Women Empowerment through Financial Inclusion: An Analysis of Slums in Ludhiana and Patna

A Thesis

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By

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Candidate's Declaration

I, hereby certify that the thesis titled "Women Empowerment through Financial Inclusion: An Analysis of Slums in Ludhiana and Patna", submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy is an authentic record of my research work carried out under the guidance of Prof Seema Singh. Any material borrowed or referred to is duly acknowledged.

The matter presented in the thesis has not been submitted elsewhere in part or entirely to any other university or institute for the award of any degree.

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Supervisor's Certificate

This is to certify that the thesis titled "Women Empowerment through Financial Inclusion: An Analysis of Slums in Ludhiana and Patna", submitted in the fulfilment of the requirements for the award of the degree of Doctor of Philosophy, is an original research work carried out by Ms Shivangi Bhatia, under my supervision. The matter presented in the thesis has not been submitted elsewhere in part or fully to any university or institute for the award of any degree, to the best of my knowledge.

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List of Abbreviations

Average Shared Variance	–	ASV
Average Variance Extracted	–	AVE
Composite Reliability	–	CR
Confirmatory factor analysis	–	CFA
Economic Empowerment Dimensions	–	EE
Exploratory factor analysis	–	EFA
Financial Inclusion	–	FI
Financial Inclusion Index	–	FII
Interpretive Structural Modelling	–	ISM
Intervention with Microfinance for AIDS and Gender Equity	–	IMAGE
Maximum Shared Variance	–	MSV
Millennium Development Goals	–	MDG
Political Empowerment Dimensions	–	PE
Pradhan Mantri Jan Dhan Yojana	–	PJD
Pradhan Mantri Jeevan Jyoti Bima Yojana	–	PJJB
Pradhan Mantri Suraksha Bima Yojana	–	PSB
Principal Component Analysis	–	PCA
Private Sector Bank	–	PRB
Public Sector Bank	–	PSB

Regional Rural Bank	–	RRB
Self-employed women association	-	SEWA
Social Empowerment Dimensions	–	SE
Sustainable Development Goals	–	SDG
United Nations	–	UN
Women Empowerment	–	WE

Summary

Women Empowerment is high on the agenda of the development framework. Even though, women make significant contributions in the economy, yet they gain disproportionately low on return as they do not have control over resources, savings and borrowings from the banks. Financial Inclusion (FI) is a global phenomenon that is about connecting every individual with access and usage of a wide range of financial products and services at affordable costs. The government's focus on providing banking to unbanked will positively boost the household at the lower segment of the society. In this direction, the Government of India launched "*Pradhan Mantri Jan Dhan Yojana*" (PJD), "*Pradhan Mantri Jeevan Jyoti Bima Yojana*" (PJJB), "*Pradhan Mantri Suraksha Bima Yojana*" (PSB), and "*Atal Pension Yojana*" (APS) in 2014, contributing to the achievement of Sustainable Development Goals (SDGs). In this background, the thesis investigates the trajectory of women empowerment through financial inclusion in urban slums of Ludhiana and Patna and own bank account under PJD. The data was gathered from 1,140 women in slums through a structured schedule on a five-point Likert scale. The schedule was pretested and validated using reliability and validity tests. The exploratory and confirmatory factor analysis were performed to validate the questions002E

The first objective of the thesis was to identify the extent of Financial Inclusion which was measured through Financial Inclusion Index (FII). The FII is a two-dimensional index that categorised the scores of women in slums into high, medium and low financial inclusion categories. The first dimension of FII is the usage of banking services and the second dimension is the subscription of financial products. This thesis showed that 61 per cent of total females in both cities lie in the low financial inclusion category.

By explaining further, after categorising the women into different categories of Financial Inclusion, its impact on their Economic Empowerment was examined using Linear Regression by using dummy variable for it. The results of regression model indicated that the relationship was significant and fit well with FII. Finally, the dimensions of women empowerment i.e. Economic, Social and Political were separately discussed. The impact of women's Economic Empowerment on their Social and Political Empowerment was analysed using Linear Regression. The results showed that the effects of Economic Empowerment on Social and Political Empowerment is significant.

The next objective of the thesis was to study whether education, awareness and location of respondents affected the choice of PJJB and PSB. This objective was accomplished using Chi-Square test. The results were indicative of the importance of education and awareness regarding the subscription of insurance schemes, and location was not significant in the subscription of these schemes.

The final objective is to evaluate the challenges/ barriers women face in accessing financial services by using Interpretive Structural Modelling (ISM) technique. The technique identified the relationships among barriers, and these barriers were prioritised based on the level of contribution as a hurdle in accessing financial services identifying the most crucial barriers to financial inclusion. Further, MICMAC Analysis was performed to identify the crucial barriers which need to be addressed to improve the state of FI. The significant findings from the analysis of results indicated that bank-related variables and internet access were crucial to financial inclusion among women in slums.

Women's financial inclusion significantly contributes to their economic empowerment, which ultimately leads to their social and political empowerment. The findings of the studies in this thesis ascertain that women in urban slums do not lack access to financial institutions. Instead, they suffer from economic risks such as unsteady earnings, non-contractual informal jobs; financial risks like reliance on the cash economy, informal credit; and social risks like social fragmentations. This thesis suggests that improving financial literacy and awareness regarding financial inclusion schemes can boost inclusion among women in slums. The results in this thesis have critical implications for policymakers and stakeholders involved in the Financial Inclusion process such as bankers, self-help groups and others to re-orient themselves towards Financial Inclusion practices. The thesis highlights theoretical and practical implications along with the significant limitations and potential areas of future research.

Key words: Financial Inclusion, Women in Slums, Pradhan Mantri Jan Dhan Yojana, Pradhan Mantri Jeevan Jyoti Bima Yojana, Pradhan Mantri Suraksha Bima Yojana, Atal Pension Yojana, Interpretive Structural Modelling, Barriers to Financial Inclusion.

CHAPTER 1 INTRODUCTION

"Empowering women is a prerequisite for creating a good nation, when women are empowered, the society with stability is assured. Empowerment of women is essential as their value system leads to the development of a good family, society and ultimately a good nation."

- Dr. APJ Abdul Kalam

1.1 Background

Since its inception, the welfare of women has continued to be one of the areas of concern of the United Nations (UN, 1995). Substantial progress has been made towards the upliftment of women in the last two decades through Millennium Development Goals and Sustainable Development Goals in health, education, and economic welfare. Empowered women make their own life decisions, which promotes their overall well-being. Gender equality and women's empowerment are critical to global progress, and they can be aided by making financial services more affordable (Holloway, Niazi and Rouse, 2017).

According to World Bank Findex data, 1.2 billion adults have had access to financial services since 2011, yet about one-third, or 1.7 billion adults, remain unbanked (Demirguc-Kunt *et al.,* 2020). Out of these, Females make up 56 per cent of the unbanked population (Demirguc-Kunt et al., 2018). A large number of females lack command over their assets, sexual and regenerative rights, independence from physical and sexual accomplices (WHO, 2013; Clark *et al.,* 2018), and 52 per cent of females were free to make their own decisions (UN, 2017).

Thus, to address the issue and attain SDG 5, related to gender equality, by 2030, approximately 193 nations have vowed to take critical measures (Hendriks, 2019). Women are stepping up in order to question the systems and institutions that are impeding them. The rules set up by the

Convention in 1979 and later by the Beijing Platform for Action in 1995 intend to remove all types of prejudice against women (Tripp, 2006).

Financial inclusion (FI) — access to financial services for households — is becoming a priority for governments and institutions (Ardic *et al*., 2011; Demirgüç-Kunt and Klapper, 2013; Allen *et al*., 2016). Expanding the approach and using financial products and services are essential for comprehensive financial development and neediness mitigation. Individuals taking part in the monetary framework are prepared to oversee risks and manage them (Cull *et al*., 2014; Dupas and Robinson, 2013).

As indicated by Findex measurements of the Word Bank, 1.2 billion people have approached financial institutions since 2011, yet around 33 per cent (i.e. 1.7 billion people) remain unbanked. Around half of the unbanked populace includes impoverished families or those not in the workforce (World Bank, 2018). FI was considered one of the essential mainstays of worldwide development and is assigned as a facilitator for seventeen Sustainable Development Goals in G-20. FI is seen as a base to reduce poverty and improve accomplishment. Over 60 countries, in this concern, have established public policies to accomplish Universal Financial Access by 2020 (McIntyre *et al.*, 2013).

Expanding females' economic participation is critical because they have experienced the suffering of neediness because of inconsistent work divisions and an absence of power over financial assets (Singh and Singh, 2020). Numerous females depend on their better half, and one in every three wedded females in non-industrial countries has no authority over family expenses (United Nations, 2015). Over 10 per cent of the females have no idea about how their income has been spent (United Nations, 2015). Moreover, females often have fewer educational achievements, work outside the

home, resource and land proprietorship, resource legacy, and command over their monetary future. Notwithstanding ongoing upgrades in stretching out admittance to the formal financial system in the current scenario, a vast access gap among people continues (Hofmann, 2020). Around the world, only 58% of females having a formal bank account, contrasted with 65% of males, have exemplified FI as a critical marker (Demirguc-Kunt *et al*., 2015). This gender disbalance is more perceptible among people in developing economies, about 18 per cent in South Asia (Demirguc-Kunt *et al*., 2015). It resulted in social exclusion and gender disparities, far more prevalent in underdeveloped nations than in industrialised nations (Ahmed *et al*., 2001; Dawar and Singh, 2016).

