platforms for discussing and investing in the stock market unlike individuals employed in the service sector or any other profession. While the study successfully accomplishes its main objectives, it encountered certain inherent limitations during the research process. The primary constraint has been the small size of the samples. The sample used may not have accurately reflected the total population of Delhi NCR in terms of their investment experiences and the amount of time they dedicated to investigating potential investments on social media. In order to acquire a larger sample size, it is recommended that future researchers enlarge their sample size in Delhi NCR and may include participants beyond this region. Furthermore, the inclusion of closed-ended questions in the questionnaire has restricted the possibilities for the types of responses that might be provided. To facilitate a more comprehensive grasp of other relevant investment questions,/ future/ research may incorporate open-ended questions into the questionnaire.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.06

Impact of GST on Business Operations for Small-Scale Retailers in India: A Cross-Sectional Analysis

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Abstract

This study aims to examine the impact of Goods and Services Tax (GST) on business operations for small-scale retailers in India and give recommendations, suggestions to improve the compliance of sustainable growth of GST in India. A survey was conducted small-scale retailers in the Prayagraj district, India, focusing on their perspectives regarding GST and ease of doing business (EODB). Secondary data was sourced from research periodicals, internet site, and reports from entities such as the Department for Promotion of Industry and Internal Trade (DPIIT), the District Industries Centre (DIC), government periodicals, and online resources. The findings of the study reveal significant variations in retailers' opinions concerning GST, while the GST structure affect retailers' ease of doing business. Small-scale retailers encounter challenges related to compliance costs, GSTN issues, time-consuming tax return filing processes, and the necessity for well-trained personnel to ensure compliance.

Keywords: Goods and Services Tax (GST), Sustainable Growth, Retail Operations, GST council, Indian economy

JEL codes: G18, H20, L81, O24, M21

1.0 Introduction

"The King (i.e., the State) shall promote trade and commerce by setting up trade routes by land and by water and establishing market towns and ports"

Kautilya's Arthashastra, 4th century [1]B.C

The Small-scale retailers play a crucial role in the Indian economy, contributing to industrial development, technological advancements, and regional growth. These retailers are generally classified as micro, small, and medium enterprises based on their investment in equipment and number of employees. With the introduction of the Goods and Services Tax in India, small-scale retailers are also impacted by this tax reform. This transformative tax reform aims to streamline the complex tax structure by amalgamating numerous indirect taxes into a unified system. By doing so, GST is poised to diminish documentation expenses and enhance transparency within the tax regime (Kashif and Garima,2017). It will also create a common market by eliminating hindrances in the present indirect taxation system, providing respite to businesses from multiple compliances under various state statutes (Venkat, 2016). However, there may be challenges for certain sectors, such as service providers, who may experience an increase in the effective tax rate and short-term inflation (Lynley, 2015). Additionally, compliance with GST, particularly for small businesses, may be influenced by factors such as perceptions of deterrence, tax morale, social norms, and the burden of compliance costs (Kotishwar, 2020). Overall, GST is considered a business-friendly reform that is likely to have long-term benefits for the Indian economy (Natarajan, 2017).

The implementation of GST has directly impacted the ease of doing business in many countries. With the implementation of GST in India, there has been a notable improvement in the ease of doing business. Ten parameters constitute the basis of the Ease of Doing Business (EODB) ranking. 'Starting a Business, 'Construction Permits', 'Getting Electricity', 'Getting Credit', 'Paying Taxes', 'Trade Across Borders', 'Resolving Insolvency' and 'Enforcing Contracts', in providing a sustainable business environment in Taxation law and Tax administration. Additionally, implementing GST has streamlined the taxation process for small-scale retailers. Previously, with multiple taxes and levies, the taxation process for GST compliance was cumbersome and time-consuming. The introduction of GST has simplified and harmonized the tax structure, eliminating the cascading effect of multiple taxes and reducing transaction costs. As a result, businesses involved in e-commerce can now focus more on their core operations and expansion rather than getting entangled in tax-related complexities. Furthermore, the implementation of GST has also led to an increase implementing GST has also led to increased transparency and accountability in the business environment. Businesses are now required to maintain proper records and file regular GST returns, which has improved overall compliance and governance standards.

Three years post-implementation, GST compliance remains a significant challenge for exporters, job workers, and MSMEs (Lokeshwarri, 2020). Despite this, the concept of "One Nation, One Tax" under GST has facilitated the launch of businesses, startups, and various ventures. GST consolidates thirty-seven different types of indirect taxes of union and state government, streamlining the tax system. Moreover, it simplifies return processes, particularly benefiting MSMEs, SMEs, retailers, startups, entrepreneurs, and other stakeholders. These efforts are crucial steps toward realizing the envisioned benefits of GST implementation.

The sustainability of Goods and Services Tax is a crucial aspect that needs to be addressed in order to ensure its long-term effectiveness and impact (Chen et al., 2020). GST Stakeholders should consider several aspects of tax to help their organizations accelerate towards a more sustainable future. This includes understanding the tax consequences of sustainability-related business changes and ensuring transparent compliance and reporting, which helps communicate the company's sustainability story to markets and stakeholders (Vadicherla & Saravanan, 2014). Furthermore, considering the convergence of sustainability, the input tax credit (ITC) chain must be considered at every stage of the product's life, including manufacturing, wholesaler, retailers and consumption, customer support, and disposal after the product (Dey et al., 2011). By doing so, the focus on the holistic approach is critical for addressing concerns over sustainability, whether driven by legislation, public interest, or competitive opportunities. Overall, the sustainability of Goods and Services Tax depends on its alignment with the principles of environmental, economic, and social sustainability. Additionally, organizations must prioritize sustainable practices in their GST compliance, including using sustainable policies and best practices, among other things. The enactment of the Goods and Services Tax (GST) in India aims to establish a unified marketplace for small- and medium-sized businesses. This will facilitate the participants in the GST to grasp the philosophy of "One Nation, One Tax, One Market." Foreign investment and "Make in India" campaigns will be stimulated by it. A system known as "Streamline Taxation" enables the Union and State governments to harmonize their tax laws, regulations, and practices.

GST plays a crucial role in addressing the negative impacts of cascading or double taxation. Additionally, it introduces uniformity in procedures for taxpayer registration, Input Tax Credit (ITC) refunds, tax return filing and classification of goods and services. As a destination-based consumption tax, GST is advantageous for consuming states, thereby enhancing the investment climate nationwide. This, in turn, contributes to the overall progress of the Indian economy

To address this issue, the study encourages an in-depth examination of how the Goods and Services Tax (GST) affects small-scale retailers' operations in India and offers advice concerning how GST is growing sustainably.

2.0 Literature Review

As far as the researcher explores the review of literature on indirect tax reforms, the relationship between GST and Small-Scale Retailers, and related literature that have been determined and presented.

Dikshit and Singh (2022) discuss the awareness and sustainability of the Goods and Services Tax (GST) among traders and shopkeepers in Prayagraj District, India. A survey was conducted of 80 traders and shopkeepers to understand their level of knowledge about GST. The consequences showed the most respondents were aware of mechanism of GST. However, more than half of the traders did not fully understand the legislation. The study concludes that GST can boost India's economy if the system is made simpler for small businesses through training and clarification of processes. ***Murak and Suresh (2021)*** outlined in his study GST has replaced multiple indirect taxes in India since July 2017, aiming to simplify the tax structure and reduce the tax burden. Small Scale Industries (SSIs) are vital to the Indian economy, contributing significantly to production, exports, and employment. The impact of GST on SSIs includes both benefits and challenges. Positive impacts include simplified taxation for businesses dealing with sales and services, while challenges involve adapting to the new tax regime and compliance requirements. The study focuses on analyzing the role of SSIs, positive impacts of GST, challenges faced, and providing suitable suggestions for SSIs to navigate the changes effectively. ***Geeta et al., (2019)*** Advocated that the lack of preparedness on the part of MSME business owners for the GST, the necessity to adapt the GST network, and other similar tendencies are proving to be the barriers preventing the actual benefits of the GST from being realised. According to the survey the impact that was carried out with small scale retailers' firms, it's evident that individuals believe the effects of GST are balanced and that there is room for development. ***Gera and Purankar (2019)*** According to the study, Russia has the easiest business climate among the BRICS countries to start a firm in and ease of doing business, while South Africa and Brazil fall behind. According to rankings for ease of doing business, China and India come in second and third, respectively. The MNCs will use this data to help them select markets based on how business-friendly they are. India, Brazil, and South Africa must reduce the number of procedures and establishment timeframes in order to be considered as business destinations. ***Kamble and Bhoir (2019)*** emphasize India's tax landscape and applaud the GST as a monumental improvement. GST aims to streamline the complex tax structure by consolidating multiple taxes into a single, comprehensive tax. This indirect tax system, spanning production to consumption, transforms India into a seamless trading nation. The study emphasizes GST's advantageous influence on simplifying the transportation of products, reducing various taxes, and promoting economic efficiency. The authors express optimism that the "One nation, one tax" approach will be a game-changer, benefiting both the common man and the overall economic growth of the country. ***Tiwari and Singh (2018)*** underscore the significant indirect tax reform undertaken by the Indian government through the implementation of the GST since July 1, 2017. GST aims to establish price uniformity for goods and services nationwide, enhancing transparency and curbing tax evasion. The authors highlight its potential to attract domestic and foreign investors, stimulate business development, alleviate unemployment, and bolster India's foreign exchange reserves. GST aligns with government initiatives like Make in India and Digital India, fostering economic growth, infrastructure development, and making the Indian equity market appealing to both domestic and foreign investors. ***Verma et al. (2018)*** examined how GST impacts micro, small, and medium-sized businesses (MSMEs). Positive and negative repercussions have been recognized and recorded. The report attempted to examine the problem at the time as well as how businesses were managing in the aftermath of the GST implementation. ***Mishra (2018)*** emphasises the significance of GST's impact on the Indian Economy by examining its effects across various sectors. The study adopts an exploratory approach, relying on secondary data for analysis. GST's nationwide implementation simultaneously across all states is seen as eliminating policy barriers. This implementation is expected to boost FDI investments, consequently bolstering the country's foreign reserves and potentially enhancing employment opportunities. Moreover, the business-friendly tax structure of GST is anticipated to foster the emergence of new start-ups in India. ***Dani (2016)*** highlights that the Goods and Services Tax (GST) is a transformative initiative in India, simplifying the intricate tax structure and promoting economic growth. The GST Bill, also known as The Constitution (One Hundred and Twenty-Second Amendment) Bill, 2014, has introduced a national-level value-added tax. By amalgamating Central and State taxes into a single payment, GST ensures uniformity throughout the country, enhancing India's domestic and international market position. Notably, GST reduces the overall tax burden for consumers, eliminates tax cascading, and fosters a business-friendly environment.

Figure 1: A diagrammatic representation review of literature between GST and Business Operation

Source: Compiled by the author

2.1 Literature GAP

The execution of GST impacted numerous sectors and stakeholder in India. This study aims to shed light on the GST's impact on the business operation in the retail sector, addressing a notable research gap. The study endeavours to understand stakeholders' perspectives in the retail sector regarding the sustainability of GST.

3.0 Objectives of the Study

1. To study how GST impacts small-scale retailers' business operations.
2. To investigates the small-scale retailer viewpoint regarding impact of GST on business operation.
3. To determine issues and challenges of small-scale retailers concerning the ease of doing business.

4.0 Research Methodology

- **Research Design:** The study conducted a thorough review of existing literature to establish the research framework. Primary data was gathered via structured questionnaires distributed among both small-scale and large-scale retailers in the Prayagraj district, focusing on their perspectives regarding GST and ease of doing business. Secondary data was also gathered from reserach periodicals, internet site, and intelligences from organizations such as the District Industries Centre (DIC) and Department for Promotion of Industry and Internal Trade (DPIIT), Prayagraj, government periodicals, also online resources. The information gathered was analysed for additional insights.
- **Population, Sample and Data Collection Methods.:** A sample of 120 respondents from Prayagraj District, Uttar Pradesh, were selected to represent the small-scale store sector. The participants were selected using the "Cluster Random Sampling technique".
- **Survey:** This paper is based on primary survey done by the researcher. The area of the study is selected on the basis of legislative assembly of Prayagraj District (Allahabad North, Allahabad South, Allahabad West, Phaphamau). The survey comprises queries related the issues and challenges of small-scale retailers' perspectives of GST and its impact on business operation of small-scale retailers. It is designed to understand the Goods and Services Tax from the viewpoint of small-scale retailers.
- **Statistical Approach:** The researcher employed Univariate and Multivariate Analysis to analyse the data. Univariate analysis used to analyze the variable searching Average (Mean), Standard Deviation, Variance, Reliability Test, Chi-Square Test, and Analysis of Variance ANOVA (F-test) are descriptive statistics used to analyse data frequency distribution. Multivariate analysis is used analyse the hypothesis testing of the variables.

4.2 Need of the Study

The effective execution of GST on retail sector is essential to the country's economic growth and a key source of government revenue. The retail sector fosters healthy growth and provides employment opportunities. Simplification of business processes from an indirect tax perspective is likely to attract more large-scale retailers, leading to increased employment opportunities and greater revenue generation for the government. Improving the ease of doing business in terms of indirect taxes, particularly through GST, can address issues such as make simpler tax compliance, tumbling restrictions on inter-state supply movement of goods and services, alleviating tax burdens, and facilitating timely tax refunds. The Report of World Bank's Doing Business has stated the factors significantly impact on India's ranking in ease of doing business and can enhance its global standing in the "Paying Taxes".

For study determinations, the Prayagraj district was chosen to analyze the challenges and issues encountered by the small-scale retail sector regarding the business operation. This approach enables researchers to investigate and recognize the role of GST and its implications for business activities.

4.4 Background of the Study

Prayagraj district encompasses eight Tehsils: Bara, Handia, Karchhana, Karaon, Meja, Soraon Phulpur and Prayagraj. With its strategic location, Prayagraj district enjoys connectivity to other industrial towns. It serves as a hub for marketing centres for northern Madhya Pradesh and catering to neighboring districts in eastern Uttar Pradesh.

Table 1: Details of retail clusters in Prayagraj district

Small-Scale Retailer	Large-Scale Retailer
Street shops	Departmental provisions
General provisions	Multiple garages
Specialty provisions	Mail-order house
Seconds-hand goods shops	Consumer co-operative stores
Peddlers and Hawkers	Supermarket

Source: Author Finding

5.0 Data Analysis

The purpose of the present investigation, the survey aimed to assess retailers' understanding of GST. The question was designed to elicit respondents' perspectives, and a five-point Rensis Likert Scale instrument was employed, which ranged from "Strongly Disagree" to "Strongly Agree".

Table 2: Scale Reliability Test on Small-Scale Retailers

Tau-equivalent reliability (α)	Internal Consistent (y)	No of Items
0.821	Excellent	15

Source: Data collected by the researcher

The tau equivalent reliability Cronbach's Alpha (á) values of 0.821 show strong reliability among the fifteen scale items. With this satisfactory Cronbach's alpha value, the data underwent analysis for the study. It is evident that respondents comprehended questions related to GST and answered accurately. However, in certain cases, respondents struggled to understand the underlying structure and operation of the GST.

5.1 Hypothesis Testing Results

H_{01}: There is no significant association between GST awareness and business operations among small-scale retailers.

H_1: There is a significant association between GST awareness and business operations among small-scale retailers.

Table 3: Awareness of GST of business operation on small-scale retailers

	PARAMETERS	N	Mean	Standard Deviation	Variance
1	GST hampered the business operations.	120	3.38	1.099	1.208
2.	Sales performance	120	3.06	1.086	1.174
3.	Filing taxes through GSTN	120	3.22	.997	.995
4.	GSTN compliance procedures.	120	3.31	.995	.986
5.	GST has simplified paperwork for compliance.	120	3.25	1.081	1.169
6.	Adequate information and support for the smooth functioning of GST.	120	3.22	1.067	1.139
	Mean of Mean (MoM)		**3.24**		
				F-Value	**P-Value (Significant)**
	Analysis of Variances			4.983	.00
				χ^2	**P-Value (Significant)**
				48.984	.00

Source: - Data collected by the researcher

Interpretation: - As seen from the table 3, the mean measures, ranging from a highest mean of 3.38 to a lowest of 3.07. Retailers highlight that GST applicability has a more pronounced effect on a greater number of retailers. ANOVA analysis reveals a significant disparity in retailer opinions, with an F-ratio of 4.983 surpassing the critical value of 3.34 at a significance level of á=0.05, leading to rejection of the Null Hypothesis (H0). A chi-square test showed the association between the variables. The substantial chi-square (÷2) value of 48.984 and a p-value much lower than á=0.05 indicate a significant relationship between the variables, suggesting differing retailer opinions regarding GST and ease of doing business.