Thus, women empowerment (WE) is a bold strategy to change the power dynamics favouring females, resulting in greater gender equality (Batliwala, 2007). Empowering women means making their life decisions by the self, which improves general prosperity. Gender fairness and strengthening females are crucial to worldwide growth and development (Bhatia and Singh, 2019). The status of females can be improved by providing them with modest financial products and services (Holloway *et al*., 2017). Complete involvement in the formal financial system includes resolving the difficulties with the monetary framework. Instead, the current focus is to resolve and maintain social inclusion (Rangarajan, 2008). The comprehensive monetary model has emerged as a method for developing nations to achieve their objectives. Improving systems to strengthen women through inexpensive financial services is a particular way to accomplish worldwide sustainable development. The attention towards the WE has immensely grown over the last few decades, and its progression is also strengthened in India. Most of the empirical articles analysed the impact of FI on WE that have evaluated either a too-broad definition of empowerment or a

shortened element (Goetz and Gupta, 1996; Fareed *et al.,* 2017; Barasa and Lugo, 2015; Kaur and Kapuria, 2020).

The study in this thesis examines the level of FI among women in urban slums and to what extent it empowers them. To be more specific, this study in the thesis examines the current state of the GOI's FI programmes for women in urban slums in two Indian cities – Ludhiana and Patna. This thesis investigates the effects of these programs on WE in urban slums, where empowerment has been measured as women's social, political, and economic empowerment in the slums.

The research framework examines the effects of FI programmes such as the "*Pradhan Mantri Jan Dhan Yojana*" (PJD), the "*Pradhan Mantri Jeevan Jyoti Bima Yojana*" (PJJB), the "*Pradhan Mantri Suraksha Bima Yojana*" (PSB), and the "*Atal Pension Scheme*" (APS) on women living in urban slums in the towns of Ludhiana and Patna. The study's findings demonstrate robust results for the effects of FI on WE. For controlling the variations in the study, the sample was carried out from the population of women with PJD bank accounts. According to this study, the rate of WE would likely accelerate as they begin to benefit from increased FI schemes.

1.2 Women Empowerment (WE)

Women empowerment is a multifaceted, multidimensional, multi-layered concept. WE can be traced back to 400 BC in Greece, where *Agnodice bravely practised medicine when women faced the death penalty for doing so[1]*, and in the 17th century, the legalistic meaning "*to invest with authority*". It is the process of equipping or authorising people to think and act autonomously and manage their tasks. It is the way towards overseeing one's destiny and the state of one's life.

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[1] Time line of women Empowerments, Accessed from
https://interactive.unwomen.org/multimedia/timeline/womensfootprintinhistory/en/index.html#section01
Accessed on 12-05-2020.

Command over assets (physical, human, education, and monetary) and ideology (convictions, qualities, and perspectives) are essential for empowerment (Baltiwala, 1994; Cueva Beteta, 2006; Melesse *et al.*, 2018; Datta and Singh, 2018; Mayoux, 2000). Pinto (2001) argued that empowerment boosts self-confidence to overcome the external hurdle, acquire resources, and change conventional thinking. As per Commission on Women and Development, WE are a four-dimensional model based on knowledge (imparting training and analytical skills), will (psychological strength to make one's own choices), assets (materialistic resources enabling confidence and power) and power (capacity to decide with the available resources) (as cited in Singh & Singh, 2020). The conceptual framework is presented in Figure 1-1.
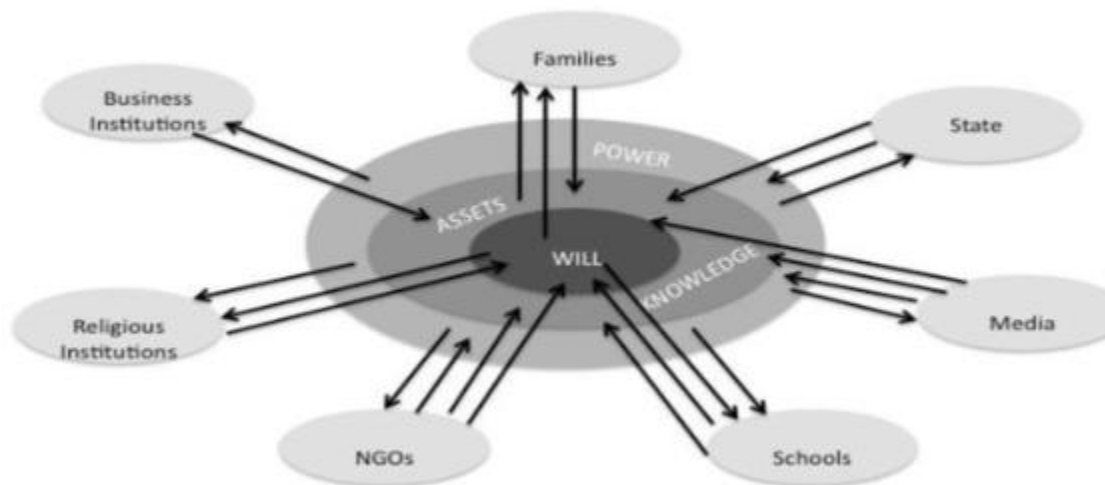
Figure 1-1 Framework of Women Empowerment

Source: Commission of Women and Development, 2007 (as cited in Singh & Singh, 2020)

"*Women's EE, which entails that women have the authority to make their own decisions regarding their resources, leads to prosperity for families and communities. Women's PE is usually*

envisioned as political participation in elections and government. It is necessary to give women a voice in the policies that affect their lives. SE, often achieved through public policy and education, liberates women from the mistreatment, exploitation, and oppression that inhibit women from reaching their full potential." (Citrome, 2011).
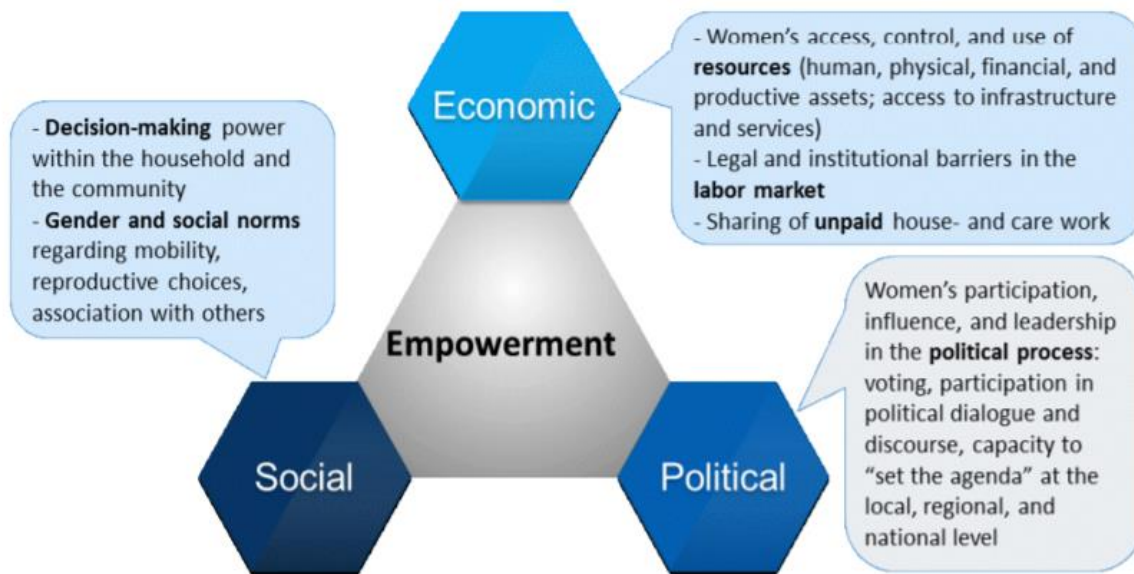
Figure 1-2 Dimensions of Women Empowerment

Source: *Women's Empowerment in Rural Community-Driven Development Projects*, World Bank, 2017

Thus, WE may be defined as the freedom that women should possess to participate in decision-making at the individual-, family-, and societal levels without being subjected to external influences (Galiè and Farnworth, 2019). It fosters an atmosphere in which women may make autonomous decisions about their growth and shine as equals in society. The concept encompasses their political, social, economic and financial well-being, which are not mutually exclusive.

The issues of WE were addressed in the 19th and early 20th centuries through various governmental policies and social reformers such as John Locke, Karl Marx, Mahatma Gandhi, Martin Luther

King, Raja Ram Mohan Roy, and Ishwar Chandra Vidyasagar, who emphasised women's education and prohibited the evil practice of child marriage and uprooting polygamy (Kaviarasu and Xavier, 2016; Simon, 1990). The leaders' thoughts backed the concern for gender equality. Pandit Jawaharlal Nehru's most famous quote was, "*To awaken the people, it is the women who must be awakened. When she moves, the family, the village, and the nation move with her*", emphasising empowering women. The modern meaning of the term emerged during the civil rights movement in the USA in the 1950s and 1960s. WE were formally discussed at four UN conferences, namely, "*Mexico City in 1975, Copenhagen in 1980, Nairobi in 1985, and Beijing in 1995*". The World Conference in Beijing in 1995 on women marked a watershed moment in the worldwide agenda for equity of gender. The "Beijing Declaration and Platform for Action", adopted by 189 nations, set the plan for WE and is broadly viewed as the essential document for a worldwide approach to gender equality[2]. Since then, gender equality has gained prominence and has become a rapidly expanding field of study (Moral and Sánchez, 2020). WE are a radical approach concerned with transforming power relations favouring the females, resulting in greater gender equality (Batliwala, 2007) to allow them to make their own life choices, thereby improving their well-being. In a nutshell, WE are the process of making women potentially prosperous so that they develop the ability to make their own decisions about their lives, families, and society by breaking down all personal barriers of society and family. Sharma and Varma (2008) provided the most cited definition "*Empowerment in the context of women's development is a way of defining, challenging and overcoming barriers in a woman's life through which she increases her ability to shape her life and environment. It is an active, multidimensional process, which should enable*

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women to realise their full identity and power in all spheres of life". It is critical for developing countries (.e.g. India) because empowering women empowers everyone.