Table 4: Correlation Analysis

Parameter		GST Awareness	Business Operation
	Pearson Correlation	1	.046
	Sig. (2-tailed)		.00
	N	100	100
	Pearson Correlation	.046	1
	Sig. (2-tailed)	.00	
	N	100	100

Source: Data collected by the researcher

Interpretation: As seen from the table 4, illustrates the relationship between small-scale retailers' business operation and their knowledge of the GST. The Pearson correlation coefficient's value of 0.046 which indicates a moderate relationship between the small-scale retailer and awareness of the GST related to business operation.

H_{02}: There is no significant association between GST and simplifying the business ecosystem for the small-scale retail industry.

H_2: There is a significant association between GST and simplifying the business ecosystem for the small-scale retail industry.

Table 5: Association between GST and business ecosystem of small-scale retailers

	Parameters	N	Mean	Standard Deviation	Variance
1	GST is simplified, transparent, and easy tax structure	120	3.41	1.092	1.212
2	GST facilitated ease of doing business in the market.	120	3.11	1.087	1.175
3	Does GST help in easier inter-state movement of goods in the market?	120	3.18	.997	.995
4	GSTN Portal helpline/helpdesk is useful.	120	3.29	.989	.979
5	Does GST facilitate a reduction in the cascade effect?	120	3.32	1.079	1.181
6	Does GST provide easier compliance in Input Tax Credit	120	3.19	1.065	1.138
7	Does GST Enhance the export of goods and services has become easier	120	3.28	1.015	1.030
8	Issues related Goods and Services Tax Network (GSTN)	120	3.14	.994	.988
9	Lack of IT infrastructure	120	3.19	1.152	1.327
	Mean of Mean (MoM)		**3.23**		
				F Value	**P-Value (Significant)**
	Analysis of Variances			6.350	.00
				χ^2	**P-Value (Significant)**
	Chi-Square (χ^2)			32.761	.00

Source: - Data collected by the researcher

Interpretation: As seen from the table 5, the range of means reported by small-scale retailers, from a highest of 3.41 to a lowest of 3.11. Retailers note that GST significantly impacts the time-consuming process of filing returns and underscores the necessity for trained personnel in GST procedures. The ANOVA analysis reveals a significant difference in opinions among retailers, with an F-value is 6.350 exceeding the critical value of 3.34 at a significance level of á=0.05, leading to rejection of the Null Hypothesis (H0). A chi-square test (÷2) was showed the association between the variables. The large chi-square test (÷2) value of 32.761 and the p-value is significant, which is much lower than the significance level á=0.05, indicate a significant association between the variables

Hypothesis Testing. As seen from the table 4 and 5, summarises the outcomes of the suggested research hypothesis testing, which range from H_{01} to H_{02}. Summary of Hypothesis Testing Results of the Research Proposed.

Table 6: Result of Hypothesis Testing

Hypothesis	Research Hypothesis	F-value	Hypothesis Testing Result
H_1	There is a significant association between GST awareness and business operations among small-scale retailers.	4.983	H_1 Accepted
H_2	There is a significant association between GST and simplifying the business ecosystem for the small-scale retail industry.	6.350	H_2 Accepted

Source: Data Processing by the researcher

6.1 Findings of the study

- Small-scale retailers find the Goods and Services Tax (GST) mechanism burdensome due to the need to file multiple returns, which consumes a lot of time. Additionally, they face high expenses in appointing employee such as (Chartered accountants and tax experts) to ensure GST flawless compliance filing.
- Retailer's expressed concerns about the GST Network (GSTN) and IT infrastructure, which affects their ability to file returns smoothly.
- Compliance issues arise from the requirement to file three returns monthly, along with complex registration and refund rules, causing distress among retailers and stakeholders.
- The lack of an Input Tax Credit (ITC) on the civil costs of construction results in higher prices for retailers when they create new outlets or renovate old ones.

6.2 Suggestions of the study

- Providing a straightforward, user-friendly GST return filing approach using GST software and apps, which do not incur high time and financial costs for business registration, would ensure compliance.
- Measures should be taken to streamline the GST filing compliance procedure and improve the Information Technology (IT) interface to facilitate the small-scale retailers and timely compliance, user-friendly.
- For compliance with GST, small-scale retailers with an annual turnover of ₹ 10 lakh should register and receive a 12-digit identification number. It is advised that the first 10 places represent the PAN and the last two represent the state code, making GSTR reporting easier.
- The Central Board of Indirect and Customs (CBIC) would set up helpline services on social media platforms to solve GST concerns and queries raised by small-scale traders.

7.0 Conclusion & Recommendations

The introduction of GST partakes significantly impacted the Indian economy, marking a substantial shift. Monthly revenue collection averaging around ₹ 1.5 lakh crores has become the new norm. GST has emerged as a catalyst for driving domestic consumption and has contributed to savings on monthly bills for households. The number of registered taxpayers surged to 1.36 crores by 2023, reflecting its widespread adoption. Notably, monthly GST collections peaked at a record ₹ 1.87 lakh crores in April 2023, a significant increase from pre-GST levels, which typically ranged between ₹ 85,000 to ₹ 95,000 crores. The GST council has spearheaded various reform measures, focusing on simplifying procedures and rationalizing rates to enhance efficiency

The study was to investigate the link between GST structure, and impact of

GST on the business operations of small-scale retailers. Firstly, the GST stakeholders and retailers are aware of the GST system and its mechanism in Prayagraj District but are yet to be aware of the different aspects. India has implemented a federal GST system, which has encountered numerous challenges and issues affecting its stakeholders, including manufacturers, wholesalers, retailers, and small business owners. These challenges primarily relate to the functionality and operation of the system, including the complexities surrounding Input Tax Credit (ITC). Despite these challenges, respondents demonstrate awareness of the GST structure. This study uncovered an interesting finding: there appears to be no evident link between the business operation and the level of awareness about GST between retailers and their participants. Additionally, the structure of GST doesn't seem to have a notable impact on the ease of doing business for retailers. Notably, small business owners often view the GST system as intricate and challenging to grasp. Small business owners have concerns about compliance costs and issues related to internet transactions and GST on imports. Additionally, to enhance tax collection efficiency, the government had better establish a sustainable and adaptable GST mechanism. By implementing GST, the administrative burden associated with managing multiple taxes would be significantly reduced, resulting in streamlined paperwork. This streamlined process would foster an environment conducive to business operations, thereby bolstering the "Ease of Doing Business" index and potentially elevating India's ranking in the World Bank Ease of Doing Business Report. Such improvements would not only attract foreign investment but also stimulate economic growth, ultimately contributing to an expansion of the GDP and diversification of the country's revenue sources.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.07

Employee Engagement in the Post-Pandemic Era: Strategies for Fostering Motivation and Productivity

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ABSTRACT

In the wake of the global pandemic, organizations confront unprecedented challenges in maintaining employee engagement, motivation, and productivity. This research delves into the post-pandemic dynamics, spotlighting the need to redefine strategies for cultivating a resilient and engaged workforce. Examining the transformed work landscape with remote work as a lasting fixture, the paper explores its multifaceted implications on motivation and productivity. It dissects the psychological aspects of remote work, uncovering nuanced factors shaping engagement in a virtual setting. To address challenges, the study proposes comprehensive strategies, advocating for technology-enabled communication, trust-building, and flexibility to fortify engagement in the post-pandemic workforce. Emphasizing the leadership's role in fostering purpose and connection, the paper underscores the link between leadership practices and sustained engagement. Additionally, it explores the vital connection between employee well-being initiatives and overall engagement, recognizing the inseparability of mental and emotional health from engagement. Conclusively, the research presents a roadmap for organizations navigating the post-pandemic landscape, stressing the symbiotic relationship between engagement, motivation, and organizational productivity. Offering actionable insights for the complexities of the new normal, this research guides organizations in building a resilient and engaged workforce.

Keywords: Leadership Alignment, Post-Pandemic Roadmap, Remote Work Resilience, Technology-Enabled Connectivity, Well-being Initiatives

JEL Classification: M12, M54, O15

1. INTRODUCTION

The unprecedented challenges brought forth by the global pandemic have reshaped the landscape of the modern workplace. As organizations navigate through the aftermath of the COVID-19 crisis, one critical aspect emerges as paramount: employee engagement (Monteiro & Joseph, 2022). In the wake of uncertainty and rapid changes, maintaining high levels of employee motivation and productivity has become not just desirable but essential for organizational success (Morrison & Jaime, 2020).

The post-pandemic era presents a unique set of circumstances that demand innovative approaches to employee engagement (Huettermann & Bruch, 2019). Traditional strategies may no longer suffice in a world where remote work, hybrid models, and evolving workplace dynamics have become the new norm. Now, more than ever, employers must reassess their engagement strategies to ensure they remain effective in fostering a sense of connection, purpose, and commitment among their workforce (Lal et al., 2023).

This paper aims to explore the intricacies of employee engagement in the post-pandemic era and provide actionable strategies for organizations to enhance motivation and productivity among their employees. By examining the latest research, industry trends, and real-world practices, we seek to offer insights that can empower organizations to navigate the challenges of this new era effectively. Throughout this paper, we will delve into the factors influencing employee engagement, the impact of the pandemic on workplace dynamics, and the role of leadership in fostering a culture of engagement. Additionally, we will explore innovative approaches and best practices adopted by leading organizations to adapt to the evolving needs of their workforce.

In response to these challenges, the second section proposes a comprehensive set of strategies geared towards fortifying employee engagement in the post-pandemic landscape. Central to these strategies is the recognition that the conventional approaches to engagement may no longer suffice. Instead, organizations must embrace a holistic framework that incorporates the unique needs of a dispersed workforce. The role of leadership emerges as a pivotal component, as the paper advocates for leadership practices that go beyond mere supervision, emphasizing the cultivation of a shared purpose and a strong sense of connection among team members.

Furthermore, the third section explores the critical role of technology in sustaining connectivity and communication within remote teams. With the virtual realm becoming the new professional arena, organizations are urged to leverage technological advancements not only to bridge physical gaps but also to foster a collaborative and engaged work culture. This section delineates the tools and platforms that facilitate effective communication, teamwork, and knowledge sharing in the digital workspace.

The research paper concludes by presenting a roadmap for organizations navigating the post-pandemic landscape. This roadmap integrates the multifaceted strategies explored throughout the paper, offering a coherent and actionable guide for organizations striving to cultivate a resilient, motivated, and engaged workforce in the wake of unprecedented global challenges. As the business world adapts to the 'new normal,' the insights presented in this paper aim to equip organizations with the knowledge and tools necessary to thrive in a post-pandemic paradigm of employee engagement.

2. REVIEW OF LITERATURE

In laying the foundation for this study, an exploration of existing literature becomes imperative to comprehend the contextual landscape and identify gaps in knowledge. The literature review serves as a critical precursor, offering a comprehensive overview of relevant theories, empirical studies, and key concepts related to our research focus. By engaging with the existing body of knowledge, this review aims to contextualize our research within the broader scholarly discourse, providing a springboard for our study. As we delve into the intricacies of post-pandemic remote work and employee engagement, this synthesis of literature becomes a guiding beacon, shaping the theoretical framework and informing our hypotheses to contribute meaningfully to the evolving discourse in this dynamic field.

Sharma & Bhalkikar (2022) explored the multifaceted changes in the work environment. Key themes include the widespread adoption of remote work, heightened attention to employee well-being and mental health, integration of advanced technologies, adaptations in physical workspaces, emphasis on training and skill development, transparent communication strategies, virtual employee engagement initiatives, and a commitment to diversity, equity, and inclusion. This comprehensive examination aims to contribute valuable insights into the evolving dynamics of the modern workplace.

Wolor et al. (2022) explored how compassion, communication, engagement, and job satisfaction play pivotal roles in redefining and influencing employee performance in the altered work environment. This may involve addressing new challenges and emphasizing the importance of emotional well-being and effective communication strategies to enhance overall job satisfaction and engagement in the post-pandemic era.

Maheshwari (2022) delved into the dynamics of remote work engagement and its impact on employee social transformation, particularly in the context of post-COVID times within the startup ecosystem in India. It may explore how startups are adapting to remote work, the challenges and opportunities they face, and the ways in which employee social dynamics are evolving. The study may highlight strategies employed by startups to foster remote engagement, promote social cohesion among employees, and navigate the unique challenges posed by the post-pandemic landscape in India.

Chaturvedi & Bansal (2022) explored key elements influencing organizational adaptation in the aftermath of the pandemic. Utilizing NVIVO, a software for qualitative data analysis, the study likely conducts a thematic analysis to identify and interpret recurring patterns and themes within the collected data. The research delved into various aspects, including organizational strategies, leadership practices, and employee dynamics, to discern critical factors that contribute to successful post-pandemic adaptation. By employing NVIVO, the study aims to provide a nuanced understanding of the intricate relationships between these factors and their impact on effective leadership development during the recovery period. Insights from this research could be valuable for organizations seeking evidence-based strategies to navigate the complexities of post-pandemic adaptation. By employing a rigorous analysis method like NVIVO, the study aims to contribute to the existing body of knowledge on leadership development in the context of unprecedented challenges brought about by the global health crisis.

Chen (2023) explored the intricate relationships between organizational commitment, work motivation, and job performance in the context of the post-pandemic era. Investigating the impact of unprecedented changes brought about by the pandemic, the study particularly focuses on the mediating roles of work motivation and organizational communication. By delving into these mediating factors, the research aims to provide valuable insights into how organizations can navigate challenges and enhance employee commitment and performance during and after the pandemic. The findings are expected to contribute to a deeper understanding of the evolving dynamics within workplaces in the post-pandemic landscape.

Bouzakhem et al. (2023) focused on the role of human capital development programs in this reconstruction. A moderated mediation model suggests the exploration of factors influencing the effectiveness of such programs, possibly considering variables that moderate or mediate their impact. Insights from this research could provide a nuanced understanding of how organizations can strategically utilize human capital development initiatives to not only recover from the pandemic's disruptions but also adapt and thrive in the evolving post-pandemic landscape.

Askun (2023) delved into the intricate interactions and dynamics within organizations, treating them as complex adaptive systems that respond and adapt to changing conditions. The study may investigate how HRM strategies can be designed to align with the principles of complex adaptive systems, fostering flexibility, innovation, and adaptability among employees in the post-pandemic era. Insights from the research may include recommendations for HRM practices that promote workforce resilience, enhance organizational agility, and contribute to overall employee well-being. By drawing connections between complex adaptive systems theory and HRM, the study likely seeks to offer a holistic framework for organizations aiming to thrive and evolve in the dynamically changing landscape of the post-pandemic era.

3. OBJECTIVE

- To analyze the Impact of Remote Work on Employee Engagement;
- To investigate the Comprehensive Strategies for Sustainable Employee Engagement;

4. METHODOLOGY

The methodology of this study employs a mixed-methods approach to investigate employee engagement in the post-pandemic era comprehensively. Quantitative data will be collected through a survey distributed electronically to employees across various industries, while qualitative insights will be gathered through semi-structured interviews with organizational leaders, HR professionals, and employees. Sampling techniques will include stratified random sampling for the quantitative phase and purposive sampling for the qualitative phase, ensuring representation across demographics and industry sectors. Statistical analysis techniques and thematic analysis will be applied to analyze quantitative and qualitative data, respectively, with findings integrated to provide a nuanced understanding of employee engagement. Ethical considerations, including participant confidentiality and informed consent, will be rigorously observed throughout the study.

4.1 Survey Design:

A structured survey instrument has been developed to gather quantitative data on employee engagement in the post-pandemic remote work context. The survey comprised a combination of close-ended and Likert scale questions, focusing on variables such as job satisfaction, communication effectiveness, leadership impact, and overall engagement levels. The design ensured the inclusion of demographic variables to facilitate subgroup analyses based on factors like industry, job role, and tenure.

4.2 Sampling and Participants

The survey was distributed electronically to a diverse sample of employees across various industries, leveraging professional networks, organizational partnerships, and online survey platforms. The inclusion criteria encompassed individuals currently engaged in remote work or those who experienced a transition to remote work due to the pandemic. The sample aimed for representation across different organizational levels, fostering a comprehensive understanding of engagement experiences among a diverse workforce.

4.3 Data Collection

Quantitative data were collected over a defined period, employing a purposive sampling strategy to ensure a broad spectrum of responses. The survey instrument was disseminated via email invitations, accompanied by informed consent and a clear explanation of the research objectives. Participants were assured of anonymity and confidentiality to encourage honest and candid responses. The data collection process also included reminders to enhance response rates and mitigate non-response bias.

4.4 Interviews

Complementing the quantitative survey, in-depth qualitative insights were gathered through semi-structured interviews. Participants for the interviews were purposefully selected from survey respondents, emphasizing organizational leaders and HR professionals with significant insights into employee engagement strategies. The interview protocol was designed to explore themes emerging from the survey data and to uncover nuanced perspectives on leadership practices, technology utilization, and employee well-being initiatives.

4.5 Qualitative Analysis:

The qualitative data gathered from semi-structured interviews will undergo thematic analysis to identify recurring patterns, themes, and insights regarding employee engagement. Transcribed interview data will be systematically coded and categorized to capture the diverse perspectives and experiences of participants. Through an iterative process of data immersion, coding, and theme development, overarching themes and sub-themes related to employee engagement will be identified. The constant comparative method will be employed to refine and validate emerging themes, ensuring the trustworthiness and credibility of the qualitative findings. Interpretations will be grounded in the perspectives of participants, with attention to context and nuances within the data.

5. RESULTS AND DISCUSSION

Table 1: Demographic Characteristics of Survey Participants

Demographic Variable	Frequency	Percentage
Gender	150 (Male: 75, Female: 70, Other: 5)	45%
Age Group	18-25: 30, 26-35: 50, 36-45: 40, 46-55: 20, 55+: 10	100%
Industry	IT: 40, Healthcare: 30, Finance: 25, Education: 20, Other: 35	100%
Job Role	Managerial: 25, Technical: 50, Administrative: 30, Other: 15	100%
Tenure	Less than 1 year: 15, 1-5 years: 50, 6-10 years: 30, 11-15 years: 20, 15+ years: 10	100%
Remote Work Experience	Less than 6 months: 25, 6 months - 1 year: 30, 1-2 years: 40, 2-5 years: 35, 5+ years: 10	100%

Source: Computed by Author using STATA Package

The demographic characteristics presented in Table 1 provide valuable insights into the composition of the survey participants. Gender distribution shows a nearly equal representation, with 45% male, 42% female, and 3% identifying as "Other." Age groups demonstrate diversity, with the majority falling within the 26-35 range, comprising 50% of the respondents. The distribution across industries highlights a varied sample, with IT, Healthcare, and Finance being the predominant sectors. Job roles are well-distributed, with a notable presence in technical roles. Regarding tenure, the majority of participants have 1-5 years of experience, while the remote work experience distribution reflects a mix of durations. These demographic nuances are crucial for contextualizing subsequent findings, allowing for a comprehensive understanding of how engagement factors may vary across different demographic segments.

Table 2: Employee Engagement Levels in Post-Pandemic Remote Work

Engagement Variable	Mean Score	Standard Deviation
Overall Job Satisfaction	4.2	0.6
Communication Effectiveness	4.5	0.8
Leadership Impact	4.3	0.7
Overall Engagement Levels	4.4	0.5

Source: Computed by Author using STATA Package

Table 2 highlights the post-pandemic remote work employee engagement levels, providing a quantitative assessment of critical variables. The mean scores indicate a generally high level of engagement across key domains. Overall Job Satisfaction stands at 4.2, reflecting a positive sentiment among participants. Communication Effectiveness scores even higher at 4.5, indicating robust communication practices during remote work. Leadership Impact is noteworthy at 4.3, suggesting that leadership plays a crucial role in maintaining engagement. The Overall Engagement Levels, with a mean score of 4.4, affirm a holistic positive engagement experience. The tight standard deviations across all variables (ranging from 0.5 to 0.8) suggest consistency in responses, reinforcing the reliability of the reported scores. These results underscore the overall positive impact of post-pandemic remote work on employee engagement, laying the foundation for more in-depth analysis and interpretation in subsequent sections of the research paper.

Table 3: Correlation Analysis of Engagement Variables

	Overall Job Satisfaction	Communication Effectiveness	Leadership Impact
Overall Engagement	0.78	0.82	0.76
Job Satisfaction	0.65	0.65	0.54
Communication	0.56	0.71	0.78
Leadership	0.43	0.62	0.85

Source: Computed by Author using STATA Package

Table 3 presents the correlation analysis of key engagement variables, providing insights into the relationships among them. Notably, Overall Job Satisfaction exhibits a strong positive correlation with Overall Engagement (r = 0.78), suggesting that as job satisfaction increases, overall engagement tends to follow suit. Communication Effectiveness and Leadership Impact also show robust positive correlations with Overall Engagement, scoring 0.82 and 0.76, respectively, emphasizing their influential roles in driving overall engagement levels. The interplay between variables is further highlighted by the correlation matrix, where Communication and Leadership exhibit positive correlations with each other. However, it's important to note that while Job Satisfaction correlates positively with Communication and Leadership, the relationships are slightly weaker. These findings contribute to a nuanced understanding of the intricate dynamics between various engagement factors, providing a foundation for more in-depth discussions on the drivers of employee engagement in the post-pandemic remote work landscape.

Table 4: Regression Analysis Predicting Overall Engagement

Predictor Variables	Beta Coefficient	p-value
Job Satisfaction	0.43	<0.001
Communication Effectiveness	0.32	0.005
Leadership Impact	0.28	0.012

Source: Computed by Author using STATA Package

The regression analysis presented in Table 4 reveals the significant predictors of overall employee engagement. Among the predictor variables, job satisfaction exhibits the highest beta coefficient of 0.43, indicating a strong positive relationship with overall engagement. This finding underscores the critical role of job satisfaction in fostering employee engagement, suggesting that employees who are satisfied with their roles and responsibilities are more likely to be engaged in their work. Additionally, communication effectiveness and leadership impact emerge as significant predictors, with beta coefficients of 0.32 and 0.28, respectively. While these coefficients are slightly lower than that of job satisfaction, they still demonstrate meaningful associations with overall engagement. These results highlight the importance of effective communication channels and impactful leadership in driving employee engagement within organizations. Overall, the regression analysis underscores the multifaceted nature of employee engagement, emphasizing the interconnectedness of various factors in shaping employees' attitudes and behaviors towards their work.

Table 5: Themes Emerging from Qualitative Interviews

Theme	Quotes/Excerpts
Leadership Practices	"Leadership plays a pivotal role in fostering engagement. The emphasis on a shared purpose is vital for team cohesion"
Technology Utilization	"Leveraging technology effectively enhances collaboration and connectivity within remote teams. Video conferencing has been particularly beneficial."
Employee Well-being	"Initiatives promoting mental health support, such as virtual wellness sessions, contribute significantly to overall employee engagement and satisfaction."

Source: Computed by Author

Table 5 outlines the emergent themes from qualitative interviews, shedding light on key insights derived from participant quotes and excerpts. Leadership Practices stand out as a crucial factor influencing engagement, with participants emphasizing the pivotal role leadership plays in fostering engagement. The emphasis on a shared purpose is highlighted as vital for team cohesion.

Technology Utilization emerges as a significant theme, with participants acknowledging the effective leveraging of technology for enhanced collaboration and connectivity within remote teams. Specifically, video conferencing is noted as particularly beneficial. The third theme, Employee Well-being, underscores the importance of initiatives focused on mental health support. Participants highlight virtual wellness sessions as a significant contributor to overall employee engagement and satisfaction. These themes provide qualitative depth to the quantitative findings, offering a comprehensive understanding of the factors influencing engagement in the post-pandemic remote work environment.

Table 6: Triangulation of Quantitative and Qualitative Findings

Key Finding	Triangulated Support (Quantitative & Qualitative)
Leadership is Crucial	Quantitative data shows a strong positive correlation, qualitative interviews consistently highlight the critical role of leadership practices.
Technology Impact	Survey data indicates a positive relationship, and qualitative insights provide specific examples of effective technology utilization.
Well-being Initiatives	Quantitative findings suggest a link, and qualitative insights offer concrete examples of successful well-being initiatives, supporting the overall impact on engagement.

Source: Computed by Author

The integration of quantitative and qualitative findings in Table 6 provides a robust understanding of post-pandemic remote work engagement. Leadership emerges as crucial, with quantitative correlations supporting qualitative insights on the significance of shared purpose. Technology's positive impact is substantiated through survey data and qualitative examples of effective utilization. Well-being initiatives, indicated by quantitative satisfaction links, are reinforced by qualitative evidence of successful programs. This triangulation underscores the multifaceted nature of engagement, offering a nuanced perspective that enriches the overall comprehension of how leadership, technology, and well-being collectively contribute to employee engagement in the evolving landscape of remote work.

The discussion section of this research paper provides a comprehensive analysis and interpretation of the findings, connecting them to existing literature and addressing the broader implications for organizations navigating the post-pandemic era. The overarching goal is to distil actionable insights from the research and offer a nuanced understanding of the complexities surrounding employee engagement, motivation, and productivity in the transformed work landscape.

5.1 Evolving Nature of Employee Engagement:

The initial focus of this discussion centres on the evolving nature of employee engagement in the post-pandemic era. The survey results revealed high levels of overall job satisfaction, communication effectiveness, and perceived leadership impact, as evidenced by the mean scores in Table 2. This positive trend aligns with recent studies that indicate a resilience and adaptability among employees in the face of unprecedented challenges (Quinn & Dalton, 2009).

However, the discussion goes beyond numerical figures to delve into the qualitative insights obtained from interviews. Respondents emphasized the importance of leadership practices in fostering engagement, highlighting the role of shared purpose and connection within remote teams (Prasad & Williams, 2019). This resonates with the literature emphasizing the shift from traditional hierarchical leadership to a more collaborative and empathetic approach. The discussions around autonomy, connection, and a sense of purpose underscore the intricate interplay of psychological and emotional factors in the remote work environment (Miceli et al., 2021).

5.2 Comprehensive Strategies for Sustainable Employee Engagement:

Moving to the second theme, the paper proposed a set of strategies aimed at fortifying employee engagement in the post-pandemic landscape (Juan, 2013). The regression analysis in Table 4 showcases the significant contribution of job satisfaction, communication effectiveness, and leadership impact in predicting overall engagement. These findings support the argument that a holistic approach, incorporating leadership practices and effective communication, is vital for sustaining employee engagement.

The qualitative insights in Table 5 further enrich the discussion, providing concrete examples of successful strategies. The emphasis on effective technology utilization aligns with the literature highlighting the role of digital platforms in maintaining connectivity and collaboration within remote teams (Kumar & Chadha, 2008). The positive correlation between well-being initiatives and engagement echoes the growing recognition of the interdependence between employee mental health and overall engagement. Organizations should consider these findings when formulating and implementing engagement strategies tailored to the unique needs of their dispersed workforce (Ray, 2012).

5.3 Technology's Role in Sustaining Connectivity:

The third theme explored the critical role of technology in sustaining connectivity and communication within remote teams. The correlation analysis in Table 3 demonstrates strong positive relationships between communication effectiveness, leadership impact, and overall engagement. This emphasizes the need for organizations to leverage technological advancements not only to bridge physical gaps but also to foster a collaborative and engaged work culture (Bajpai & Dasgupta, 2004).

The qualitative findings elucidate specific examples of technology-enabled connectivity. The emphasis on video conferencing as a tool for enhancing collaboration aligns with the broader literature on the positive impact of visual communication in virtual settings. These insights underscore the practical implications of technology in maintaining team cohesion and communication effectiveness, emphasizing the importance of ongoing technological adaptation in the post-pandemic work environment.

5.4 Employee Well-being Initiatives:

The fourth theme investigates the intertwined relationship between employee well-being and engagement. The positive correlation between well-being initiatives and overall engagement, as shown in Table 3, supports the argument for prioritizing employee mental health and work-life balance in engagement strategies.

The qualitative interviews shed light on specific well-being initiatives that resonated with employees. Virtual wellness sessions and mental health support were highlighted as effective measures, aligning with the literature emphasizing the importance of proactive well-being initiatives in remote work scenarios. The discussions around work-life balance strategies further emphasize the holistic approach organizations should adopt to address the holistic needs of their employees.

5.5 Implications for Organizations:

The synthesis of quantitative and qualitative findings in Table 6 highlights the triangulation of results, providing a robust understanding of the multifaceted nature of employee engagement in the post-pandemic era. The discussion emphasizes the practical implications for organizations seeking to build a resilient and engaged workforce (Kumar & Chadha, 2008).

Leadership emerges as a linchpin, with both quantitative and qualitative data underlining its pivotal role. Organizations are encouraged to foster a leadership culture that prioritizes a shared purpose, connection, and adaptability. The positive impact of technology on communication effectiveness signifies the need for ongoing investment in digital tools, ensuring that teams remain connected in virtual settings.

The emphasis on employee well-being initiatives calls for a strategic integration of mental health support and work-life balance strategies into organizational policies. As organizations navigate the ‘new normal,’ the insights from this research provide a roadmap for cultivating a workforce that is not only engaged but also resilient in the face of ongoing challenges.

5.6 Limitations and Future Research:

Despite the insights gained from this study, several limitations warrant consideration. Firstly, the reliance on self-reported data through surveys and interviews may introduce common method bias and social desirability bias, potentially influencing the accuracy of responses. Additionally, the cross-sectional nature of the data limits causal inference, as it precludes the examination of temporal relationships among variables over time. Furthermore, the study's sample may not fully represent the diversity of organizational contexts and workforce demographics, potentially limiting the generalizability of findings. Future research endeavors could address these limitations by employing longitudinal designs to explore temporal dynamics of employee engagement and implementing diverse data collection methods to mitigate biases. Moreover, comparative studies across different industries, organizational sizes, and cultural contexts could provide valuable insights into the contextual factors influencing employee engagement. Additionally, qualitative studies focusing on the experiences of specific employee groups, such as remote workers or frontline employees, could offer nuanced understandings of engagement dynamics. By addressing these limitations and expanding research scope, future studies can contribute to a more comprehensive understanding of employee engagement in the post-pandemic era.

1. CONCLUSION

In conclusion, this study has shed light on the intricacies of employee engagement in the post-pandemic era and identified critical factors influencing overall engagement levels. Through a mixed-methods approach integrating quantitative regression analysis and qualitative thematic analysis, we have gained valuable insights into the multifaceted nature of employee engagement (Sutherland & Anderson, 2015). The findings underscore the significance of job satisfaction, communication effectiveness, and leadership impact as key drivers of employee engagement, emphasizing the importance of fostering a supportive work environment characterized by meaningful work, open communication channels, and effective leadership practices.

Despite the limitations inherent in this study, including potential biases in self-reported data and the cross-sectional nature of the analysis, the findings offer valuable implications for theory and practice. Organizational leaders and HR professionals can leverage these insights to develop targeted strategies for enhancing employee engagement, ultimately contributing to improved productivity, retention, and organizational success (Iqbal et al., 2013). Moreover, the identification of potential areas for future research, such as longitudinal studies and comparative analyses across diverse contexts, opens avenues for further exploration and refinement of our understanding of employee engagement dynamics (Jean et al., 2011).

Throughout the investigation, several key themes emerged, emphasizing the pivotal role of proactive and adaptive approaches in fostering a thriving work environment. One prominent finding underscores the importance of clear and transparent communication as a foundational element for sustaining employee engagement. In the post-pandemic era, where remote and hybrid work models have become prevalent, maintaining open lines of communication has proven crucial in keeping employees informed, connected, and motivated.

The research also highlighted the significance of flexible work arrangements in the contemporary professional landscape. As employees navigate the challenges of remote work, organizations that embrace flexibility and provide the necessary support mechanisms are better positioned to cultivate a motivated and productive workforce (Kýlýçarslan & Dumrul, 2017). The study underscores the need for companies to revisit traditional structures and policies, embracing a more agile and adaptable approach to accommodate the diverse needs and preferences of employees.

Moreover, the research delves into the role of leadership in driving employee engagement. Leadership styles that prioritize empathy, inclusivity, and genuine concern for employee well-being have emerged as critical factors in promoting a positive work culture (Shaari et al., 2014). In the post-pandemic era, where the lines between professional and personal life are often blurred, compassionate leadership has proven instrumental in maintaining employee morale and commitment.

The study also reveals the impact of employee recognition and rewards programs on motivation and productivity. Acknowledging and appreciating employee contributions, especially in virtual settings, significantly contribute to job satisfaction and engagement. Organizations that implement effective recognition initiatives are better positioned to foster a sense of belonging and commitment among their workforce.

As organizations continue to adapt to the evolving challenges of the post-pandemic landscape, prioritizing employee engagement remains paramount. By nurturing a culture of engagement rooted in job satisfaction, effective communication, and impactful leadership, organizations can cultivate resilient and high-performing teams capable of thriving in the face of uncertainty. Thus, this study serves as a call to action for organizations to prioritize employee engagement as a strategic imperative in shaping the future of work in the post-pandemic era (Henley et al., 2008).

The findings of this study offer practical implications for organizational leaders and human resource professionals. Implementing the identified strategies can contribute to a more resilient, motivated, and productive workforce, ultimately supporting organizational success in the ever-evolving landscape of the post-pandemic era. As organizations navigate this transformative period, leveraging these insights can pave the way for sustained employee engagement, laying the foundation for long-term success in a dynamic and unpredictable business environment.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.08

Does Promise of Niche for Differentiated Banking Matter? – A Study on Performance & Outreach of Small Finance Banks in India

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Abstract:

RBI issued differentiated banking licenses for Small Finance Banks (SFBs) in 2015. SFBs differ from commercial banks in terms of regulatory compliance although there are some similarities in their activities. In this paper, an attempt has been made to analyze factors affecting the profitability of SFBs, measured in terms of Return on Asset (ROA). The results of panel regression suggest that the size of the bank and non-interest income have a significant positive impact. In contrast, net non-performing assets and share of operating expenses in total expenses have a substantial adverse effect on profitability. It has been observed that the southern region of the country accounts for 30% of the total branches of SFBs present in the country whereas only 4% of the total branches are seen in the northeastern region of the country. The result of ANOVA shows a similarity in branch network distribution by the SFBs across six regions. The study also reveals that 39% of the total branches of the SFBs are located in semi-urban areas whereas rural region accounts for only 19% of the total branches of SFBs. ANOVA test revealed no similarity in branch network distribution by the SFBs across four different population groups namely rural, semi-urban, urban, and metropolitan.