The advent of research in WE also prompted international organisations to support WE and gender equality. The "*United Nations Entity for Gender Equality and Women*" (UNEGEW), a division of UN, was established in 2011 to focus on brutality against women, harmony and security, leadership and cooperation, economic development, and national planning and budgeting. In addition, the "*United States Agency for International Development*" (USAID) Office of Gender Equality and WE concentrated on young girls' schooling, maternal and kid wellbeing, and microcredit advances (USAID, 2011; Dash *et al.,* 2016). These organisations prioritised women's economic position, equal involvement of women in decision-making and leadership, and enhanced equitable health and education results. These developmental organisations recognise WE as a strategy for boosting economic growth (Porter, 2013) because women in developing countries invest 90 per cent of their incomes in their families, compared to men's average of 30 per cent to 40 per cent (Gender and Development Network, 2011). A yearly increase in adult education for women in the country results in a $700 rise in per capita income in the gross domestic product (Gender and Development Network, 2011).

According to the UN's article "*Facts and Figures: Economic Empowerment*", published in 2015, women account for over half of the total populace, perform very nearly 66 per cent of the world's work, acquire barely one-10th of the world's income, and hold short of what accounts for one per cent of the world's assets. Women experience bias in labour, wellbeing, training, work dynamics, and the legal framework; adults and young females represent more than 70 per cent of the world's 1.3 billion individuals living in severe destitution; women work 66 per cent of all functioning hours globally. All around the world, 33 per cent of the ladies are destitute or live-in unacceptable

lodgings such as slums (COHRE, 2008). As per the UNHCR, 80 per cent of refugees are females and youngsters. Females have scarcely one per cent of the world's land. Gender-based savagery is the primary reason for mortality among females aged between 15 and 44. As a result, the marginalisation of women has hampered the whole interaction of financial development, as has been acknowledged late. World Bank research (World Bank, 2001) indicated that societies that singled out based on gender brought about the expenses of increased poverty slowed economic development and offered awful life to their residents. The World Bank's Empowerment and Poverty Reduction: A Sourcebook characterises empowerment as "*the extension of freedom of choice and action*" in its broadest sense (Narayan and Petesch, 2002). The United Nations (2001) has stressed WE as the system through which ladies acquire control and responsibility for lives by widening their choices. Therefore, WE is a fundamental objective of an economy's solid development measure.

Advancing literature on equality of gender and WE have been acknowledged as a topic of paramount importance, and discussion at various forums are held at different Global summits, including Millenium Development Goals (MDG) and Sustainable Development Goals (SDG). The MDGs have not been achieved satisfactorily as these were languid (Singh and Shah, 2016; Chibba, 2009). The Special Task Force of the UN to MDG project recommended that developing nations can achieve these goals through public investment, capacity building, regional initiatives, donor's efforts, and funds and finances (United Nations, 2014). However, MDG failed to become the development agenda for WE due to the simplistic approach of goal setting and no roadmap regarding achieving the targets. The MDGs also neglected structural constraints to equality of gender and WE (Razavi, 2016). The development agenda post-2015 focussed on "*inclusive growth*" based on several indicators for gender equity and females' rights. WE was added to SDG

Goal 2 on "*equal rights of women*", promoting property inheritance and ending all sorts of discrimination in political, monetary and public life against women. Goal 3 focuses on women's skills and training. These transformations required external resources such as land, credit, admittance to innovation and markets, solid legitimate foundations and social norms, and capabilities such as knowledge, self-assurance and confidence (Hirway, 2015). Thus, the post-2015 WE paradigm focused on FI, which has become a global movement after the Maya Declaration[3]. Christine Lagarde, the Chief of the International Monetary Fund (IMF), in her speech in 2015, said, "*improving access to economic opportunities for women as one of the key priority areas for development*". Thus, FI is the critical imperative for WE that offers empowerment in the broadest sense – it enables people to cope with poverty and challenges of shocks, risks and emergencies and eliminate usury. The following section discusses the FI for women. WE has been a topic of discussion in the microcredit industry for over four decades. Apart from the numerous other elements, the following have been taken into account for investigation, and proof of their presence in the literature has also been mentioned:

1.2.1 Economic factors

The literature has sufficient evidence regarding financial empowerment leading to EE (Duvendack and Mader, 2020; Hendriks, 2019). If women are financially empowered, they have control over the productive assets and their ownership such as land, house, cart or livestock for income-generating activities; they gain confidence in asking for the whereabouts of the utilisation of funds (Schuler *et al*., 1998; Raudeliuniene *et al.*, 2014). Women acquire a say in income spending

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[3] Statement of common principles regarding the development of FI policy made by a group of developing nation regulatory institutions during the Alliance for Financial Inclusion (AFI) 2011 Global Policy Forum held in Mexico (Maya declaration, 2011).

decisions without their husband's consent or by agreeing on it jointly (Vonderlack and Schreiner 2002; Kabeer and Neoponen 2005; Alsop *et al.*, 2006), women start to invest in resources rather than consuming, and households' economic situation improves (Pitt and Khandker 1998; Kabeer, 2005). From a larger viewpoint, those who benefit from FI will have secure savings and admittance to related products such as loans, insurance and banking facilities (Chakrabarty, 2011; Martin and Hill, 2015).

1.2.2 Social factors

One of the objectives of FI is to make women socially empowered because an empowered woman will take care of certain vital decisions within the family such as – ensuring nutritive food for family members, education of children, avoiding child labour and child marriage and a better accommodation (Kabeer 1999; Benjamin 2000; Sengupta and Aubuchon, 2008). WE is an approach to create ends progression of social difficulties such as child marriage, child labour and lack of education (Cornwall and Edwards, 2010; Raudeliuniene, Dzemyda and Kimpah, 2014). A few investigations have exhibited positive effects of microfinance on strengthening women's social position, for example, confidence, earning self-respect in terms of raising their voice against domestic violence and ensures decision-making rights with regards to the education of children (Pitt and Khandker, 1998; Alsop *et al.*, 2006).

1.2.3 Political factors

FI has a significant influence on women's political engagement and their degree of political and legal understanding (Hashemi *et al*., 1996). Microfinance has been exhibited to empower women through improving economic activity, boosting well-being, and fostering social and political empowerment (Alsop and Heinsohn, 2005; Mayoux and Hart, 2009; High-Pippert and Comer, 1998). Previous research has shown that microfinance and financial inclusion assist women in

safeguarding their rights and politically reinforcing them (Cheston and Kuhn, 2002). According to the current situation, women actively participate in political issues due to greater involvement in outdoor activities and FI initiatives (Raudeliuniene, Dzemyda and Kimpah 2014; Salahuddin, 2015).

1.3 Financial Inclusion (FI)

FI provides financial services at no expense to vast sections of the distraught and low-income populaces (UNO, 2006; Ardic *et al.,* 2011; Demirgüç-Kunt and Klapper, 2013; Allen *et al.,* 2016). It provides financial services or admittance to primary monetary products such as bank accounts, credit at affordable rates to financially excluded or impoverished segments of society. Exclusion and inclusion are two of a kind. In the last two decades, exclusion from financial services has arisen as a policy problem in numerous OECD nations. Carbó *et al*. (2005) argued: "*financial exclusion sits at the heart of the political-economic-social conundrum*". The possession of a bank account is a significant sign of FI (Sinclair *et al*., 2009). The term "*Financial Inclusion*" was first proposed in 1993 by Geographers who were worried about physical access to banking services due to the closure of bank branches. Gradually, it led to the development of a volume of literature on acquiring access to the financial system. The focal point of the contention on FI changed from geological area to access (Hogarth and O'Donnell, 1999; Kempson, 2000; Kane and Spizman, 1994) and the impediments in obtaining admittance to the financial system (Weinstein and Yafeh, 1998; Borio *et al.,* 2001; Claessens, 2006). The European Commission has characterised a few classifications of exclusion from financial services such as banking, investment funds, credit, and insurance, which are considered significant and accessible to society (Anderloni and Vandone, 2007).

Worldwide, approximately 2.5 billion individuals are excluded from the formal monetary framework (CAGP, 2009), and this has attracted many scholars worldwide to contribute towards the field (de Gregorio and Guidotti, 1995; King and Levine, 1993; Benhabib and Spiegel, 2000; Arestis and Demetriades, 1997; Beck *et al.,* 2000; Sarma and Pais, 2011; Brau and Woller, 2004; Dev, 2006; Ghosh, 2013a; Beatriz and Marc, 2011; Hermes *et al*., 2018; Taylor, 2012; Ledgerwood *et al.,* 2013; Lee, 2002) (Table 1-1 shows the definitions by various authors and institutions). Carbo *et al*. (2005) concluded that many characteristics of FI programs in developed countries match developing countries. Thus, the discussion of FI is now shifting to the developing countries.

Despite significant progress in India over the last two decades, many bank accounts are used substantially less often by account users. As per the Global Findex data set, India represents 11% of the world's unbanked populace, with just 20% of Indian grown-ups having active savings bank accounts. Credit availability from legitimate financial firms is even worse since just 7% of Indian adults access it (Demirguc-Kunt *et al.*, 2018).

Table 1-1 Financial inclusion definitions

Institutions	Definition	Indicators
Treasury Committee, House of Commons, UK (HM Treasury, 2004)	*Ability of individuals to access appropriate financial products and services.*	Affordable credit and savings for all and access to financial advice.

United Nations (2006)	*A financial sector that provides 'access' to credit for all 'bankable' people and firms, to insurance for all insurable people and firms and to savings and payments services for everyone. Inclusive finance does not require that everyone is eligible to use each of the services, but they should be able to choose to use them if desired*	Access to credit, insurance, savings, payment services
Report of the Committee on financial inclusion in India (Rangarajan, 2008)	*Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost*	Access to financial services and timely and adequate credit.
World Bank (2008)	*Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered responsibly and sustainably.*	Access to financial services such as deposit, credit, payments, insurance.

1.3.1. Historical background of FI in India

A few decades ago, the commoner would borrow from the local credit supplier charging high financial rates (Philips, 2020). In order to abolish and bring equality in the economic structure, the GOI had taken several drives in the past to accomplish the goals of making its economy financially inclusive, that is also one of the requirements for SDG (Islam, 2015), as well as to reduce other issues that were a by-product of being financially exclusive. The historical background of FI is as follows:

- The very first attempt towards microfinance in India was taken in 1972 by the Self-Employed Women Association (SEWA), which is a society enlisted as a worker's organisation for independently-employed women labourers in the unorganised sectors, and

the organization launched its SEWA bank in 1974 as a cooperative bank with 4,000 women employees donating a capital of INR 10 each for the benefit of disadvantaged women.

- In 1986-87, NABARD took an important initiative by assisting Mysore Resettlement and Development Agency (MYRADA) in reaching out to the rural poor to provide financial services and encourage them to work through self-help organisations. NABARD then gave MYRADA INR 10 lakhs, and the outcomes never caused the government to regret its decision.

- In February 1992, a fundamental breakthrough in the Indian banking industry for the poor or financially excluded was the Self-help Group and Bank Linkage Program (SHG-BLP), which was later emphasised by the GOI's budgets published by the late 1990s. Through efforts of both the RBI and the GOI, NABARD provided enticing outcomes.

- According to India's directives, the RBI first adopted the phrase "*Financial Inclusion*" in its annual policy statement 2005-06 and established a policy under the name "*Financial Inclusion Policy*". Since then, the RBI has employed a variety of microfinance institutions, self-help organisations, and business correspondence formats and information and communication technology solutions to fulfil its aim of 100 per cent FI in the country at little cost.

- In February 2011, under "*Swabhiman*" – a financial security program launched by the GOI, which focussed on bringing the underprivileged section into the financially inclusive population to provide equal economic growth for all. Till March 2012, 73,000 unbanked villages were provided with banking facilities with a population above 2,000 with the help of Business Correspondents and provided facilities such as General Credit Card and Kisan Credit Cards.

- Introducing "Pradhan Mantri Jan Dhan Yojana" on 28th August 2014 was a significant step in removing the financial untouchability prevailing within the economy and providing essential financial services to the excluded lot. Interestingly, this scheme successfully registered in the Guinness World Records to open maximum bank accounts (approx. 1.81 crores) within one week of the scheme's launch under the FI campaign.

- From "*Jan Dhan to Jan Suraksha*", the GOI introduced two schemes that facilitated the inclusive growth of the excluded population by providing the financial covers to them in the form of "*Pradhan Mantri Jeevan Jyoti Bima Yojana*" and "*Pradhan Mantri Suraksha Bima Yojana*" for life assurance and accidental insurance respectively at affordable prices.

FI integrates unbanked and underbanked individuals into the financial system to access financial services, resulting in economic development and empowerment possibilities (Lenka and Barik, 2018; Sohail, 2014). Financial exclusion is an issue that both rich and developing countries experience (Dymski, 2005). Many nations are yet to achieve universal FI despite having a "well-developed" financial sector (Lenka and Barik, 2018). There has been a critical development in bank offices in metropolitan, semi-rural, and urban regions in India in the post-liberalisation time frame. Nonetheless, a significant segment of the populace presently needs admittance to financial products in India (Fuller, 1998; Peachy and Roe, 2004; Chaia *et al.,* 2009).
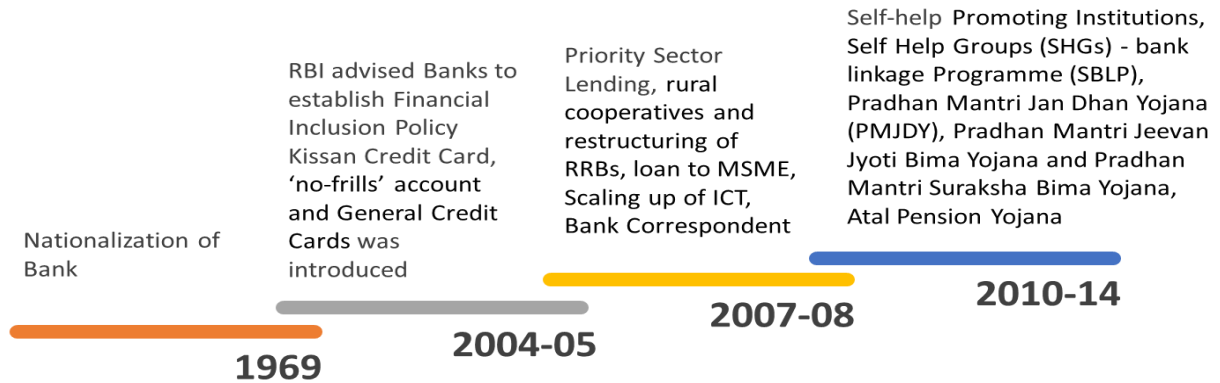
Figure 1-2 Development of Financial Inclusion in India

To address this scenario, the GOI took the required steps and established the "*Pradhan Mantri Jan Dhan Yojana*" (PJD) in 2014 to provide formal financial services to the target demographic of 20 to 65 years of age. The scheme focused on the lower- and middle-income population and aimed to provide affordable financial services such as banking, insurance, and pensions. These programmes were primarily aimed to provide them with financial security. These plans had been optimised to keep up with the economic growth rate, contributing to the Sustainable Development Goals (SDG) achievement. Surprisingly, there is greater anticipation of their impact on WE. As of May 2021, 53% of women have bank accounts, with the majority of them affiliated with a public sector bank. Although the previously mentioned initiatives undertaken by the GOI, banks or financial institutions could not penetrate the lower section of society due to a lack of infrastructure and funding, on receiving end, lack of trust, lack of education and lack of awareness of financial services at the bottom of the pyramid are major hindrances.

Table 1-2 Financial Inclusion Schemes Launched by GOI

Scheme	Details and Benefits	Eligibility
PJD launched in 2014	*Accidental insurance cover of Rs. 2 lakhs, Life cover of Rs. 30,000, Overdraft facility up to Rs. 10,000 to preferably lady of the household, Rupay ATM-cum-Debit Card.*	*All citizens of India with valid proofs, Preference is given to female of the household.*
PJJB launched in 2015	*Pay premium is Rs. 330 per annum, Risk coverage under this scheme is for Rs. 2 Lakh in case of death.*	*People in the age group of 18 to 50 years, Having Bank account under PJD.*
PSB launched in 2015	*Pay a premium of Rs. 12 per annum, the risk covered under the scheme is Rs.2 lakh for accidental death and full disability and Rs. 1 lakh for partial disability.*	*People in the age group 18 to 70 years, Having Bank account under PJD.*
AP launched in 2015	*Fixed pension for the subscribers ranging between Rs. 1000 to Rs. 5000*	*Minimum age of joining APY is 18 years, and maximum age is 40 years, Having Bank account under PJD.*

Source: Compiled by the researcher from various websites

Table 1-3 Accounts Under PJD (All figures are in crores) as of July 07, 2021

Bank Type	Beneficiaries at rural/semi-urban centre bank branches	Beneficiaries at urban metro centre bank branches	Rural-Urban Female Beneficiaries	Total Beneficiaries	Deposits in Accounts	Rupay Debit Cards issued to beneficiaries
PSB	20.98	12.73	18.49	33.71	111992.45	26.56
RRB	6.71	0.96	4.44	7.67	27906.31	3.46
PRB	0.69	0.57	0.69	1.26	4378.70	1.11
Total	**28.38**	**14.26**	**23.62**	**42.64**	**144277.46**	**31.13**

Source: Department of Financial Services, GOI

1.3.2 Financial Inclusion for Women

Women have different economic lives than men on a variety of fronts. As wage-earners, women generally earn less in labour markets or specialise in certain types of employment (Papyrakis, Covarrubias and Verschoor, 2012; Rubery, 1978). As a part of economic activity, business activities are frequently divided along gender lines, with specific tasks being dominated by their male counterparts, and as asset holders, women are less likely to be formal landowners (OECD, 2019). Prior studies demonstrated that various spending patterns, consumer products, and investment decisions depend upon who controls the money in the homes (Pahl,1990; Lindberg and Ryner, 2010; Paul and Upadhyay, 2018). As a result of these disparities, unique FI initiatives for women should be devised to empower them. Otherwise, they will frequently be excluded or have a different impact than males under generic FI schemes (Napier *et al.*, 2013).