Keywords: Differentiated Banking, Outreach, ROA, Small Finance Bank

JEL: E58, G21

1.1 BACKGROUND OF THE STUDY:

"*People ... were poor not because they were stupid or lazy. They worked all day long, doing complex physical tasks. They were poor because the financial institution in the country did not help them widen their economic base*." – Muhammad Yunus.

In light of the above statement, it can be said that bringing the unbanked and underbanked section of society within the scope of the formal banking system should be one of the prime objectives of any welfare economy. The journey of financial inclusion, in India, can be traced back to 1969 with the nationalization of banks. Over the years Reserve Bank of India (RBI), the central bank of the country, has taken several initiatives to bring unbanked society within the scope of the formal banking system. To bring the underprivileged section of society within the periphery of the formal banking system, RBI, along with GoI, has laid stress upon financial inclusions by making an effort to extend the banking services in different possible ways- like 'no frills' accounts, Self-help group bank linkage movement, increasing the banking outreach through business facilitator/ correspondents and many more.

Small finance banks, a type of differentiated bank, is an almost a decade-old concept, which was first mooted by Honorable Finance Miniter on 10th July 2014, while presenting Union Budget for the fiscal year 2014-15-

"RBI will create a framework for licensing small banks and other differentiated banks. Differentiated banks serving niche interests, local area banks, payment banks, etc. are contemplated to meet the credit and remittance needs of small businesses, unorganized sectors, low-income households, farmers, and migrant workforces.[2]

For the furtherance of the goal of financial inclusion by delivering banking services to various niche segments, RBI issued differentiated banking licenses for Small Finance Banks and payment banks in 2015. (National Strategy for Financial Inclusion 2019-2024, RBI). Small Finance Banks are much more refined form, compared to earlier special-purpose financial vehicles like Regional Rural Banks (RRBs) and Local Area Banks (LABs). (Kangayan & Dhevan, 2020)

The primary objective of small finance banks is to envisage the goal of financial inclusion, the same can be achieved by:

- Providing savings vehicles to unserved and underserved sections of society,
- Supplying credit to marginal farmers, small business units, unorganized sectors, and entities belonging to the MSME sector.

In this regard it is important to note that a Small Finance Bank can perform all the operations that are performed by a normal commercial bank, but at a smaller level, targeting the low-income segment (Srinivas & Shanigarapu, 2020)

1.2 HIGHLIGHTS OF KEY REGULATORY GUIDELINES MANDATED FOR SFBs:

1.2.1 Small finance banks are to register themselves as a public limited company under the Companies Act 2013 and they are licensed by RBI under Section 22 of the Banking Regulation Act 1949. They are required to use the words "Small Finance Banks" so that people can differentiate them from other banks.

1.2.2 As per RBI circular on "Rationalisation of Branch Authorisation Policy- Revision of Guidelines" dated May 18, 2017, SFBs are required to have at least

25% of their total bank branches in the unbanked rural sector having a population up to 9999 as per the latest census. It is also important to note there this no prohibition in the area of operation of SFB. However, preference will be given to those applicants who would open banking outlets in the Northeastern, Eastern, and Central regions of the country.

1.2.3 SFBs would need to have a minimum paid-up voting capital of Rs. 200 crores. In case SFBs are converted from NBFCs/ Local Area Banks/ Micro-Finance Institutions/Payment Banks, an additional time of 18 months to given to achieve a net worth of Rs. 200 crores from the date of in-principal approval. In case SFBs are converted from Urban Co-operative Banks, an additional time of 5 years to be given to increase the net worth to Rs. 200 crores.

1.2.4 Keeping in mind, the inherent risk associated with SFBs, RBI mandated SFBs to maintain a minimum capital adequacy of 15% of its risk-weighted asset continuously.

1.2.5 Minimum 40% of the paid-up equity capital to be held by the promoters during the first five years from the day of commencement of business and gradually promoters' stake should be brought down to a maximum of 15% within 15 years from the date of commencement of business in a staggered manner.

1.2.6 SFBs are required to extend a minimum of 75% of Adjusted Net Bank Credit (ANBC) to RBI designated priority sectors, out of which a bank should lend 40% to different subsectors under PSL and the rest of 35% may be lent to anyone/ more subsectors which the bank has competitive advantages.

1.1.7 50% of its loan portfolio should constitute loans/advances made primarily towards small borrowers having loan sizes not more than 25 lakhs.

1.3 NAME OF SFBs, YEAR OF INCORPORATION AND HEADQUARTER

To continue the furtherance of financial inclusion, Small Finance Banks, since inception, have played a progressive role in mobilizing savings and providing credit to the unbanked and underbanked section of society. There are, at present, 12 Small Finance Banks operating in the country, which are as follows (names are arranged alphabetically):

Table 1: Name of Small Finance Banks, year of incorporation and their headquarter:

Serial No.	Name of the Small Finance Bank	Incorporation	State in which headquarters is present
1	Au Small Finance Bank Limited	19th April 2017	Rajasthan
2	Capital Small Finance Bank Limited	24th April 2016	Punjab
3	ESAF Small Finance Bank Limited	17th March 2017	Kerala
4	Equitas Small Finance Bank Limited	5th September 2016	Tamil Nadu
5	FINCARE Small Finance Bank Limited	21st July 2017	Karnataka
6	Jana Small Finance Bank Limited	28th March 2018	Karnataka
7	North East Small Finance Bank Limited	25th July 2016	Assam
8	Shivalik Small Finance Bank Limited	1st January 2021	Delhi
9	Suryoday Small Finance Bank Limited	23rd January 2017	Maharashtra
10	Ujjivan Small Finance Bank Limited	1st February 2017	Karnataka
11	Unity Small Finance Bank Limited	1st November 2021	Delhi
12	Utkarsh Small Finance Bank Limited	23rd January 2017	Uttar Pradesh

Source: Compiled by the researchers

The above table shows the name of SFBs presently operating in India along with the year of incorporation and the state in which they are headquartered. It shows that out of the total 12 SFBs, 5 of them are headquartered in the southern part of the country (Kerala, Karnataka, Tamil Nadu), 5 of them in the northern part (Punjab, Delhi, Uttar Pradesh, Rajasthan), 1 in the western part (Maharashtra) and 1 in the north-eastern region of the country. No SFB is headquartered in the Central and Eastern regions of the country. The above table also shows that Capital Small Finance Bank Limited was the first Small Finance Bank in the country. RBI had issued in-principal approval in September 2015 to ten entities, except Shivalik Small Finance Bank Limited and Unity Small Finance Bank Limited, to begin their functioning as SFBs. It is also to note that Shivalik Small Finance Bank Limited is the first Urban Cooperative Bank to go into transition to become an SFB.

2. DIFFERENTIATED BANKING FOR FINANCING NICHE: JUSTIFICATION FROM EXISTING ACADEMIC RESEARCH

Financial literacy is of utmost importance in reaching the goal of financial inclusion. The establishment of Small Finance Banks in our country has helped banks to create brand value in the niche and unbanked section of society by offering financial services at affordable rates. (Arora, Sharma, Pahwa, & Yadav, 2018). At the same time, it is also important to note that Non-Performing Assets (NPAs) harm the profitability of commercial banks. It leads to capital erosion and low net interest margin. A positive relation exists between non-interest income and the profitability of banks. (Mohan, 2022). Since Small Finance Banks have a niche segment of society as a target for providing loans, therefore they have higher chances of having NPAs as compared to commercial banks. (Srinivas & Shanigarapu, 2020).

Since their establishment, SFBs have progressed enormously by spreading in different parts of the country to meet the goal of financial inclusion in the underbanked and unbanked parts of the country. (Patel & Fulwari, 2021). Empirical analysis reveals there exists no relation between the cost of funds and the net interest margin of the SFBs in India. Also, the same regulatory requirements for SFBs as commercial banks and the increase in overall profit over the years have ensured their sustainability. (Kangayan & Dhevan, 2020). A positive impact of the size of the bank and debt-to-asset ratio was found on ROA whereas deposit-to-asset ratio and loan-to-deposit ratio were found to impact ROA negatively while measuring the profitability of private banks in India and Bangladesh. (Deli, Gazi, Harymawan, Dhar, & Hossain, 2022). The SFBs are efficiently allocating their funds to ensure they maintain a good net interest to total fund ratio. They are also using effective methods of collection of funds and ensuring good interest cash flow throughout which would help them in the timely repayment of debts. (Shama & Gurunathan, 2022). SFBs are acting more like business correspondents of the commercial banks. A huge population remains unaware of the functions performed by SFBs as they do not focus more on advertisement. (Subrahmanyam, Umarani, & Sultana, 2022).

3. OBJECTIVES OF THE STUDY:

"***Since inception, small finance banks (SFBs) have started playing a progressive role in mobilizing savings from and providing credit to their niche customer segments, furthering the cause of financial inclusion. In the quarter that ended March 2022, the deposits grew by 37.3 per cent on a y-o-y basis while the credit portfolio was 25.6 per cent, as against the growth rate of deposit and credit of scheduled commercial banks (SCBs) at 10.2 per cent and 10.8 per cent respectively. Although it may seem unfair to compare the concerned numbers of public and private sector banks to SFBs because of scale effects, even in terms of outreach through bank branches, SFBs represent about 4 per cent of bank branch network in India***"- (Rao, 2022). [1]

Keeping the above statement in mind, the researchers have not made any comparative study between SFBs and private or public sector SCBs. We just wanted to have an overview of the factors affecting the profitability and their expansion in terms of outreach of the branch network.

There are ***three objectives*** of the present research, which are as follows:

1. to analyze how various factors influence the performance of the select SFBs.
2. to analyze and study the growth & expansion of SFBs across various groups of populations and regions.
3. to have an overview of Priority Sector Lending (PSL) across various categories of PSL.

4. RESEARCH METHODOLOGY

4.1 MODEL FORMULATION

The ***following model*** has been tested to analyze how various factors affect the performance of the select Small Finance Banks (SFBs).

ROA = á+ â1 ADR + â2 INS+ â3 SF + â4 NNPA + â5 CDR + â6 PSL + â7 NNI + â8 NB+ â9 OE+ å t

ROA= Return on Asset

ADR = Advance to Deposit ratio

INS = Interest Spread

SF = Size of firm (log value of total assets)

NNPA = Net non-performing asset on net advances

CDR= Cost to deposit ratio

PSL =% of total advances made towards Priority Sector

NB = Number of bank branches

OE= % Operating expenses on total expenses

The above nine variables have been identified based on extensive literature surveyed. The table given below shows the formula used to calculate the above-mentioned variables and their respective possible impact on return on equity.

Table 2: Formula used to calculate the above-mentioned variables and their respective possible impact on return on equity

Name of Variable	Formula Used to Calculate	Perceived Impact on Profitability
ROA = Return on Asset ***(Independent variable)***	$\frac{Net\ Profit}{Total\ Assets} x100$	NA
Explanatory variables		
ADR = Advance to Deposit ratio	$\frac{Advance}{Deposits}$	Higher ADR is not good in terms of liquidity but it is believed to have a positive impact on profitability.
IS = Interest Spread	Interest Income - Interest Expended	The higher the interest spread; the higher will be the profitability.
SF = Size of Firm	Value of the total assets of the bank	The more the assets, the better will be the profitability.
NNPA= NPA as % to Net Advances	$\frac{Gross\ NPA - Provision}{Net\ Advances}$x100	It denotes the proportion of advances that turned into NPA after adjusting for the provisions already made for NPA by the Bank. The higher the NNPA, the lower will be the profitability.
CDR = Cost to Deposit Ratio	$\frac{Interest\ expanded\ on\ deposits}{Total\ Deposit.}$	Cost deposit is the amount of interest paid by the banks on its deposits, generally, it is believed that higher CDR would negatively impact profitability. On the other hand, a higher CDR may attract more deposits that enhance the loanable funds available with the bank and increase its profitability.
PSL= % of Priority Sector Lending	$\frac{Advances\ made\ towards\ Priority\ Sector}{Total\ Advances}$x100	RBI mandated SFBs to 75% of their total advances towards priority sectors. The expected impact is that since this credit is directed there is little consideration of profitability. However, it is also important to note that the banks are free to decide their interest rates.
NNI = Non-Interest Income	Amount of non-interest income as reported in the income statement	Non-interest income is believed to have a positive impact on the profitability of the Banks.
NB = Number of Branches	Number of branches including the branches through business correspondents and Business facilitators.	It is believed that a greater number of branches would increase the profitability of the banks.

Source: Compiled by the researchers

4.2 SOURCE OF DATA & STUDY PERIOD

To analyze the model mentioned in 4.1 and to attain the other objectives, we have considered 10 SFBs out of the 12 SFBs presently in existence. The SFBs, that are considered for the study, are AU Small Finance Bank Limited, Capital Small Finance Bank Limited, ESAF Small Finance Bank Limited, Equitas Small Finance Bank Limited, FINCARE Small Finance Bank Limited, Jana Small Finance Bank Limited, North East Small Finance Bank Limited, Suryoday Small Finance Bank Limited, Ujjivan Small Finance Bank Limited, Utkarsh Small Finance Bank Limited. We did not consider Shivalik Small Finance Bank Limited and Unity Small Finance Bank Limited, since both of them were incorporated in 2021, just 2 years back. We have considered a study period of 5 years starting from 2018-19 to 2022-2023.

We have collected all the relevant data from *the Prowess* database as well as from the annual reports of the select SFBs. We have also collected data from the RBI database of the Indian economy.

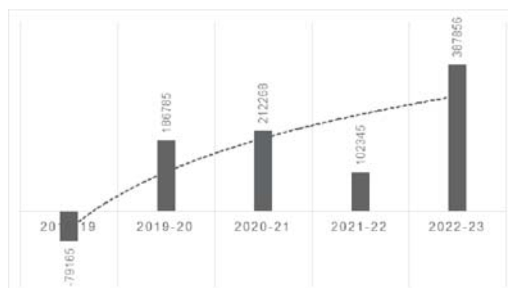
4.3 USE OF STATISTICAL TECHNIQUES & SOFTWARE

To analyze the factors influencing the profitability of the SFBs, we have applied panel data regression. Panel Ordinary Least Square (POLS), Random Effect (RE), and Fixed Effect (FE) methods have been used to run the panel regression. To choose the appropriate method out of the three models mentioned above, we have conducted the Bruesch-Pagan Test, Housman test, and Wald test. To analyze the outreach of the branches network across various regions and population groups as specified by RBI, we applied the ANOVA test. Apart from the tests mentioned above, we have used Pie-chart, Bar-graphs, Map of India, etc. wherever it is found feasible to use.

5. RESULTS AND DISCUSSION

5.1 FACTORS INFLUENCING FINANCIAL PERFORMANCE OF THE SFBs

Figure 1: Profit after tax (PAT) of 10 Small Finance Banks over 5 years (2018-19 to 2022-2023) {Rs. in Crore}



Source: Compiled by the researchers

The above figure shows the consolidated profit after tax (PAT) of the 10 SFBs over 5 years starting from the financial year 2018-19 to 2022-23. We observed PAT has increased gradually in the last 5 years except in the financial year 2021-2022. In the 2021-22 financial year, we witnessed a decline in the consolidated PAT, and the same can be linked to the economic slowdown due to the pandemic covid-19.

To ascertain how certain factors are influencing the profitability of SFBs, we developed a model, the same is mentioned in ***para 4.1***. The model mentioned in ***para 4.1*** considers nine independent variables and as we know independent variables often suffer from multicollinearity, we have applied the VIF test to check whether the problem of multicollinearity exists or not.

Table 3: VIF test results (Test for multicollinearity)

Independent Variables	Tolerance	VIF
ADR	.685	1.461
INS	.437	2.288
SF	.495	2.020
NNPA	.501	1.995
CDR	.659	1.517
PSL	.897	1.115
NNIC	.599	1.669
NB	.338	2.959
OE	.495	2.022

Source: Compiled by authors (*E-views outcome*)

The above table shows VIF test results, conducted to check whether the problem of multicollinearity exists or not. It is found from the table that all the variables have VIF values less than 4. Considering a threshold value of 4 (thumb rule) we conclude that there exists no multicollinearity.

Table 4: Regression Results (Dependent Variable: ROA)

Variable	Ordinary Least Squares			Fixed Effect Model			Random Effect Model		
	Co-efficient	t-test	Prob.	Co-efficient	t-test	Prob.	Co-efficient	t-test	Prob.
C	0.34	3.98	0.00	0.42	2.94	0.00	0.61	9.28	0.00
ADR	0.38	2.55	0.01	0.02	0.25	0.80	0.08	0.98	0.32
INS	0.17	0.84	0.40	0.08	0.57	0.57	0.30	2.74	0.00
SF	0.04	0.24	0.80	0.51	2.19	0.04*	0.24	2.19	0.03
NNPA	0.13	1.29	0.20	-0.16	-2.18	0.03*	-0.18	-2.82	0.00
CDR	0.60	4.62	0.00	0.09	1.01	0.32	0.27	3.56	0.00
PSL	0.03	0.45	0.65	-0.18	-1.44	0.16	-0.12	-2.67	0.01
NNIC	0.10	0.90	0.37	0.23	3.38	0.00*	0.16	2.62	0.01
NB	0.06	0.63	0.52	0.20	-1.46	0.15	0.09	1.72	0.09
OE	0.62	6.85	0.00	-0.42	-5.67	0.00*	0.33	5.76	0.00
Summary Statistics:									
Adjusted R^2	0.288			0.795			0.711		
F-Stat	3.36			11.58			14.42		
Prob.	0.00			0.00			0.00		
Durbin – Watson	1.01			1.84			1.38		

Source: Compiled by authors *(E-views outcome)*

The above table shows the co-efficient value of each independent variable, t-statistic, and their respective probability for each of the three models. The table also shows the adjusted R^2 value, F-statistics, probability of F-statistic, and Durbin-Watson result. We applied the Bruesch-Pagan Test, Housman test, and Wald test to determine the appropriate model:

Bruesch-Pagan Test

H0: Pooled Ordinary Least Squares is more appropriate than the Random Effect Model.

H1: Alternate hypothesis: Pooled Ordinary Least Squares is not appropriate.

Table 5: Breusch-Pagan Test

Lagrange Multiplier Tests for Random Effects Null hypotheses: No effects Alternate hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
	Cross-section	Test Hypotheses Time	Both
Breusch-Pagan	4.65494 (0.0310)	0.462577 (0.4964)	5.11517 (0.0237)*

* Significant @ 5%

Source: Compiled by authors

Since the *p-value* is less than 0.05, therefore null hypothesis is rejected, which means Pooled Ordinary Least Squares (POLS) is not appropriate.

To determine which model is appropriate between the Random Effect Model and the Fixed Effect Model we applied the Hausman test. The hypothesis and the result of the test are shown below:

H0: The random Effect Model is more appropriate than the Fixed Effect Model.

H1: Fixed Effect Model is more appropriate.

Table 6: Hausman Test

Correlated Random Effects – Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-sq. Statistic	Chi-sq. d.f.	Prob.
Cross-section random	25.395	9	0.0026*

* Significant @ 5%

Source: Compiled by authors

The above Hausman test result shows *a p-value* less than 0.05, so we reject the null hypothesis that the Random Effect Model is more appropriate than the Fixed Effect Model.

Lastly, to compare the Pooled Ordinary Least Squares and Fixed Effect Model we applied the Wald test. The hypothesis is given below:

Null hypothesis: The pooled Ordinary Least Squares regression model is appropriate.

Alternative hypothesis: Fixed Effect Model is appropriate.

Table 7: Wald Test

Wald Test Equation: Untitled			
Test Statistic	Value	df	Probability
F-statistic	11.53	(8,41)	0.000*
Chi-square	92.31	8	0.000*

* Significant @ 5%

Source: Compiled by authors

Since *the p-value* is less than 0.05, therefore we reject the null hypothesis and accept the alternative hypothesis. Therefore, the Fixed Effect Model is more appropriate than Pooled Ordinary Least Squares.

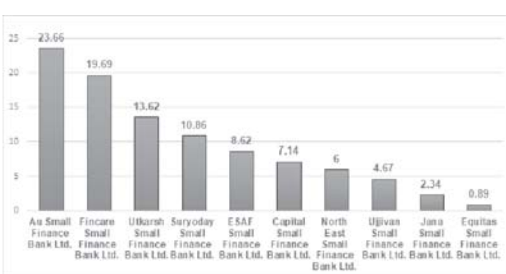
The fixed Effect Model is found to be the appropriate model.

The fixed Effect Model is found to be the appropriate model based on the above discussion (with reference to tables no. 5, 6, and 7). Table 4 shows that the regression equation based on the fixed effect model has an adjusted R^2 of 0.795, which implies 79.5% of the variation in ROA (i.e., Return on Assets) is explained by the nine independent variables considered in the equation. *Prob.* of F-Stat is found to be less than 0.05 and Durbin-Watson is also very close to 2. The above indicators justify the robustness of the model. Out of the nine independent variables considered in the model, we found SF (i.e., size of firm) and NNIC (i.e., non-interest income) have a significant positive impact on ROA, whereas NNPA (i.e., percentage of net non-performing asset) and OE (i.e., percentage of operating expenses on total expenses) has significant negative influence on ROA.

5.2 OUTREACH OF SFBs THROUGH BRANCH NETWORK

In this section of the study, we have emphasized analyzing the physical outreach of SFB branches across various regions of the country and various population groups. We have also attempted to have an overview of how effective the outreach is, in terms of priority sector lending across various categories namely agricultural and allied activities, MSME, Personal Loans, and others.

Figure 2: Compounded Annual Growth Rate (CAGR) of increase in numbers of branches of SFBs over last 5 years (i.e., 2018-19 to 2022-23)



Source: Computed by the researchers

The above figure represents the CAGR of increase in the number of bank branches of 10 SFBs over the last five years starting from 2018-19 to 2022-23. It is found AU Small Finance Bank Ltd. has a CAGR of 23.66% followed by Fincare Small Finance Bank Ltd, Utkarsh Small Finance Bank Ltd., and so on. The lowest growth rate is observed in the case of Equitas Small Finance Bank Ltd.

5.3 ANALYSIS OF THE SPREAD OF BRANCHES ACROSS SIX REGIONS INCLUDING STATE-WISE DISTRIBUTION

The different States and UTs have been grouped into six regions namely, Northern Region, Western Region, Southern Region, Central Region, Eastern Region, and North-Eastern Region, as per RBI's database. The map and the table given below represent the present status (as on 30th November 2023) of branch network distribution of the 10 SFBs-

Table 8: Present status (as on 30th November 2023) of branch network distribution of the 10 SFBs

Southern Region		Western Region		Northern Region		Central Region		Eastern Region		North Eastern Region	
Tamil Nadu	784	Maharashtra	725	Rajasthan	490	Madhya Pradesh	411	Bihar	326	Assam	174
Bihar	326	Gujarat	419	Punjab	269	Uttar Pradesh	366	Odisha	284	Tripura	16
Odisha	284	Goa	8	Haryana	197	Chhattisgarh	145	West Bengal	147	Meghalaya	16
West Bengal	147			Delhi NCT	83	Uttarakhand	36	Jharkhand	122	Nagaland	10
Jharkhand	122			Chandigarh	16					Mizoram	7
Sikkim	9			Himachal Pradesh	23					Manipur	2
				Jammu & Kashmir	3					Arunachal Pradesh	2
Total	1824	Total	1152	Total	1081	Total	958	Total	888	Total	224

Source: Compiled by researchers

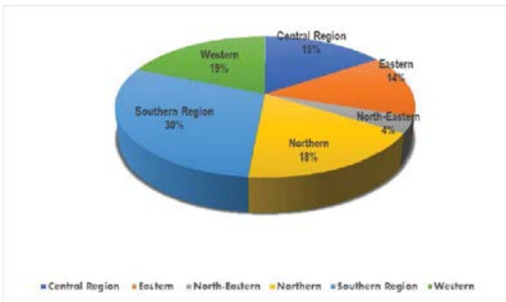
The above table shows Madhya Pradesh has the highest number of branches i.e., 411 out of the four states that represent the Central Region, Uttarakhand has the lowest number of branches of SFBs in the Central Region. In the Eastern region, Bihar has 326 branches, the highest and Sikkim has only 9 branches. Assam has the highest number of branches in North-Eastern Region. Arunachal Pradesh and Manipur have only 2 branches each. In the Northern Region, we found Rajasthan has 490 SFB branches followed by Punjab, Haryana, and so on. In the Southern Region, Tamil Nadu has 784 branches, the highest across all the States and UTs in the country. In the western part, Maharashtra has 725 branches, the second highest across all the States and UTs. Goa has the lowest number of branches in the Western Region of the country.

Figure 3: Branch Networks of SFBs

Source: RBI database

The above map shows the highest number of branch networks of 10 SFBs are located in the southern region of the country comprising Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, and Puducherry (area marked in green colour in the map). The total number of branches of the 10 SFBs in this region is 1824 in these 5 states and 1 UT (Puducherry). The second highest number of branches is seen in the western region comprises three states namely, Maharashtra, Gujrat, and Goa (Marked in yellow colour in the map). The total number of branches in this region is 1152. The northern region (marked in blue on the map) has got third highest number of branch networks having 1081 branches. The region comprises Rajasthan, Punjab, Haryana, Jammu & Kashmir, Himachal Pradesh, and Delhi NCR. Central region comprises Uttarakhand, Uttar Pradesh, Madhya Pradesh, and Chhattisgarh, the region accounts for a total of 958 branches of SFBs. The central region in the map is marked in purple. Eastern region has 888 branches spreading across the states of Odisha, Jharkhand, Bihar, West Bengal & Sikkim. The area on the map is marked in pink. Lastly, North-eastern states like Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Tripura & Mizoram have only 227 branches (region marked in orange), which implies north-eastern region accounts for the least number of branches compared to the other five regions.

Figure 4: Branch distribution data of Select 10 SFBs across six different regions:



Source: Compiled by researchers (from the RBI database of the Indian Economy**)**

The above figure shows the distribution of branches of Small Finance Banks (SFBs) as on 30th November 2023 across the six regions of the country. It is seen that the Western, Northern, Central, and Eastern regions have almost similar share of branch network distribution ranging from 14% to 19%. The northeastern region has only 4% of the total branches spread across the country. The southern region has the highest 30% of the branches of SFBs.

We further wanted to statistically test the similarity of branch network distribution by SFBs across the six regions of the country by applying Anova. The test below uses the following hypothesis:

H0: There is a similarity in branch network distribution by SFBs across the six regions.

H1: There is no similarity in branch network distribution by SFBs across the six regions.

The table shown below represents the results of Anova:

Table 9: Test of Homogeneity & ANOVA

Levene Statistic	df1	df2	Sig.
1.779	5	54	.133

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1794.392	5	358.878	.803	.552
Within Groups	24128.779	54	446.829		
Total	25923.171	59			

Source: Compiled by researchers ***(SPSS 23 output)***

The assumption of homogeneity of variance is tested by applying Levene's test before comparing the independent groups with the help of Anova. If *the p-value* of the Levene test is found to be more than 0.05, then the assumption of homogeneity of variance is not violated. We also have found from the ANOVA table that the *p-value* of F-statistic is more than 0.05, therefore, we accept the null hypothesis that there is a similarity in branch network distribution by the SFBs across six regions.

5.4 ANALYSIS OF DISTRIBUTION OF BRANCHES ACROSS DIFFERENT POPULATION GROUP

Based on the size of the population, where a bank branch is located, is classified either into rural, semi-urban, urban, or metropolitan. The basis of classification-

Population less than 10,000 – Rural

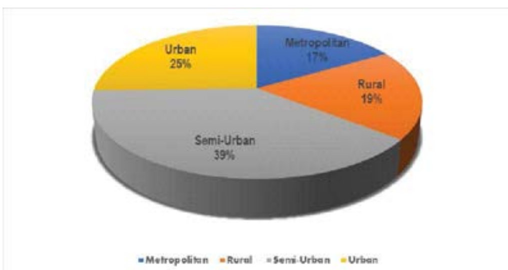
Population 10,000 and above but less than 1 lakh- Semi-urban

1 lakh and above and less than 10 lakh – Urban

10 lakh and above – Metropolitan

We have attempted to have an overview of the branch distribution network of these 10 SFBs across the above-mentioned population groups. The figure given below represents the same:

Figure 5: Branch distribution data of Select 10 SFBs' different population groups as on 30th November'2023:



Source: Compiled by researchers (from the RBI database of Indian Economy)

The above figure shows that 39% of the total branches of 10 SFBs are located in semi-urban areas, and 25% of the total branches are situated in urban areas. 19% of the total branches are present in the rural areas and lastly, 17% of the total branch network of the 10 SFBs are present in Metropolitan areas.

We further wanted to test whether there is any similarity in branch distribution network by SFBs across the four population groups as mentioned above, by applying the ANOVA test. The test below uses the following hypothesis:

H0: There is a similarity in branch network distribution by SFBs across the four population groups namely, rural, semi-urban, urban, and metropolitan.

H1: There is no similarity in branch network distribution by SFBs across population groups.

The table shown below represents the results of Anova along with a test of homogeneity:

Table 10: Test of Homogeneity& ANOVA

Levene Statistic	df1	df2	Sig.
.607	3	36	.615

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2704.027	3	901.342	6.745	.001
Within Groups	4810.389	36	133.622		
Total	7514.416	39			

Source: Computed by researchers *(SPSS 23 output)*

The assumption of homogeneity of variance is tested by applying Levene's test before comparing the independent groups with the help of Anova. If *the p-value* of the Levene test is found to be more than 0.05, then the assumption of homogeneity of variance is not violated. Here we found p-value of Levene's statistic is more than 0.05. Therefore, the assumption of homogeneity of variance is not violated. It was found from the ANOVA table that the significance level of the F-statistic is less than 0.05, therefore, we accept the alternative hypothesis that there is no similarity in branch network distribution across various population groups. We further performed post-hoc analysis by Fisher's Least Significant Difference (LSD) method to determine which groups had significant differences.

Table 11: Post-hoc analysis by LSD method to determine which groups have significant differences:

Population group	Population group	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Metropolitan	Rural	-8.40	.113	-18.89	2.07
	Semi-Urban	-22.89*	.000	-33.37	-12.40
	Urban	-8.71	.101	-19.19	1.77
Rural	Metropolitan	8.40	.113	-2.07	18.89
	Semi-Urban	-14.48*	.008	-24.96	-3.99
	Urban	-.30	.954	-10.78	10.182
Semi-Urban	Metropolitan	22.89*	.000	12.40	33.37
	Rural	14.48*	.008	3.99	24.9
	Urban	14.18*	.009	3.69	24.66
Urban	Metropolitan	8.71	.101	-1.77	19.19
	Rural	.30	.954	-10.18	10.786
	Semi-Urban	-14.18*	.009	-24.66	-3.69

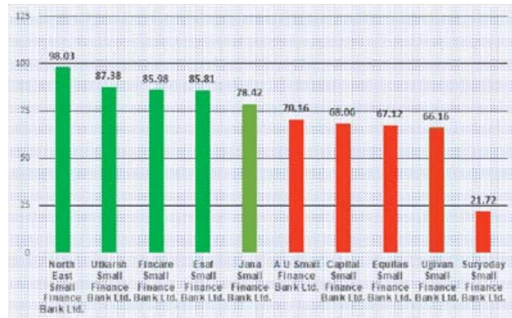
Source: Computed by researchers (*SPSS 23* output)

The above post-hoc test shows distribution of branches in semi-urban areas is significantly different from the distribution of branches in metropolitan, rural, and urban areas. Therefore, it can be concluded that the branch network is mostly concentrated in the semi-urban areas.

5.5 ACHIEVEMENT OF SET TARGETS TOWARD PRIORITY SECTOR(PSL) LENDING

Small Finance Banks are required to extend 75% of their Adjusted Net Bank Credit (ANBC) as loans and advances to the sectors categorized as priority sectors by RBI. The same has been manded by the regulator keeping in mind the objective of SFBs to provide banking services to the niche segment i.e., the unbanked and underbanked population of the society. In this section, we will discuss the average % of PSL of the 10 SFBs considered in the study. The result of the same is depicted below in Figure 5.

Figure 6: Bank-wise Average Percentage of PSL of last 5 years



Source: Compiled by researchers

The above figure shows, that out of 10 SFBs considered in the study, 5 SFBs have having average PSL of more than 75% as on the reporting date of the Balance Sheet. The highest average percentage is witnessed in the case of North-East Small Finance Bank followed by Utkarsh Small Finance Bank Ltd., Fincare Small Finance Bank Ltd., and so on. The lowest average percentage of PSL is seen in the case of Suryoday Small Finance Bank Ltd.