Moreover, cooperative banks and post offices can be some of the most successful tools to promote WE by involving them in formal financial systems (Nayak, 2012), as they understand the local customers better than the restrictive commercial banks. Saha (2014) argued that inequity in access to microfinance between men and women hinders WE. Hence, to optimise the contribution of microfinance to WE, access to it should be equal for both men and women.

Women will thrive on having access to microfinance only if they are well aware of it (Swain and Wallentin, 2009; Debnath *et al.*, 2019). It can only be accomplished if they are financially literate about such campaigns and use financial products that may positively affect their family members' lives in the future (Sharma and Kukreja, 2013). Financial inclusion must be maintained as a critical policy to accelerate economic growth. One of the leading causes discovered via the literature analysis for women not being empowered by microfinance was that the majority of control remains in the hands of men in the house, and as a result, women are not self-sufficient yet. As a result,

people should be educated to be unbiased towards women (Basu, 2006). As a step toward attaining growth, it has been proposed that regular follow-ups should be provided after training and imparting skills so that people are aware of the ramifications (Ghosh *et al.,* 2015). Also, to promote the FI among women, it is not sufficient to provide access to bank accounts only, but the usage of accounts should also be encouraged (Mehta, 2015).

1.4 Purpose and Significance of Study

The motivation behind the current investigations in this thesis is to explore the effects of FI on the empowerment of women. To analyse the research questions, the investigations are undertaken to measure women's FI and explore its effects on WE and the barriers faced by the women in getting financial services. The investigations were restricted to Ludhiana (Punjab) and Patna (Bihar). The studies in this thesis examined women in urban slums having bank accounts under the "Pradhan Mantri Jan Dhan Yojana" (PJD) scheme. Thus, the studies in the thesis intend to develop the area of FI further and strengthen its sustainable execution for the section of the population who are resource-deprived and facing financial distress.

1.5 Proposed Chapters

Chapter 2: Review of Literature – An extensive Review of Literature has been performed on themes of women empowerment and its dimensions, financial inclusion and its measurement and challenges of financial inclusion.

Chapter 3: Research Methodology – The chapter has discussed the research objectives and hypotheses, design for the study, pre-testing of the questionnaire, data collection process through an interview schedule and analysis through appropriate statistical tools.

Chapter 4: Financial Inclusion Index – The chapter has discussed the respondents' demographic profile and construction on the financial inclusion index (FII) to measure the extent of financial inclusion of women in slums at Ludhiana and Patna.

Chapter 5: Factors affecting Insurance Preferences – The chapter has empirically examined the effects of the demographic profile of respondents and their financial literacy on the subscription of insurance products.

Chapter 6: Women Empowerment through Financial Inclusion – The chapter has discussed the measurement of the women empowerment dimensions, and further, the effects of financial inclusion through FII are examined on women empowerment dimensions.

Chapter 7: Challenges in accessing Financial Services – The chapter has discussed the challenges identified from literature faced by women in slums in accessing financial services. These challenges are further prioritised through Interpretive Structural Modelling.

Chapter 8: Conclusion and Recommendations – The chapter has concluded the research findings undertaken in this thesis and has given recommendations for stakeholders involved in providing financial services to women. The chapter has also highlighted the scope of future research and the limitations of the thesis.

CHAPTER 2 REVIEW OF LITERATURE

2.1 Background

The chapter provides a comprehensive overview of WE and FI to explore the current state of research on FI schemes and their impact on WE. The review of literature has been done in the following sections:

2.2 Women Empowerment

2.3 Measurement of Women Empowerment

2.4 Financial inclusion

2.5 Measurements of financial inclusion

2.6 Barriers to Financial Inclusion

The literature was accessed from popular electronic databases such as Google Scholar, Emerald, Science Direct, Springer, Wiley Online and Sage. Many keywords were used to access the literature from books and peer-reviewed journals in the domain. Keywords were identified and constructed into the search string. A preliminary search using these keywords was performed to identify other keywords for the main search. The list of keywords related to WE includes "women empowerment", "social empowerment", "economic empowerment", "political empowerment". The list of keywords related to FI includes "financial inclusion", "financial inclusion index", and "women empowerment and financial inclusion". The literature was filtered by analysing the titles of the articles and then analysing the abstracts. The chapter concludes with research gaps on the basis oof the literature reviewed.

2.2 Women Empowerment

WE research has evolved and expanded on various dimensions that have increased their exercise choices (Mehra, 1997; Malhotra *et al.*, 2002; Cornwall, 2016; Chaudhry and Nosheen, 2009). Due to the ideology of most social movements, the concept of WE was explicitly based on social work, community psychiatry, and public health care during the 1960s and 1970s. During the 1980s, *Empowerment* was defined as a mechanism that enabled communities to control economic affairs. During the mid-1990s, the concept of WE gained enormous importance following the Fourth World Conference on Women in Beijing, and researchers investigated the concepts from various social and wellness dimensions. The state concept of WE investigated from the 1960s until 1999 is presented in table 2-1.

Table 2-1 Evolution of research on Women Empowerment (WE)

Author	Women Empowerment Concept
Freire, 1968; Hanisch, 1970, Solomon, 1976	WE was considered to be the field of social work, transforming power relations in favour of women's rights and gender equality.
Rappaport, 1985; Rappaport, Swift, & Hess, 1984; Whitmore and Kerans,1988, Solomon, 1987	WE was considered as a process and highlighted lack of integration of women in economic development.
Batliwala, 1995; Schuler and Hashemi, 1994, Kabeer, 1999; Keller and Mbewe, 1991; Cleland *et al.,* 1994; Elson, 1999	The idea of empowerment entered into mainstream and accentuated issues of reproductive and sexual rights, violence against women and gender inequality.

WE was designated as one of the MDGs to be attained by 2015. The adoption of gender equality and WE in MDG 3 to promote gender equality and empower women by 2015 has brought together

leading practitioners and academicians to undertake thorough research on the issue. The inclusion of WE in the MDG has shifted the focus of academicians towards the economic dimension (Duflo, 2012; Okechukwu *et al*., 2016, Singh and Gupta, 2013). It emphasised the importance of gender equality and WE, and a more significant number of empirical studies on the subject were conducted (Table 2-2).

Table 2-2 Studies on Women Empowerment (WE)

Author	Country	Dimension of Women Empowerment	Findings of the Study
Ahmed, 2005	Bangladesh	Intimate Partner Violence	Positive impact of degree of involvement with microcredit institutions and imparting skill training on the incidence of domestic violence against women.
Banerjee *et al.,* 2015	India	Economic Empowerment	There were no significant changes in health, education or women's empowerment with increase in take up of microcredit.
Bali, Swain and Wallentin, (2009)	India	Empowerment Index	On an average there is a significant increase in the empowerment of women in self-help groups as compared to those who are not in SHGs and the former show considerably higher levels of empowerment than the latter.
De Hoop *et al*., 2014	India	Economic, Social and Psychological Empowerment and Intimate Partner Violence	The membership of self-help groups in Odisha have a positive impact on WE compared to those women who were living in an environment with comparatively conservative gender norms.
Desai and Joshi, 2012	Durgapur, Rajasthan	Economic, Social and Political Empowerment	The women who were enrolled in SEWA program were more likely to participate in group savings program, exerted greater control over household decisions and displayed greater civic

			engagement than those who did not enrol.
Desai and Tarozzi, 2011	Ethiopia	Social Empowerment	Analysed community-based family planning programs on the access of microcredit for contraceptive use, fertility and family size preferences. The study concluded that access to microcredit was not affected by such programs.
Garikipati, 2008	India	Economic Empowerment	It was observed that women at large divert the funds procured through loans towards building household's assets and increasing household's incomes which does not lead to women's co-ownership in the assets within the family and hence being disempowered.
Garikipati, 2012	India	Economic Empowerment	Proving that microcredit has little impact on women's time use and helps their husbands move away from wage work to self-employment and shows that women's funds are typically used to increase household assets' male ownership. The study concludes that women can be empowered not just by allocating the micro credit but also by analysing the usage of that loan.
Holvoet, 2005	India	Economic Empowerment and Social Empowerment	Women are allocated micro-credit through some group membership the decision-making patterns within households shift from norm-guided and male decision-making to more joint and female decision-making. Hence females are more socially empowered.
Mahmud, 1994	Bangladesh	Social Empowerment	Women who are participants of FI programmes are more likely to be socially, personally and economically empowered than those who do not participate at all in terms of greater mobility outside the home, increased access to extra-family support, higher returns to labour and finally having a

			say in determining the usage of contraceptives.
Mukherjee and Kundu, 2012	India	Economic Empowerment and Social Empowerment	Investigated the relationship between participation in government-sponsored microcredit program, i.e., Swarna Jayanti Gram Swarojgar Yojana and WE in terms of taking decisions for money management, use of borrowed money, food items and kinship and family matters. The results showed that the likelihood of decisions being taken by females increased amongst households participating in the program and had a greater say in all the spheres as compared to the non-participants.
Osmani, 2007	Bangladesh	Economic Empowerment	Survey data on the borrowers of Grameen Bank of Bangladesh and results showed that access to microcredit could have a positive effect on women's bargaining power within the household, thus, making them economically empowered.
Pitt *et al.,* 2006	Bangladesh	Economic, Social, Political Empowerment	The credit programmes lead to women taking a greater role in household decision making, having greater access to financial and economic resources, having greater social networks, having greater bargaining vis-à-vis their husbands, having greater freedom of mobility and increased spousal communication regarding family planning and parenting concerns. Hence women with access to credit were empowered in all dimensions.
Steele *et al.,* 1998	Bangladesh	Social Empowerment	The findings show that those who joined tend to be more educated and more socially independent than those who did not join. The analysis showed the positive impact of credit program on women's aspirations in regards to their children's education, marriage age and use of modern contraceptives.