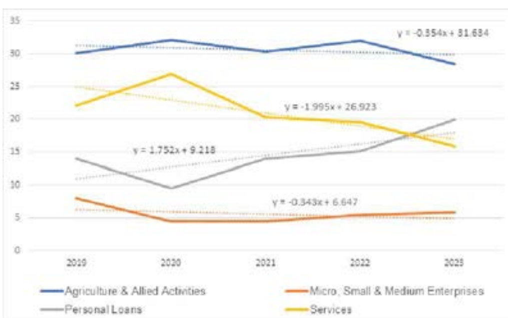
SFBs have disclosed Priority Sector Lending (PSL) in their annual report, dividing the same into the following groups namely - **Agriculture & Allied activities**, **Micro, Small & Medium Enterprises**, **Personal Loans**, **Services, and Others**. It is, however, to note that as per RBI guidelines, there are many other sub-categories of priority sector.

Table 12: Category-wise breakup of average % PSL of 5 years by the 10 SFBs

Categories of Priority Sector (based on the disclosure given in the annual report)	2019	2020	2021	2022	2023
Agriculture & Allied Activities	30.09	32.14	30.28	31.92	28.43
Micro, Small & Medium Enterprises	8.05	4.39	4.4	5.44	5.81
Personal Loans	13.98	9.46	13.9	15.12	19.91
Services	22.13	26.88	20.32	19.53	15.83

Source: Compiled by researchers

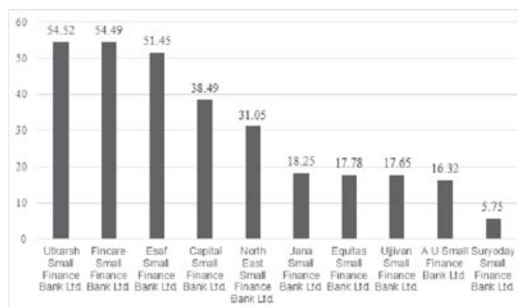
Figure 7: Analysing the trend of the percentage of PSL across the four categories as mentioned in Table 11:



Source: Compiled by researchers *(drawn based on the data represented in Table 12)*

The above table (Table 12) shows the category-wise breakup of the average % PSL of 5 years (2018-19 to 2022-23) by the 10 SFBs. A trend line chart has also been depicted based on the above table. It shows that out of the four categories of PSL disclosed by the SFBs in their annual reports, the highest average lending has been in agriculture and allied activities. However, there has been a slow decline in the same over the 5 years. A similar declining trend has also been witnessed in lending towards Micro, Small & Medium Enterprises and Services by the 10 SFBs. Personal loans have been the only category where the average % PSL has gradually increased. It may be because the rate of interest can be imposed a little higher in the case of personal loans as compared to other categories of priority sectors. This draws attention as it indicates that SFBs are gradually shifting their focus from the objective of providing loans to niche segments of society at lower rates of interest towards making a profit by providing more personal loans in the priority sector.

Figure 8: Average % PSL of last 5 years towards Agricultural and Allied Activities

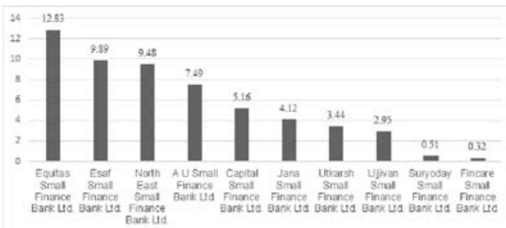


Source: Compiled by researchers

The above graph depicted in Figure 8 shows the average % PSL of the last 5 years towards agricultural and allied activities. It shows that Utkarsh Small Finance Bank, Fincare Small Finance Bank, and ESAF Small Finance Bank are the highest lenders (lending more than 50% on average) in the agricultural and allied activities category in the last 5 years. The lowest lending in this category is witnessed in the case of

Suryoday Small Finance Bank with an average lending of just 5.75% over 5 years.

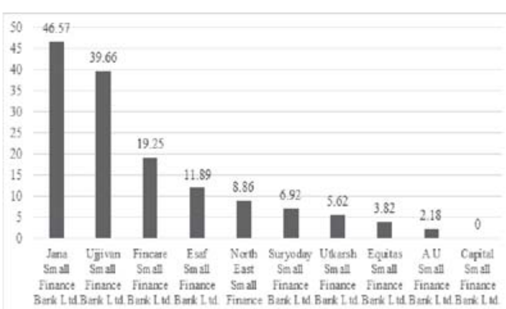
Figure 9: Average % PSL of last 5 years towards Micro Small and Medium Enterprises



Source: Compiled by researchers

The above graph depicted in Figure 9 shows the average % PSL of the last 5 years towards MSME. It shows that Equitas Finance Bank is the highest lender (lending around 12.83% on average) in this category in the last 5 years. The lowest lending in this category is witnessed in the case of Suryoday Small Finance Bank and Fincare Small Finance Bank with average lending of just 0.51% and 0.32% over 5 years respectively.

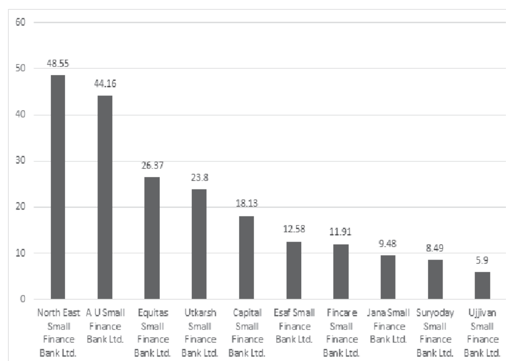
Figure 10: Average % PSL of last 5 years Priority Sector Personal Loan:



Source: Compiled by researchers

The above graph depicted in Figure 10 shows the average % PSL of the last 5 years towards Personal Loans. It shows that Jana Small Finance Bank is the highest lender (lending around 46.57% on average) in this category in the last 5 years. The lowest lending in this category is witnessed in the case of AU Small Finance Bank and Capital Small Finance Bank with average lending of just 2.18% and 0% over 5 years respectively.

Figure 11: Average % lending of last 5 years towards services sectors belonging to Priority Sector:



Source: Compiled by researchers

The above graph depicted in Figure 10 shows the average % PSL of the last 5 years towards Services sectors belonging to Priority Sector. It shows that North-Esat Small Finance Bank is the highest lender (lending around 48.55% on average) in this category in the last 5 years. The lowest lending in this category is witnessed in the case of Suryoday Small Finance Bank and Ujjivan Small Finance Bank with average lending of just 8.49% and 5.9% over 5 years respectively.

6. RECOMMENDATIONS

6.1 Empirical panel regression analysis indicates the share of operating expenses has a significant negative impact on the profitability of the SFBs. It is, therefore, suggested that SFBs must make efforts to reduce O/E by ensuring optimum utilization of resources.

6.2 It has also been found from the panel regression analysis that net non-performing asset has a significant negative impact on the profitability of the SFBs, it is also important to note gross NPA percentage of SFBs has increased by about 4% on a y-o-y basis in 2020, 2021 and 2022.[1] SFBs are suggested to implement appropriate credit monitoring action in order curve raise NPA percentage.

6.3 Although the scope is limited, SFBs are suggested to make an effort to increase non-interest income as it was found to have a significant positive impact on the profitability of the SFBs.

6.4 The Northeastern region has got only 4% of the total branches of SFBs. RBI has taken quite a few steps for incentivizing the expansion of branches in the north-eastern region such as an easy licensing policy for the banks wanting to open branches in the north-eastern region, 25% extra weightage towards the certain districts which are mostly present in the north-eastern states.

6.5 SFBs are also required to have 1/4th i.e., 25% of branches present in a locality having a population of not more than 9999 people (which is designated as a rural area as per RBI). But while analyzing the distribution of branches across various groups of population, we found SFBs are having 19% of their branches present in rural areas, which implies that they are deviating from what they are expected. Therefore, it is suggested that they should open more branches in rural areas keeping their objective of profit enhancement aside.

6.6 Analysing the trend of percentage of PSL across the four categories namely agricultural and allied activities, MSME, Personal Loan, and Services, it has been observed that SFBs are gradually shifting their focus from the objective of providing loans to niche segments of society at lower rates of interest towards making profit by providing more personal loans in priority sector.

7. CONCLUSION

Small Finance Bank is a relatively new concept in the banking system of the country. To date, RBI has permitted 12 SFBs. All these entities belong private sector. Some of them are already listed and some of them are in the process of being listed. It has been observed that the highest number of bank branches are seen in the southern region of the country the reason behind the same is majority of the SFBs were previously NBFC-MFIs. It is a known fact that MFIs had a strong base in the southern region of the country. Northern-eastern states have the lowest number of branches and it has been observed that only the north-east small finance bank has ensured its coverage in the north-eastern region but in the case of other small finance banks, it has been observed that the north-eastern region has been highly neglected. SFBs are also required to have 25% of branches present in the locality having a population of not more than 9999 people. Analyzing the distribution of branches across various groups of the population, we found SFBs have 19% of their branches present in rural areas, which implies that they are deviating from what they are expected. Analyzing the trend of the percentage of PSL across the four categories namely agricultural and allied activities, MSME, Personal Loan & Services, it has been observed that SFBs are gradually shifting their focus from the objective of providing loans to a niche segment of society at lower rates of interest towards making a profit by providing more personal loans in priority sector where there is a liberty of charging a little higher rate of interest. It is however to mention, that over the last 5 years, the profit after tax of the SFBs has grown rapidly so as their branches.

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Orissa Journal of Commerce
Vol. 45, Issue 2, April-June 2024
ISSN: 0974-8482

URL: www.ojcoca.org
DOI: https://doi.org/10.54063/ojc.2024.v45i02.09

Informal Sector Employment Conditions and Living Standards in Assam: Unveiling the Realities

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Abstract

Growing informality is the common phenomenon of the labour market in both India and Assam. Similar to the national scenario, unorganised sector shares more than 90 percent of the employment in Assam. Workers in the informal or unorganized sector are basically exposed to various occupational and health related risk. However, in many developing and underdeveloped countries, issues concerning the working conditions of informal workers remain unaddressed. Based on a primary survey conducted in four districts of Assam, this paper provides an overview of the working conditions of informal workers. The study reveals that the conditions of informal workers of Assam is not satisfactory, and have a significant scope for improvements.

Key words: Informal, Workers, Assam, Conditions, Component.

Introduction

Assam is the highest populated states among the northeastern states having 98.4 per cent of rural area and 86 per cent of the rural population (Census, 2011). In case of different aspect including demographic, Assam shows similar characteristics like India, sometimes it is also called 'Mini India' or 'India in miniature'. In case of labour market also the situation of Assam is similar to that of India. In other words, growing informality is the common phenomenon of the labour market in both India and Assam. Similar to the national scenario, unorganised sector shares more than 90 percent of the employment in Assam. Workers in the informal or unorganized sector are basically exposed to various occupational and health related risk. Over the years, there has been a growing demand of healthcare services with the increasing size of the population as well as with increasing diseases (both communicable and non-communicable) burden (Tripathy, 2014). But concern about the conditions of informal workers is still a neglected issue in many of the developing and under-developed nations. This study presents a report of the conditions of informal workers based on primary survey carried out four districts of rural Assam. A total of 600 samples from the study area are collected, out of which 515 from the rural areas and 85 from the urban areas following the multi-stage technique of data collection. Sample respondents are informal workers and information is collected for both personal level and household level with the intent to fulfill the predetermined objective. To define the informal worker, the definition put forwarded by 17th international conference of Labour Statisticians at ILO is followed. In 2003 the 17th ICLS defined informal employment as "all remunerative work (both self-employment and wage employment) that is not registered, regulated or protected by the existing legal or regulatory frameworks, as well as non-remunerative work undertaken in an income producing enterprise".

The first part of this study describes demographic and locational composition of the informal workers. Second part shows social profile of the informal workers by caste, religion, educational level, family type and so on. Third part reveals economic profile of the informal workers in terms of occupation, main source of income, per capita monthly income, per capita monthly expenditure, wealth index, per capita land holding. Finally, fourth part deals with environmental and sanitary profile in terms of housing condition and basic amenities such as toilet facility, bathroom, ventilation, drinking water etc.

Demographic and Locational Characteristics

The initial section of this chapter shows the demographic and location-related characteristics of the informal workers. It counts informal workers by their age, sex, household size, location related information rural-urban composition, migration status and distance.

Age Composition

Age is an important component in both demographic and social science research. The workers in the study area belong to different age groups. The survey covered information of the 600 households, based on the data collected from 600 samples. Among the six age groups i.e., below 18, 18-30, 31-40, 41-50, 51-60 and above 60, the respective proportion of workers constitute 0.2 per cent, 21.3 per cent, 33.3 per cent, 20.3 per cent, 20.3 per cent and 4.5 per cent.

Age composition of the male and female workers shows that below 18 years age group comprise 0.2 per cent of the male workers. Similarly, more than 21 per cent of males and 19 per cent of females belong to younger age group 18-30 years. Likewise, more than 32 per cent of males and 36 per cent of females fall in the age group 41-50, more than 19 per cent of males and 22 per cent females are belonged to the age group 51-60 and more than 5 per cent of males and 2 per cent of females fall under the age group above 60. Thus, males outnumber females in the younger age below 18 as well as in the age group 18-30 and also old age (above 60). While, females outnumber males in the age group 31-40 and 51-60. Proportion of the young workers of the age group below 18 and 18-30 are more in rural areas, while the proportion of the workers of the age group 31-40, 41-50, and above 60 are higher in urban area.

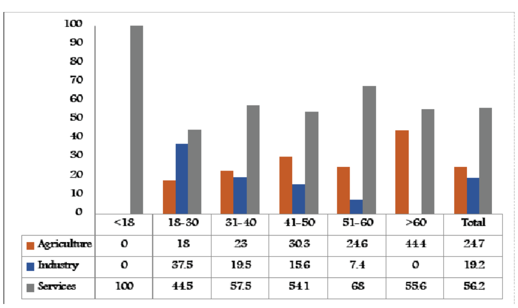
Table.1 Area and Gender-wise Distribution of the Workers on the Basis of Age

Age	Rural	Urban	Male	Female	Total
Below 18	1 (0.2)	0 (0.0)	1 (0.2)	0 (0.0)	1 (0.2)
18-30	161 (32.2)	18 (3.0)	101 (21.8)	27 (19.7)	128 (21.3)
31-40	99 (19.8)	39 (39.0)	150 (32.4)	50 (36.5)	200 (33.3)
41-50	99 (19.8)	23 (23.0)	97 (21.0)	25 (18.2)	122 (20.3)
51-60	107 (21.4)	15 (15.0)	91 (19.7)	31 (22.6)	122 (20.3)
Above 60	22 (4.4)	5 (5.0)	23 (5.0)	4 (2.9)	27 (4.5)
Total	**500 (100.0)**	**100 (100.0)**	**463 (100.0)**	**137 (100.0)**	**600 (100.0)**

Source: Primary Data, 2023. Figures in the Parenthesis indicate percentage to total.

Sector wise analysis shows that 44.4 per cent workers from the agricultural sector and 55.6 per cent workers from services sector are above 60 years whereas; all the workers of the age group below 18 are engaged in service sector. Similarly, in the age group 18-30, 12.8 per cent workers are belonged to agricultural sector, 39.5 per cent belonged to industrial sector and 18.7 per cent workers are belonged to services sector. This is illustrated in figure 1.

Figure.1 Sector-wise Distribution of Workers on the Basis of Age (in per cent)



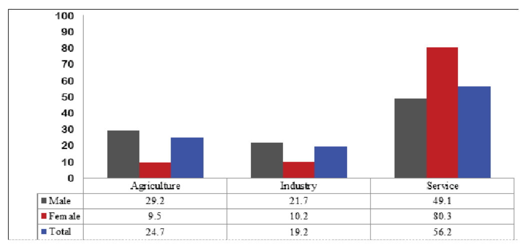
Source: Primary Survey, 2023.

Sex Composition

A total of 600 workers are selected for the study, of which 148 (24.7 per cent) workers belong to agriculture sector, 115 (19.2 per cent) from industrial sector, and 337 (56.2 per cent) belongs to service or tertiary sector. The selected sample consists of 463 (77.2 per cent) male workers and 137 (22.8) female workers.

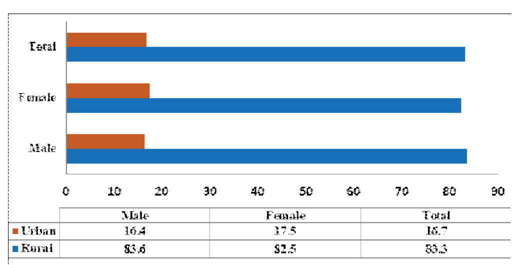
Among total workers, 500 workers reside in rural area and 100 reside in urban area. Among sample workers, 83.3 per cent resides in rural area and 16.7 per cent resides in urban area. The proportion of female workers is more in urban area than the rural area and vice versa.

Figure.2 Sex Composition of the Workers by Sector (in per cent)



Source: Primary Survey, 2023

Figure.3 Sex Composition of the Workers by Area of Residence (in per cent)



Source: Primary Survey, 2023.

Household Size

Average size of household among informal workers is found 5.24 against national average of Assam 4.87 (as per Census 2011). Among the sample districts, Dhubri has the highest size of the family 6.92, followed by Sonitpur (4.62) and Dhemaji (4.18). Sector-wise, the average family size data reveals that Dhubri districts has more average family size for the agricultural workers and for Sonitpur and Dhemaji districts, average family size is more for the industrial sector workers. This is shown in table 2.

Table.2 Average Household Size of the Workers by Sectors & Districts

District (1)	Sector (2)	Average Household Size (3)
Dhubri	Agriculture	8.27
	Industry	6.75
	Services	5.73
	Total	**6.92**
Sonitpur	Agriculture	4.39
	Industry	5.04
	Services	4.43
	Total	**4.62**
Dhemaji	Agriculture	3.58
	Industry	4.72
	Services	4.24
	Total	**4.18**
Total	***	**5.24**
Assam	***	**4.87**

Source: Primary Survey, 2023, Census of India, 2011.

Rural-Urban Composition

Based on the size of settlement and occupation pattern, the populations are divided into two groups i.e., Rural and Urban. Total of 600 workers, 83.3 per cent resides in rural area and 16.7 per cent resides in urban area. The proportion of rural workers is the highest in Dhemaji district (89.7 per cent); followed by Dhemaji district (82.0 per cent) and Dhubri district (78.0 per cent). Distribution of the sample household by rural-urban composition is shown below.

Table.3 Place of Residence of the Workers by Districts

Districts (1)	Type of Area (2)		Total (3)
	Rural	Urban	
Dhubri	192 (78.0)	54 (22.0)	246 (100.0)
Sonitpur	208 (89.7)	24 (10.3)	251 (100.0)
Dhemaji	100 (82.0)	22 (18.0)	103 (100.0)
Total	**500 (83.3)**	**100 (16.7)**	**600 (100.0)**
Assam	85.90	14.10	100

Source: Primary Survey, 2023, Census of India, 2011. Figures in the Parenthesis indicate percentage to row total.

Migration

Migration is the movement of the population from a place of origin to a place of destination in search of various opportunities, education, or job. It is another important determining factor of the status of the socio-economic conditions of the informal workers. In the study area, majority of migrant workers are belonged to urban area and Dhubri district. In rural area, the highest proportions of migrant workers are belonged to Dhubri district (17.2 per cent), followed by Dhemaji (11.0) and Sonitpur district (9.6 per cent). In urban area, the highest migrants are belonged to Dhubri district (20.7 per cent), followed by Sonitpur district (29.2 per cent) and Dhemaji district (22.7 per cent).

Table.4 Migration Status of the Workers by Districts

Type of Area (1)		Migration Status (2)		Total (3)
	Districts	Migrant	Non-Migrant	
Rural	Dhubri	17.2	82.8	100.0
	Sonitpur	9.6	90.4	100.0
	Dhemaji	11.0	89.0	100.0
	Total	**12.8**	**87.2**	**100.0**
Urban	Dhubri	33.3	66.7	100.0
	Sonitpur	29.2	70.8	100.0
	Dhemaji	22.7	77.3	100.0
	Total	**30.0**	**70.0**	**100.0**
Total	Dhubri	20.7	79.3	100.0
	Sonitpur	11.6	88.4	100.0
	Dhemaji	13.1	86.9	100.0
	Total	**15.7**	**84.3**	**100.0**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to row total.

Distance

Distance of the household is important in the determination of availability of some basic facilities. For comparison purposes only, the distance here has been categorized into three dimensions and accordingly, some arbitrary values are given to rank it. For the facilities which were available within 5 KM from the respondent's location, it was termed as 'good', from 6-10 KM, it was termed as 'moderate' and above 10 KM was termed as 'poor' in quality. The distance-wise condition of basic amenities is shown in the table below.

Table.5 Distribution of Sample Households Based on the Nearest Infrastructure Facilities

Nearest institutions & their Quality	No. of households	Percentage (%)
(1)	(2)	(3)
1. Pre-primary		
a. Good	599	99.8
b. Moderate	1	.20
c. Poor	0	0.0
2. Primary		
a. Good	596	99.3
b. Moderate	4	.70
c. Poor	0	0.0
3. High school		
a. Good	522	87.0
b. Moderate	77	12.8
c. Poor	1	.20
4. Higher secondary		
a. Good	445	74.2
b. Moderate	107	17.8
c. Poor	48	8.0
5. College		
a. Good	183	30.5
b. Moderate	187	31.2
c. Poor	230	38.3
6. Hospitals		
a. Good	225	37.5
b. Moderate	160	26.7
c. Poor	215	35.8
7. Sub- health Centre		
a. Good	509	84.8
b. Moderate	78	13.0
c. Poor	13	2.2
8. Post-office		
a. Good	305	50.8
b. Moderate	225	42.5
c. Poor	40	6.7

Source: Primary Survey, 2023.

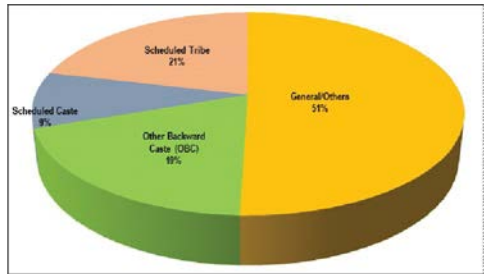
Social Characteristics

Social variables are such variables that are very crucial in any research purpose of social science. In other words, it can also be said that without considering the social background of the sample population, it is impossible to carry out empirical research in social sciences. This section deals shows the social profile of the informal workers by caste, religion, educational level, family type, marital status and information about the head of the household.

Caste Composition

Caste is considered as an important component responsible for determining the social status in many developing countries of the world including India. Caste profile of the informal workers shows that more than 50 per cent of the workers are belong to general or other category, 21 per cent are Scheduled tribe, are 19 per cent OBC and 9 per cent belongs to Scheduled Caste category. The proportion of General or and Other Backward Class workers are recorded more in Dhubri district. The proportion of Scheduled tribe is recorded the most in Sonitpur district, while the most of the scheduled tribe category is recorded in Dhemaji district.

Figure.4 Distribution of the Workers by Caste



Source: Primary Survey, 2023.

Table.6 Caste-wise Distribution of Informal Workers

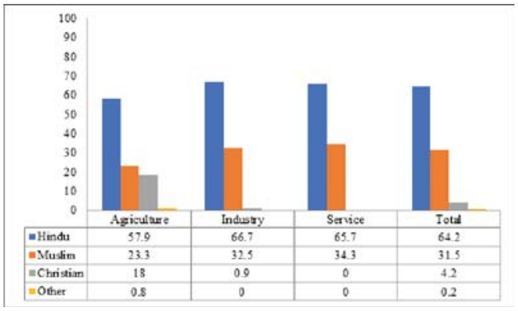
Districts (1)	General/ Others (2)	Other Backward Caste (OBC) (3)	Scheduled Caste (4)	Scheduled Tribe (5)	Total (6)
Dhubri	69.1	25.2	1.2	4.5	100
Sonitpur	42.2	12.5	18.5	26.7	100
Dhemaji	28.7	19.7	6.6	45.1	100
Total	**50.5**	**19.2**	**9**	**21.3**	**100**

Source: Primary Survey, 2023.

Religious Composition

Religion plays an inevitable role in many functions within a social institution. The ideologies, beliefs, and social relations of many people are shaped by their religious identity. So, to determine the social status of a group of people or an individual the role of religion cannot be ignored. Among surveyed workers, 62.2 per cent of the workers in the study area belong to Hindu, 31.5 per cent Muslim, 4.2 Christian and 0.2 other religion.

Figure.5 Distribution of the Workers by Religion



Source: Primary Survey, 2023.

Educational Status

Education is considered as an important instrument to measure vertical mobility in the societal ladder. Higher level of literacy is considered as an important parameter in any development paradigm. In the study area, the highest proportions of the workers have educational qualification up to high school level (24.5 per cent), followed by middle school (24.0 per cent), primary level (22.8 per cent), and illiterate (20.7 per cent), graduate (6.3 per cent), post graduate (1.0 per cent) and other technical education (0.7 per cent).

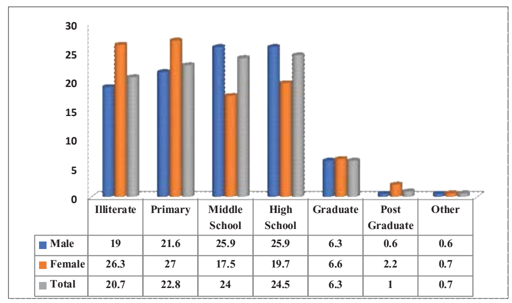
Table.7 Sector-wise Distribution of the Workers by Educational Status

Educational Qualification (1)	Category of employment (2)			Total (3)
	Agriculture	Industry	Service	
Illiterate	27 (20.30)	26 (22.80)	71 (20.10)	124 (20.70)
Primary	30 (22.60)	33 (28.90)	74 (21.0)	137 (22.80)
Middle School	23 (17.30)	40 (35.10)	81 (22.90)	144 (24.0)
High School	41 (30.80)	12 (10.50)	94 (26.60)	147 (24.50)
Graduate	10 (7.50)	3 (2.60)	25 (7.10)	38 (6.30)
Post Graduate	1 (0.80)	0 (0.00)	5 (1.40)	6 (1.0)
Other	1 (0.80)	0 (0.00)	3 (0.80)	4 (0.70)
Total	**133 (100.0)**	**114 (100.0)**	**353 (100.0)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

In case of educational qualification categories viz. illiteracy, primary education, graduate, post graduate and others, females outnumber males. In case of educational level up to middle school and high school males outnumber females.

Figure. 6 Gender-wise Distribution of the Workers by Educational Status



Source: Primary Survey, 2023.

Type of Family

Family is the most primary unit of society. It is bondage between/among people by blood relation, adoption, and the process of marriage. The process of socialization starts from the family itself and all the socio-economic activities begin at home. According to George Peter Murdock (1949)[1] family is a universal institution or social group, which is shaped by reproduction, economic cooperation, and common residence.

In general, families are divided into Matriarchal and Patriarchal families. But in our society the experiences of patriarchal values in common, so here patriarchal family are given due emphasis. A patriarchal family is subdivided into two major segments; single-family and joint family. But the type of family may also include others, like a single parent, extended family, childless family, stepfamily, etc. A nuclear family consists of a couple and their dependent child, which is also known as an elementary family. A joint family may be referred to as a family which consists of three or more than three generations with their spouses living like a single-family.

In the study area, 66.2 per cent of the workers have nuclear type of family and 33.8 per cent workers have joint family. The proportion of nuclear family is the highest in Sonitpur district (74.1 per cent), followed by Dhemaji district (68.9 per cent) and Dhubri district (57.3 per cent). On the other hand, the proportion of joint family is the highest in Dhubri district (42.7 per cent), followed by Dhemaji district (31.1 per cent) and Sonitpur district (25.9 per cent).

Table.8 Distribution of Workers by the Type of Family

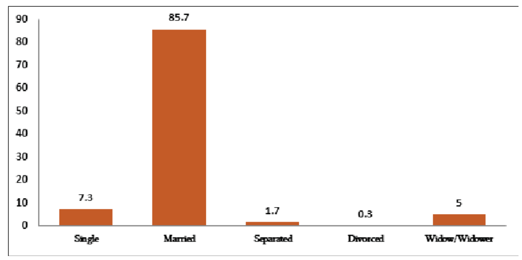
Type of Family (1)	Districts (2)			Total (3)
	Dhubri	Sonitpur	Dhemaji	
Nuclear	141 (57.3)	172 (74.1)	84 (68.9)	397 (66.2)
Joint	105 (42.7)	60 (25.9)	38 (31.1)	203 (33.8)
Total	**246 (100.0)**	**232 (100.0)**	**122 (100.0)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Marital Status

The study shows that most of the informal workers are married (85.7 per cent), followed by single (7.3 per cent), widow or widower (5.0 per cent), whereas, only 1.7 per cent workers are separated and 0.3 are divorced by the marital status. It is also revealed that Single marital status category, married category males outnumber females, while in the marital status separated, divorced and widow/widower category females outnumber male.

Figure.7 Distribution of the Workers by Marital Status (in per cent)



Source: Primary Survey, 2023.

Table.9 Marital Status of Informal Workers by Gender

Gender (1)	Marital Status of the respondent (2)					Total (3)
	Single	Married	Separated	Divorced	Widow/Widower	
Male	43 (9.30)	414 (89.40)	3 (0.60)	1 (0.20)	2 (0.40)	463 (100.00)
Female	1 (0.70)	100 (73.00)	7 (5.10)	1 (0.70)	28 (20.40)	137 (100.00)
Total	**44 (7.30)**	**514 (85.70)**	**10 (1.70)**	**2 (0.30)**	**30 (5.00)**	**600 (100.00)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Head of the Household

The total average age of the household in the study area is 48.15. Among three districts, average age of the household head is the highest in Dhubri (49.65), followed by Sonitpur (47.78), and the lowest in Dhemaji (45.1). With regard to gender of the head of the household, 9.8 per cent of the total households are female head and 90.8 per cent are male headed. Dhemaji district (13.9 per cent) has more household headed by females, followed by followed by Sonitpur (10.3 per cent). In Dhubri district, the proportion of female headed household is the lowest i.e., 7.3 per cent, less than the total average of 9.8 per cent.

Table.10 District-wise Average Age and Gender of the Household Head

Districts (1)	Gender of the HH (2)	Percentage (3)	Average Age of the HH (4)
Dhubri	Male	92.7	49.65
	Female	7.3	
Sonitpur	Male	89.7	47.78
	Female	10.3	
Dhemaji	Male	86.1	45.1
	Female	13.9	
Total	**Male**	**90.2**	**48.15**
	Female	**9.8**	

Source: Primary Survey, 2023.

Economic Characteristics

The analysis of economic profile is very effective in bringing out the real picture of different dimensions in society; such as occupational status, income, wealth, and employment opportunities (Muller and Parcel, 1981)[1]. This section includes occupational status, main source of income, per capita monthly income and expenditure of the family, per capita size of agricultural land holding and possession of asset.

Occupational Status

In the study area, 49.2 per cent workers are found self-employed, 32. 40 per cent casual labour, 9.5 per cent contributing family workers and 8.9 per cent other category workers (this includes retired, pension earner, govt. employee or any other category apart from the casual labour, self-employed and contributing family worker) by occupation. The proportion of casual labour is the highest in Dhemaji district (40.80 per cent), contributing family worker is the highest in Dhubri district (11.80 per cent), and self-employed and other category worker is the highest in Sonitpur district (52.20 per cent) and (14.20 per cent) respectively.

Table.11 Occupation of the Workers by Districts

District (1)	Occupational Type (2)				Total (3)
	Casual Labour	Contributing Family Worker	Self-employed	Other	
Dhubri	87 (35.40)	29 (11.80)	119 (48.40)	11 (4.50)	246 (100)
Sonitpur	58 (25.00)	20 (8.60)	121 (52.20)	33 (14.20)	232 (100)
Dhemaji	49 (40.80)	8 (6.70)	54 (45.00)	9 (7.50)	120 (100)
Total	**194 (32.40)**	**57 (9.50)**	**294 (49.20)**	**53 (8.90)**	**598 (100)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Main Source of Income

The Source of income is also known as the source of livelihood. In the study, the sources of income are broadly divided into three categories viz, Agriculture, Industry, and services. Agriculture and allied activities are included in the primary sector, Industry and construction fall in the secondary sector and services fall in the tertiary sector. It is observed that more than 50 per cent of the informal workers are engaged in services sector primarily for their livelihood. Around 25 per cent workers main source of income is agriculture and 20 per cent worker depends mainly on industries for the survival. Proportion of workers agriculture as primary means of income is the highest in Sonitpur district (34.9 per cent), followed by Dhemaji (21.3 per cent) and Dhubri (16.7 per cent). Similarly, the proportion of workers industry as main source of livelihood is the highest in Dhemaji (38.5 per cent), followed by Sonitpur (15.9 per cent) and Dhubri (12.6 per cent). In case of service sector as primary source of income, Dhubri (70.7 per cent) records the highest, followed by Sonitpur (49.1 per cent) and Dhemaji (40.2 per cent).

Total (1)	Main source of income (2)			Total (3)
	Agriculture	Industry	Services	
Dhubri	41 (16.70)	31 (12.60)	174 (70.70)	246 (100.0)
Sonitpur	81 (34.90)	37 (15.90)	114 (49.10)	232 (100.0)
Dhemaji	26 (21.30)	47 (38.50)	49 (40.20)	122 (100.0)
Total	**148 (24.70)**	**115 (19.20)**	**337 (56.20)**	**600 (100.0)**

Table.12 Main Source of Income of the Workers by Districts

Source: Primary Survey, 2023.