Swendeman *et al.,* 2009	India	Economic, Social and Psychological Empowerment	The study demonstrated that women gained more EE in increased negotiating powers at the workplace, increased savings and alternative income. Also, women were considerably more socially empowered as they experienced increased social interactions and social function participations.
Bhatia and Singh, 2019	Ludhiana	Social, Political, and Economic dimensions	FI has positive influence on social, political, and economic dimensions of women empowerment.

Despite development efforts, ground realities have resulted in fewer women benefiting (Kapur and Narayan, 2020). The suggested reasons were that the region is particularly troublesome because of a potential disjunction between women's goals and concepts of empowerment and externally acquired empowerment standards defined a priori. Similarly, the pattern of behaviours and mentalities that might be utilised to evaluate WE in one nation might be unimportant in another (Schuler *et al.*, 1996). Moreover, because females are not a homogeneous group, it might be challenging to build up a set of rules for strengthening WE and may not be appropriate to all females. Mayoux (1998) emphasised the importance of women's aspirations and techniques in understanding their strengthening. Even though females are "*active agents of change*" (Carroll, 1993) and assume essential roles in both the home and society, the women are overlooked during the development processes and due to which they keep on living in inconsistent society. Furthermore, the diversity of conceptualisations of empowerment makes identifying and delineating meaningful metrics to measure WE challenges (Mayoux, 1998).

Holloway *et al*. (2017) proposed that offering inexpensive financial services to women is the most effective strategy to promote gender equality and WE while meeting global economic growth objectives. Rise in women access to resources improves family wellbeing, particularly for children

(Mayoux, 1998; Kabeer, 2009; Schuler *et al.,* 1996; Murthy *et al.,* 2002; Hazarika, and Guha-Khasnobis, 2008). Thus, Financial inclusion enables women to achieve a level-playing field while also to promote comprehensive social inclusion and economic prosperity. When the United Nations declared 2005 "*The International Year of Microcredit*", it sparked tremendous enthusiasm for financial inclusion. In the words of Kofi Annan, the former United Nations General Secretary in 2005, "*there is no more effective tool for development than women empowerment*". He used this quotation to highlight gender inequality as an impediment to worldwide development. He has additionally accentuated the significance of an "*Inclusive Financial Sector*" in guaranteeing gender economic equality. Following the G-20's influences in 2014, the monetary services were perfused to a considerable fragment of society, and the period in the range of 2011 and 2014 saw an expansion in the number of new adults in the financial system. Then again, it could not close the gender gap in access to financial services (Ghosh and Vinod, 2017), resulting in social exclusion and gender imbalance which is undeniably more common in non-industrial nations than in rich nations (Ahmed *et al.,* 2001; Dawar and Singh, 2016). For more than three decades, the term "*microfinance*" has prominently featured in development literature (Robinson, 2001). Even the "*United Nations Capital Development Fund*" (UNCDF) has zeroed in on the linkage between destitution and EE in 2005 to build women microfinance participation to achieve economic equality. According to the research, microfinance is broadly viewed as an effective procedure for destitution mitigation and WE (Kaleem and Ahmed, 2010; Sultana *et al*., 2017; Amin and Becker, 1998; Kabeer, 2005). Thus, to address the global concern, it is essential to explore the components of WE.

2.3 Measurement of Women Empowerment

The literature on WE have provided various dimensions and variables for its measurement. This section presents the discussion on the measurement of women empowerment dimensions in factor-based and index-based studies.

2.3.1 Index-based measurements

Major international organisations created indices to assess various facets of WE. Gender Development Index (GDI), created by UNDP in 1995 to quantify gender equality, is one of the primary indices. This index added a gender-sensitive measurement to the Human Development Index (HDI). GDI accounted for a country's average and overall degree of well-being and prosperity. UNDP created the Gender Inequality Index (GII) in 2010; its indicator is quantifiable and quantifiable concerning regenerative wellbeing, strengthening, and workforce cooperation. It was created to compensate for the shortcomings of GDI. The World Economic Forum's Global Gender Gap Index, initially published in 2006 and updated in 2019, aims to quantify gender equality in 153 nations. It is based on four critical categories to assess a country's gender equality: health, education, economics, and politics. The World Bank created the Women, Business and Law (WBL) index in 2020 to assess women's EE in 190 economies. The WBL index is based on the following factors: mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pension. The Kenya National Bureau of Statistics, in collaboration with UN Women and UNICEF, set up the WE Index in 2020 to gauge and quantify progress toward gender equity and strengthen women and young ladies as per Sustainable Development Goals 5 and 6. Given the importance of information and tracking, the achievement of WE as SDG5, the International Labour Organization (ILO) supplied various gender-specific data through ILOSTAT to address the gender gap. Its adoption at the 19th International Conference of Labor Statisticians (ICLS) in 2013 has

enormous ramifications for measuring women's commitment in a wide range of work and looking at options in their access to productive employment, especially in the low-pay work situation.

According to the survey of literature done by authors, several writers have created indices to address gender equality and WE. New elements of the WE index were established based on data available to address gender concerns across nations. Reproductive health was the other pillar of WE indices (Kibira *et al.*, 2014; Al Riyami *et al.,* 2004; Canning and Schultz, 2012; Kishor and Johnson, 2006; Blanc, 2001; Hou and Ma, 2011; Yaya *et al.,* 2018; Moreau *et al.,* 2020; Kazembe, 2020; Adebowale, Gbadebo and Afolabi, 2016;), partner violence (Rahman *et al.,* 2011; Willie and Kershaw, 2019; Gracia and Merlo, 2016; Hindin and Adair, 2002) and women participation in agriculture (Yount *et al.,* 2019; Seymour, 2017; Alkire *et al.,* 2013; Kumar, Raghunathan, Arrieta, Jilani and Pandey, 2021). These indices are applicable in countries such as Oman (Al Riyami *et al*., 2004), Uganda (Kibira *et al*., 2014), Bangladesh (Rahman *et al*., 2011; Yount *et al*., 2011) and Namibia (Kazembe, 2020). The indices measured women empowerment through self-help groups (Mohapatra and Sahoo, 2016; Roy, Chatterjee and Dutta Gupta, 2018; Alemu, van Kempen and Ruben, 2018; Kumar *et.al.,* 2021). The indices measuring women empowerment are based in rural area (Roy, Chatterjee and Dutta Gupta, 2018; Baig *et al.,* 2018; Sharaunga, Mudhara and Bogale, 2016; Akhter and Cheng, 2020; Arora and Meenu, 2011) and in slum area (Donta, Nair, Begum and Prakasam, 2016; Rout and Bag, 2020; Hazarika, 2010). However, there is a scarcity of research on the multidimensional study of empowerment across several domains (Moral, EM, and Sánchez, 2020), there is dearth of studies for WE in slums and research is scarce in the Indian context.

2.3.2 Dimension-based Measurement of WE

There is sufficient empirical research indicating that gender imbalance, to a large extent, harms economic progression (Klasen, 2002), and gender disparities in employment and education adversely affect a country's drawn-out development (Klasen and Lamanna, 2009). As a result, affirmative action is required to provide new impetus to women's emancipation (Singh and Singh, 2020). Thus, breaking down the method of measuring WE is a critical issue that literature must address (Hanmer and Klugman, 2016). WE have garnered significant scholarly consideration in the recent decade as a means of improving females' mobility, well-being, monetary status, and contribution in decision making (Afrin, 2008). Page and Czuba (1999) described empowerment as a "*multifaceted social process that assists people in gaining control over their own life*". Because of the abstract nature of WE, measuring it is challenging (Fox and Romero, 2017; Bishop and Bowman, 2014). Kabeer's (2001) seminal work defined WE as "*the capacity to make strategic life choices in contexts where this capacity was previously denied to them*". The study was centred on three factors: first, access to unique resources, second, capacity to make own life's choices, and third, successes about decisions made. The second component is evidence empowerment, whereas the other two are proxy measures (Richardson, 2018). Swamy (2014) and Ashraf *et al*. (2010) emphasised that having a bank account benefited women's financial well-being, while Duflo (2012) expressed that it improved access to advanced components such as well-being, schooling, working prospects, and political support. As a result, the qualities listed in the sub-sections below have been suggested as potential empowerment measures.

2.3.2.1 Political Empowerment (PE)

Equality of gender is the core of human liberties and the foundation for accomplishing long haul advancement. Expanding women's political interest, participation, and leadership is primary for

the economy's financial and social advancement (United Nations, 2018). Hence, quotas, knowledge, and voting have emerged as critical interventions (Deininger and Liu, 2013; Kabeer, 2005; Armendáriz and Morduch, 2010; Sundström *et al*., 2017). The regulatory structure, social practices, autonomy in significant administration, social adaptability, and systems considerably affect empowerment (Beteta, 2006; Bandiera *et al*., 2018; Kumar *et al*., 2019; Chatterjee *et al.,* 2018). Empowerment of women through the political dimension serves as an encouragement for political inclusion and promoting political participation, ensuring women's rights and legitimate roles. PE may be accomplished by understanding political issues, supporting political activity, and associating political groupings (Chatterjee *et al*., 2018). Extending female representation in political committees, casting a ballot, and political participation and commitment in informal gatherings to resolve network concerns prompts to strengthen the position of women further (Bardhan and Klasen, 1999). Table 2-3 presents the literature on the measurement of PE of women and their outcomes.

Table 2-3 Measurement of Political Empowerment of Women

Author	Definition of Variable	Measurement	Findings
Jayaweera (1997)	Percentage of women seats in parliament and ministerial level	Continuous Variables	The system of quotas in assemblies has increased the representation of women in India and Bangladesh in recent years, but there is no positive linear relationship between education and economics. Women's social and political empowerment as a consequence of the interface of gender ideologies and social and economic structural constraints.
Ghosh and Vinod (2017)	Female seats in Legislature and female reservation in Panchayat	Continuous Variables	Households with female heads are less inclined to access formal finance and more inclined to access informal finance. Further,

			it also suggested that for female-headed households, educational and wage discrimination are more relevant in explaining the access to finance whereas political and social factors are much more germane in explaining the use of finance.
Dash *et al.* (2016)	Perception towards Political Empowerment dimension	Summated rating scale	Microfinance programs have empowered women socially, economically and politically.
Sundström *et al.* (2017)	Political Empowerment Index is measured through Civil Liberties index, Civil Society Participation index and Political Participation Index	Index from 0 to 1	Construction of V-Dem women's political empowerment index which provided information about three dimensions – civil liberties, civil society participation and political participation globally.
Habib and Jubb (2012)	Categorical variables associated with Socio-Political Participation of women	Binary Variables	The study was conducted in Bangladesh involving 297 structured interviews with women from two different groups – members of Bangladesh Association for Social Advancement (ASA) microfinance program and a control group of non-participants. The results highlighted that microfinance is a powerful tool for the empowerment of women significantly increasing women's Political participation.
Barnes and Taylor-Robinson (2018)	Women's access in top cabinet posts	Summated rating scale	Women's access to powerful political posts may empower women citizens by fostering satisfaction and confidence with the government and cultivating beliefs in women's ability to govern.
Saha and Sangwan (2019)	Several dummy variables associated	Binary Variables	Index of WE were created using four dimensions – economic, social, interpersonal and political. The results showed that PE plays

	with women's political awareness		a vital role in empowering women in terms of knowing the name of village sarpanch, knowing the name of MLA/MP, election voting and voting not influenced by husband.
Pippert and Comer (1998)	Interest in Political campaign, political participation and attitudinal measure	Continuous Variables	The women whom women in political parties represent are more likely to be interested in and participate in politics, have a greater sense of political efficacy, competence and trust and evaluate that party as an institution more favourably than women who are represented by men.
Hughes and Dubrow, 2018	Variables associated with women's political participation	Binary Variables	Women's political experiences may vary such that empowerment for some may not mean empowerment for all. It mainly deals with the intersectionality due to women remain politically disempowered.
Sharma (2020)	Variables associated Legal Environment, Political Environment.	Qualitative	Identify the dimensions of political empowerment of Indian women and assess the factors responsible for the lacunas that hold women back in their potential. The major factors churned out that are needed for political empowerment of women are information or awareness, family support, legal environment, political environment and personal ambitions or internal motivations.
Lv and Deng (2019)	"ndex of women political empowerment	Continuous	The study explored the relationship between women's PE and co2 emissions. In the long run, the results indicated that co2 emissions decreased by 11.51 per cent points in response to a one-unit increasing the index of women's political empowerment.

			Further, the study also shows that women's civil society participation has the largest effect followed by political participation.

Source: Compiled by the Researcher

2.3.2.2 Economic Empowerment (EE)

EE is the ability to participate in growth processes, recognise the value of their participation, and distribute wealth fairly, improving access to economic resources (OECD, 2011). Swain and Wallentin (2012) discovered that economic factors have a substantial role in WE. Al-Mamun *et al.* (2014) used a qualitative survey to evaluate the shift in WE in another research. Based on the sample data of 242 low-income urban women in Malaysia participating in a microcredit programme to quantify the influence of vital home leadership, an empowerment indicator was developed using the following criterion: household decision making, financial/economic stability, resource control, say or control in familial decisions, legal awareness, and mobility. Chiapa *et al*. (2016) discovered, by field analysis of female heads of households evaluating 1,236 families in urban ghettos, that with access to savings bank accounts, low-income families manage their assets better, prioritising schooling and consumer spending, and feeling more responsible for their financial/economic conditions. Table 2-4 presents the literature on measurement of EE of women and their outcome.

Table 2-4 Measurement of Economic Empowerment of Women

Author	Definition of Variable	Measurement	Findings
Bali Swain & Wallentin (2009)	General index of women's empowerment.	Index from 0 to 1	Women who participated in SHG-Bank linkage program were economically more empowered than those who did not participate at all.

Banerjee *et al.* (2015)	Normalized index score that includes variables that measure the decision-making power of the female respondent in the household.	Index from 0 to 1	Access to microcredit appears to have no discernible effect on education, health or WE in the short run. In the longer run (when borrowing rates are the same, but households in the treatment groups have on average borrowed for longer), there is still no impact on WE or other social outcomes, but as a whole they don't paint a picture of dramatic changes in the basic development outcomes for poor families.
De Hoop *et al.* (2014)	Dummy variable that is 1 for women who make decisions about food expenditures.	Binary Variables	The study presented the impact estimates of women's self-help group membership on subjective well-being in Odisha, India. It concluded that there is evidence of a positive impact of SHG membership on women's EE. membership does not affect subjective well-being.
Deininger and Liu (2013)	Dummy variable that is 1 for women who are able to save individually.	Binary Variables	The SHG-based approaches can lead to more EE of women even in the shorter run and earn and save.
Desai and Joshi (2014)	Several dummy variables associated with women's decision-making power about schooling and health expenditures.	Binary Variables	The study found no evidence that participation increased income or had a disproportionate impact on women's socio-economic status.
Garikipati (2008) and Garikipati (2012)	Women's labor supply	Continuous Variable	The women cannot be economically empowered by just granting micro credit, but a track should also be kept on its usage, as such loans benefit

			their husbands more than the women themselves.
Holvoet (2005)	Several dummy variables are associated with women's decision-making power in economic and non-economic domains.	Binary Variables	Women are granted loans through some group membership, their bargaining power within household decision making regarding channelizing the funds procured through such loans increases, thus, making them economically empowered.
Husain *et al.* (2014)	Several variables are associated with women's decision-making power in the economic domain, which are 0 if the woman has no decision-making power, 0.5 if there is joint decision-making and 1 if the woman is the sole decision-maker.	The aggregate score of categorical Variables	SHG membership enhanced the women's say in the financial decision making within households.
Kim *et al.* (2009)	Dummy variable that is 1 if the woman believes her contribution to the household is positive	Binary variable	Intervention with microfinance lead to EE of women as compared to the control group.
Mukherjee and Kundu (2012)	Several dummy variables associated with women's decision-making power about household expenditures.	Binary Variables	Women who participated in government-sponsored schemes were more economically empowered as compared to the ones who did not participate at all.
Nessa *et al.* (2012)	The categorical variable associated with the economic decision-making power of the woman in the household."	Binary variable	Participation in microcredit programmes leads to a say in economic decision-making amongst women and leads women to have ownership in property. So, women became economically empowered.

Osmani (2007)	Categorical variable that measures the woman's perception on how well she would be able to take care of herself.	Ordered categorical variable	The female creditors of Grameen Bank can have more bargaining power in economic decision making within their households.
Pitt *et al*. (2006)	"Several dummy variables that are associated with women's decision-making power about household expenditures access to funds and borrowing money	Binary variables	The females with access to microcredit programmes had a greater role in economic decision making within households and had greater access to financial resources. Thus, they were economically empowered.
Steele *et al*. (1998)	"Several dummy variables associated with women's decision-making power with respect to medical expenditures, borrowing, and housing repairs."	Binary variables	Those women who participated in the microcredit programme were more educated and had greater access to the financial resources within the household.
Swendeman *et al*. (2009)	Dummy variables related to decision-making power of female sex workers.	Binary variables	Women with participation in the sonagachi project had increased negotiating powers at the workplace, increased savings, and had alternate income.
Saha and Sangwan (2019)	Several dummy variables associated with women's economic status	Binary Variables	Women's economic status, their control over savings and purchasing capacity regarding expensive items, in brief, EE is more important in determining WE.
Chakraborty and Abraham (2021)	Survey questionnaire	Summated Scale	Economic Empowerment Significantly mediate relationship between financial inclusion and economic development

2.3.2.3 Social Empowerment (SE)

SE is the act of granting personal power or control in order to improve their standard of living: person-to-person contact and correspondence and social adaptability aid WE (Swain and Wallentin, 2009). Societal pressure influences women's decision-making abilities inside the family unit (Searing and Chiappori, 1998). EE is the ability to study and manage one's financial prosperity by combining economic independence, budgetary self-sufficiency, and financial literacy (Postmus, 2010; Postmusetal., 2013; Cole *et al.,* 2011; Mathur *et al.,* 2018). All aspects of empowerment, such as social, political, and economic empowerment, are intertwined and cannot be separated (Taylor, 2000). However, the link between financial inclusion and gender inequality is poorly understood and has only been investigated to a limited extent. Several studies (e.g., Karim, 2011; Roodman and Qureshi, 2006; Fraser, 2017) expressed concerns about the country's history on monetary consideration and recognising female stature. Monetary consideration has been attacked as a "*developing new name*" by Bateman (2012), who sees it as a re-branding of microfinance. According to Guérinet *et al*. (2015), financial inclusion promotes over-indebtedness and has no discernible influence on poverty (Duvendack *et al.,* 2011; Stewart *et al.,* 2012; Bhandari, 2009). However, several studies have shown that having a bank account boosts women's financial well-being (Swamy, 2014; Ashraf *et al.*, 2010). Table 2-3 presents the literature on the measurement of SE of women and their outcome.