Monthly Income and Per Capita Family Income

The socio-economic status and the living standard of the household of any community mostly depend on the family income. In most of the studies in social sciences, it is vital to collect data on the income of the household to determine the economic status. By analyzing monthly income of the workers, we can see that 42.8 per cent of the workers monthly income falls in the range of Rs. 10001-20000. The lowest and the highest income category shares 5.5 per cent and 5.5 per cent of the workers. Gender-wise, the picture of the monthly income shows that the share of females in the lowest income category i.e., income group below 5000 is comparatively higher than the male counterparts and vice versa.

Table.13 Monthly Income of the Worker by Gender

Gender (1)	Income Group (in Rs.) (2)					Total (3)
	Up to 5000	5001-10000	10001-20000	20001-30000	Above 30000	
Male	23 (5.0)	162 (35.0)	207 (44.70)	43 (9.30)	28 (6.0)	463 (100.0)
Female	10 (7.30)	54 (39.40)	50 (36.50)	18 (13.10)	5 (3.60)	137 (100.0)
Total	**33 (5.50)**	**216 (36.0)**	**257 (42.80)**	**61 (10.20)**	**33 (5.50)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

It is found that in the study area, most of the household's per capita monthly income lies between Rs. 1001-Rs.5000 (Table.12). District-wise data shows that per capita income up to Rs. 1000 is the most in Dhubri district. Per capita income between Rs. 1001-5,000 and Rs. 5,001-10,000 is the highest in Sonitpur district. In Dhemaji district, per capita monthly income is comparatively found more for the income range from Rs. 10,001-20,000, Rs. 20,001-30,000 and Rs. 30,000 above.

Income is closely related to the source of income. In the lowest per capita monthly income category i.e., up Rs. 1000 is associated with agricultural sector, followed by service sector. On the other hand, the highest per capita monthly category i.e., above Rs. 30,000 is associated with industrial sector, followed by services (Table.15).

Table.14 Per Capita Monthly Family Income by Districts

Districts (1)	Per Capita Monthly Family Income (in Rs.)						Total (8)
	Up to 1000 (2)	1,001-5,000 (3)	5,001-10,000 (4)	10,001-20,000 (5)	20,001-30,000 (6)	Above 30,000 (7)	
Dhubri	27 (11.0)	198 (80.50)	20 (8.10)	1 (0.40)	0 (0.0)	0 (0.0)	246 (100.0)
Sonitpur	7 (3.0)	192 (82.80)	30 (12.90)	3 (1.30)	0 (0.0)	0 (0.0)	232 (100.0)
Dhemaji	3 (2.50)	89 (73.0)	15 (12.30)	8 (6.60)	4 (3.30)	3 (2.50)	122 (100.0)
Total	**37 (6.20)**	**479 (79.80)**	**65 (10.80)**	**12 (2.0)**	**4 (0.70)**	**3 (0.50)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Table.15 Per Capita Monthly Family Income by Sectors

Sector (1)	Per Capita Monthly Family Income (in Rs.)						Total (8)
	Up to 1000 (2)	1,001-50,00 (3)	5,001-10,000 (4)	10,001-20,000 (5)	20,001-30,000 (6)	Above 30,000 (7)	
Agriculture	16 (10.80)	119 (80.40)	12 (8.10)	1 (0.70)	0 (0.0)	0 (0.0)	148 (100.0)
Industry	0 (0.00)	103 (89.60)	8 (7.0)	2 (1.70)	1 (0.90)	1 (0.90)	115 (100.0)
Services	21 (6.20)	257 (76.30)	45 (13.40)	9 (2.70)	3 (0.90)	2 (0.60)	337 (100.0)
Total	**37 (6.20)**	**479 (79.80)**	**65 (10.80)**	**12 (2.0)**	**4 (0.70)**	**3 (0.50)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Monthly Expenditure of the Household

Due to the reluctant nature of human, it is difficult to get correct information about family income, so monthly expenditure of the household is taken as an index of economic status of the workers. Monthly expenditure of all the categories was estimated to be highest for workers engaged in service sector as the source of income.

Table.16 Monthly Expenditure of the Household by Sector

Monthly Expenditure (in Rs.) (1)	Main source of income			Total (5)
	Agriculture (2)	Industry (3)	Services (4)	
Up to 5000	22 (26.80)	21 (25.60)	39 (47.60)	82 (100.0)
50001-10000	85 (26.10)	67 (20.60)	174 (53.40)	326 (100.0)
10001-20000	39 (23.60)	22 (13.30)	104 (63.0)	165 (100.0)
20001-30000	2 (10.50)	1 (5.30)	16 (84.20)	19 (100.0)
Above 30000	0 (0.0)	4 (50.0)	4 (50.0)	8 (100.0)
Total	**148 (24.70)**	**115 (19.20)**	**337 (56.20)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

The study shows that monthly family expenditure among the female workers of the urban area is more than the female workers of the urban area. In case of male workers, monthly family expenditure varies between rural and urban area in different income group category.

Table.17 Monthly Expenditure of the Workers by Area and Gender (in Per Cent)

Income Group (in Rs.)	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
Up to 5000	11.9	10.6	21.1	33.3	13.4	14.6
5001-10000	56.8	53.1	50	33.3	55.7	49.6
10001-20000	29.2	23.9	23.7	29.2	28.3	24.8
20001-30000	1.3	12.4	0	0	1.1	10.2
Above 30000	0.8	0	5.3	4.2	1.5	0.7
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Primary Survey, 2023.

Agricultural Land Holding Per Capita

Around 42.5 per cent of the informal workers own agricultural land. Households with no agricultural land comprise 57.5 per cent of the total households. Workers with up to 1 bigha constituted 30.5 per cent; those with more than 1 to 5 bighas of land constituted 11 per cent, and finally with more than 5 bighas of land constituted 1 per cent. It is also seen that households without agricultural land are the highest in Dhubri district (71.1 per cent). Households with Agricultural land up to 1 bigha and more than 1 to 5 bigha is the highest in Sonitpur district and the households with agricultural land more than 5 bigha is the highest in Dhemaji district.

Table.18 Per Capita Size of Agricultural Land Holding by Districts

District (1)	Per Capita Land Holding Size (in Bigha)				
	No Agricultural Land (2)	Up to 1 (3)	More than 1 to 5 (4)	More than 5 (5)	Total (6)
Dhubri	175 (71.1)	70 (28.5)	1 (0.4)	0 (0.0)	246 (100)
Sonitpur	102 (44.0)	82 (35.3)	46 (19.8)	2 (0.9)	232 (100)
Dhemaji	68 (55.7)	31 (25.4)	19 (15.6)	4 (3.3)	122 (100)
Total	**345 (57.5)**	**183 (30.5)**	**66 (11.0)**	**6 (1.0)**	**600 (100)**

Source: Primary Survey, 2023. Figures in the Parenthesis indicate percentage to total.

Possession of Assets

Possession of assets in terms of mobile phone, television, computer, electric fan, refrigerator, car, motorcycle, etc. is important in measuring the standard of living of the households. It is seen that in the study area, around 79 per cent of the workers possess fan, 2.3 per cent have radio, 43 per cent have television, 13 per cent have machine, 5.7 per cent have computer, 93.80 have mobile phone, 35.3 per cent have motorcycle and 3.7 per cent have car. Mean index of the asset possession for the study area is 0.345. Both Sonitpur (0.397) and Dhemaji district (0.385) more value of mean index than the total average (0.345), whereas Dhubri has the lowest mean score of the index i.e. 0.276.

Table.19 Possession of Asset by the Workers

Districts	Fan	Radio	TV	Machine	Computer	Mobile	Motorcycle	Car	Mean Index
Dhemaji 122	107 (87.70)	6 (4.90)	56 (45.90)	17 (13.90)	7 (5.70)	121 (99.20)	56 (45.90)	6 (4.90)	0.385
Sonitpur 232	196 (84.50)	4 (1.70)	151 (65.10)	43 (18.50)	10 (4.30)	220 (94.80)	100 (43.10)	13 (5.60)	0.397
Dhubri 246	173 (70.30)	4 (1.60)	51 (20.70)	18 (7.30)	17 (6.90)	222 (90.20)	56 (22.80)	3 (1.20)	0.276
Total 600	**476 (79.30)**	**14 (2.30)**	**258 (43.0)**	**78 (13.0)**	**34 (5.70)**	**563 (93.80)**	**212 (35.30)**	**22 (3.70)**	**0.345**

Source: Primary Survey, 2023. Figures in Parenthesis represent percentage.

Environment & Sanitation Related Characteristics

This section incorporates environment and sanitation related profile of the workers by exploring housing condition and basic amenities of the household in the form of toilet facility, bathroom, ventilation, drinking water sources and so on.

Housing Condition

Housing is one of the basic important needs of every human being and it serves as a parameter which determines living conditions of the workers. Housing is regarded as one of the major elements to measure the material living standard and the status of the individuals in the society. According to (Krieger & Higgins, 2009), good housing has acute influence on people's health[1].

Four types of houses are recorded in the study area: The permanent concrete structure (pucca), semi-permanent bricked wall with tiled roof (Semi-pucca), mud hutment (Kutcha) and other type of houses (temporary tin houses). First type accounts 40.5 per cent, second type accounts 16.7 per cent, third 39 per cent, and the remaining 3.8 per cent of the non-permanent tin houses (type four) are basically found in the Char area (flood prone) of Dhubri district.

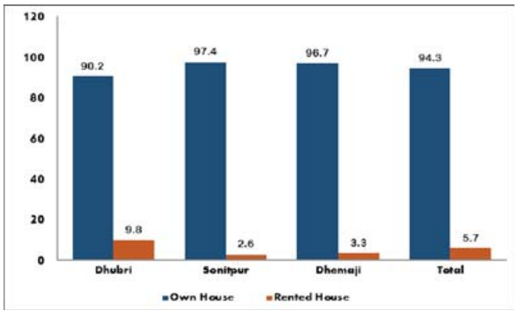
Table.20 Type of Houses by Districts

District (1)	Housing type				Total (6)
	Pucca (2)	Semi Pucca (3)	Kutcha (4)	Other (5)	
Dhubri	102 (41.50)	30 (12.20)	91 (37.0)	23 (9.30)	246 (100.0)
Sonitpur	98 (42.20)	52 (22.40)	82 (35.30)	0 (0.0)	232 (100.0)
Dhemaji	43 (35.20)	18 (14.80)	61 (50.0)	0 (0.0)	122 (100.0)
Total	**243 (40.50)**	**100 (16.70)**	**234 (39.00)**	**23 (3.80)**	**600 (100.0)**

Source: Primary Survey, 2023. Figures in Parenthesis represent percentage.

It is found that majority of the sample workers (94.3 per cent) are residing in self-owned houses and only 5.7 per cent are residing in rented houses. In Sonitpur district (97.6 per cent) workers live in own house and only 2.6 per cent workers live in rented house. While, in Dhubri district the proportion of workers are living in rented house is the highest i.e., 9.8 per cent. Sector-wise analysis shows that 26.3 per cent agricultural workers live in pucca houses; the corresponding share is 36 per cent for industrial workers and 47.3 per cent for service sector workers. On the other hand, 48.1 per cent agricultural workers, 45.6 per cent industrial workers and 33.4 per cent service sector workers live in Kutcha houses.

Figure.8 House-ownership by District (in per cent)



Source: Primary Survey, 2023.

Table.21 Housing Condition of the Workers by Category of Employment (in per cent)				
Housing Type (1)	Agricultural Worker (2)	Industrial Worker (3)	Service Sector Worker (4)	Total (5)
Pucca	26.3	36	47.3	40.5
Semi Pucca	24.8	18.4	13	16.7
Kutcha	48.1	45.6	33.4	39
Other	0.8	0	6.2	3.8
Total	**100**	**100**	**100**	**100**

Source: Primary Survey, 2023. Figures in Parenthesis represent percentage.

Amenities of the Household

Information also collected relating to basic amenities of the household such as road condition, bathroom facility, availability of separate bedroom, separate kitchen, separate toilet, water availability, fuel used, lighting source, and ventilation facility. The analysis shows that 36.3 per cent have pucca road condition, while 44.7 per cent have Kutcha and other 19 per cent have sand graveled road condition. Bathroom condition of the 40 per cent of the household is pucca, 51 per cent have Kutcha and remaining 9 per cent uses open place for bathing. With regard to separate bedroom and separate kitchen, the household having that facility is 69.2 per cent and 68.8 per cent respectively. It is also found that 58.2 per cent households have sanitary toilet, another 39.1 have pit toilet and remaining 2.7 uses open source for toilet. Around 53.8 per cent household have in house water sources and 46.2 per cent of the households use water from out-house premises. For cooking purpose, 79.2 Per cent of the household are using LPG, 16.8 per cent depend upon firewood and 4 per cent use other sources such as electricity and cow dung. With regard to lighting source, 87.3 per cent use electricity, 3.3 per cent use kerosene and 9.4 per cent use other source such as battery light and solar light. Solar light use is mostly found in Char area of Dhubri district. Information on the condition of Sunshine facility reveals that around 40.8 per cent households have good ventilation facility, 30.2 per cent have moderate condition of ventilation and 28.4 per cent have poor condition of the ventilation in their houses.

Table.22 Information on Basic Amenities		
Type of facilities	**No. of household**	**Percentage of household**
(1)	**(2)**	**(3)**
1. Road Condition		
a. Pucca	218	36.3
b. Kutcha	268	44.7
c. Stand graveled	114	19.0
2. Bathroom Facility		
a. Pucca	204	40.0
b. Kutcha	306	51.0
c. Open	54	9.0
3. Separate Bedroom		
a. Yes	415	69.2
b. No	185	30.8
4. Separate Kitchen		
a. Yes	413	68.8
c. No	187	31.2
5. Toilet Facility		
a. Sanitary	349	58.2
b. Pit	235	39.1
c. Open	16	2.7
6. Availability of Water		
a. In-house premises	323	53.8
b. Out-house premises	277	46.2
7. Fuel Used		
a. Firewood	101	16.8
b. LPG	475	79.2
c. Other	24	4.0
8. Lighting Source		
a. Electricity	524	87.3
b. Kerosene	20	3.3
c. Other	56	9.4
9. Ventilation Facility		
a. Good	245	40.8
b. Moderate	185	30.8
c. Poor	170	28.4

Source: Primary Survey, 2023.

Conclusion

Analysis of the field survey highlights the status of informal workers in terms of demographic, social, economic, health-related and work-related condition. Demographic profile of the informal worker shows that share of younger population i.e., less than 30 years age is the lowest among the working age population. Compare to women, the share of men in the workforce is found more in the study area. Further, it was also found that the female workers in the urban space are slightly more than that of rural area. Though, feminisation is often related to agricultural sector but present study reveals that the proportion of the share of women in services is considerably higher than the share in manufacturing and agriculture sector. It is quite consistent with the findings made by IMF (Ostry, et.al., 2018)[1]. Average size of the household of the informal worker is found 5.24, slightly more than the national average of 4.87. Among the total workforce migrant workers comprises a 16 per cent worker, the highest in Dhubri district (20.7 per cent). The social profile of the workers shows that the proportion of workers of the background general and other caste shares the highest (51 per cent) and Hindu religion shares the most (64.2 per cent). Further, the educational attainment data shows that, the share of workers having high school level qualification is relatively more (24.5 per cent), and the lowest share is found for the technical education (0.7 per cent). Nuclear family type and marital status (married) is predominant among the workers in the study area. With regard to head of the household, around 90 per cent household's head was male and average age of the head of household was 48.15 years. Economic profile reveals that among the workers, self-employment as occupation is quite popular in the study area; with its share of 49.2 per cent and services is the main source of livelihood providing bread to around 56.2 per cent of the households. Monthly income data shows that around 42.8 per cent household's monthly income falls in the income group more than 10,000 - 20,000 Rupees. Per capita monthly income shows that around 80 per cent household's per capita monthly income fall in the income group between Rs. 1001-5000 categories. Monthly expenditure picture depicts that household's run by services or industrial income made more expenses than household run by agricultural sector. Land holding size data shows that around 57.5 per cent workers in the study area do not have land for agriculture purposes and 30.5 per cent household's per capita land holding is up to 1 Bigha. With regard to asset possession, Sonitpur district is found relatively better than other sample districts. Information on environmental and sanitation profile reveals that around 40.5 per cent workers live in pucca houses, followed by 39 per cent in Kutcha houses. With regard to basic amenities, it is seen that 44.7 per cent workers responded to Kutcha road as means of communication to work place, 51 per cent uses Kutcha bathroom, 30.8 per cent do not have separate bedroom, 31.2 per cent households do not have separate kitchen in their houses, around 39 per cent uses pit toilet, 46.2 per cent depend on out-house sources for drinking water, around 17 per cent uses firewood as fuel, 3.3 per cent as kerosene for lighting, and around 28 per cent lives in the household with poor sunshine conditions.

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ISBN: 0974-8482

Orissa Journal of Commerce

Published by : Dr. Prabodha Kumar Hota, Managing Editor
on Behalf of Orissa Commerce Association, Odisha, India.
E-mail: submissionojc@gmail.com
journal Website: www.ojcoca.org