Table 2-5 Measurement of Social Empowerment of Women

Author	Definition of Variable	Measurement	Findings
Swain & Wallentin (2009)	General index of women's empowerment.	Index from 0 to 1	SE of females can be achieved to a greater extent with the help of SHG-Bank linkage program.

De Hoop *et al*., (2014)	Dummy variables that measure women's autonomy to go out without their husband's permission	Binary variables	Relationship between SHG membership and improvement in the social status of women in Odisha, India. It concludes that SHG membership positively impacts the SE of women.
Deininger and Liu (2013)	Dummy variables that measure women's autonomy to go out without their husband's permission	Binary variables	SHG-based approach fosters group formation and assist groups through a federated structure and can have significant social and nutritional benefits in the relatively shorter term.
Desai and Tarozzi (2011)	Dummy variables that measure women's decision-making power about family-size	Binary variables	The research suggests that the access to microcredit do not have any effect on women's family planning, use of contraceptives and family size preferences.
Desai and Joshi (2012)	Dummy variable associated with decision-making about family size	Binary variable	The Enrolment to SEWA is directly correlated with social empowerment.
Husain *et al*. (2014)	Several variables associated with women's mobility, which are 0 if the woman has no decision-making power, 0.5 if there is joint decision-making and 1 if the woman is the sole decision-maker.	Aggregate score of categorical variables	SHG programme effects were positive on reducing tolerance against domestic violence and also enhanced the status of women within households.
Mahmud (1994)	Dummy variable that is 1 if the woman is sterilized.	Binary variable	Women who participated in employment programmes were having more mobility outside the home and also had a say in the usage of contraceptives than those who did not participate, thus

			making them socially empowered.
Nessa *et al*. (2012)	Categorical variable associated with freedom of movement of woman	Categorical variable	Women's participation in microcredit programmes lead them to have freedom of movement and more socially aware which ultimately made them more socially empowered.
Pitt *et al*. (2006)	Several dummy variables that are associated with women's mobility and women's bargaining power over family-size decision-making	Binary variables	Women who participated in microcredit programmes had greater social networks, freedom of mobility and increased spousal communication which made them socially empowered.
Steele *et al*. (1998)	Dummy variable that is 1 when the woman uses contraceptives.	Binary variable	The women with participation in the microcredit programme had greater say in household decision making, freedom of movement and took decisions regarding their children's marriage and education.
Swendeman *et al*. (2009)	Several dummy variables that are associated with reproductive behaviour	Binary variables	Women with participation in the sonagachi project have increased social interactions and increased social function participations, making them socially empowered.
Saha and Sangwan (2019)	Several dummy variables associated with women's socio-cultural status	Binary Variables	The index results showed that SE of women is vital in determining WE in terms of freedom to move around the village to visit the temple or a friend's place, freedom to move outside village to see a doctor, relatives or market without anyone's objection.

Chakraborty, and A braham (2021)	Survey questionnaire	Summated Scale	Social Empowerment significantly mediate the relationship between financial inclusion and economic development

Based on the literature review presented in these sub-sections, there is an abundance of literature on FI and its influence on WE. However, there is a scope to examine the role of financial inclusion in empowering females in slum residents: the poor and those living just over the poverty level face too much vulnerability. Around 93 per cent of the labour force works in the informal sector, and the vulnerability of women managing finances at home grows due to a lack of access to formal financial services. Based on prior research, this thesis argues that women's financial inclusion in ghettos will aid in their elevation. This study investigates the FI of women post-PJD in the urban slums of Ludhiana and Patna, as they have been mostly ignored in scholarly studies on FI.

2.4 Financial Inclusion (FI)

The usage of formal monetary services or FI has aroused researchers, policymakers, and other financial sector players (Cihak *et al*., 2012). FI alludes to affordable access to different monetary services like credit, deposit, insurance, settlement, and benefits services for people and organizations (United Nations Capital Development Fund, 2006; CRISIL 2013; Sinha, 2020). Individuals who lack FI should depend on their assets to fulfil their financial requirements, such as putting savings aside for retirement, investing resources into their schooling, exploiting business prospects, and managing fundamental or idiosyncratic challenges (Demirguc-Kunt *et al*., 2008). An effective financial system guarantees that money is allocated efficiently for productive resources, critical for economic progress. FI was designated as one of the critical pillars of global growth at the G-20 summit in 2010, and it has been acknowledged as a facilitator for seven of the

17 Sustainable Development Goals. The World Bank sees financial inclusion as critical to improving prosperity via poverty reduction, and more than 60 countries have adopted national strategies to achieve Universal Financial Access by 2020 since 2010. Thus, endeavours aimed towards improving the proficiency and dependability of the monetary frameworks and expanding the broadness of FI. In the absence of a formal monetary structure, loans were advanced through informal channels, which is costly and drains assets in repayment failure (Beck *et al*., 2006; Demirguc-Kunt and Klapper, 2012; Deere and Doss, 2006). These exclusionary conditions may add to chronic poverty and persistent imbalance, restricting general financial development. Therefore, economic exclusion is a significant hindrance to advancement. Thus, the financial researchers propose FI as a tool to reduce poverty in low-income countries (Nino-Zarazua and Copestake, 2008; Helms, 2006; Copestake, 2007; Choudhury, 2010). The notion of FI is archaic. Instead, it has long been investigated by numerous organisations and researchers in order to advance the discipline.

The features of financial services under financial inclusion are: (a) inexpensive to the low-income group, (b) suitable to the needs of users, and (c) readily accessible. The supply-side, i.e. financial provisions, and the demand-side, i.e. financial participation, were the two components of financial inclusion. The willingness and competence of an entity to deliver financial services to target customers are referred to as financial provision. On the other hand, financial participation relates to users' desire to obtain and use financial services. The gap between financial provision and financial participation refers to financial inclusion constraints that result in financial exclusion (McKillop and Wilson, 2007). Thus, both the supply and demand sides of FI are critical in guaranteeing participation in formal financial institutions, according to institutional monitoring.

2.4.1 Developments of Financial Inclusion in India

Sarma and Pais (2008) conducted a study on the history of Indian financial services. According to them, FI began in 1904 with the cooperative movement, which gained traction in 1969. Bank branches were created in significant numbers to focus on previously untapped markets, resulting in the implementation of Lead Bank plans and the nationalisation of fourteen major commercial banks (Sarma & Pais, 2008). Despite these advancements, a considerable gap in financial evaluation necessitated particular attention (Das, 2014). Numerous examinations have affirmed that exclusion from the monetary framework brought about a 1 per cent misfortune in the nation's GDP (Chuc and Taghizadeh-Hesary, 2019). As a result, the RBI decided that inclusive finance is a financially feasible requirement, not merely a socio-political one. At long last, in the Mid-Term Review of Monetary Policy (2005-06), the RBI prescribed banks to make inclusive financing one of their essential objectives. Financial exclusion is an issue that both developed and developing countries experience (Dymski, 2005). Most developing countries are yet to achieve universal financial inclusion despite having a "*well-developed*" financial sector (Lenka and Barik, 2018). Swamy (2011) noted the exclusion of many Indian households from the realm of financial services. Over the long run, the circumstances have improved, with 41 per cent of the population having no bank account in 2007 (Cnaan *et al*., 2012) to 17 per cent populace having no bank account in 2011 (Rachna, 2011). Financial inclusion in India has increased significantly over the period (Figure 2-1), with a significant increase in bank branches in urban, semi-urban, and metropolitan areas. However, many Indian people remained deprived of banking services (Fuller, 1998; Peachy and Roe, 2004; Chaia *et al*., 2009). Due to a lack of interest in opening bank accounts, a reluctance to build bank branches in rural regions, inadequate connection, the non-issuance of smart cards, and a lack of confidence in business correspondents, India's actual share of the financially included population is low (Choithrani, 2013; Sharma and Kukreja, 2013; Srinivas *et al.,* 2014). There are

critical differences in the dispersal and movement of financial services in the nation (Pokhriyal and Ghildiyal, 2011).

To address this scenario, the GOI took the required steps and established "*Pradhan Mantri Jan Dhan Yojana*" (PJD) in 2014 to provide formal financial services to the people from the lower segment of society between 20 to 65 years of age. It was implemented to make financial services such as banking, insurance, and pensions more affordable to Indian people, focusing on lower- and middle-income populations (Fletschner and Kenney, 2014). These programmes are primarily aimed at people in order to provide them with financial security. These plans have been optimised to keep up with the economic growth rate, therefore contributing to the Sustainable Development Goals (SDG) achievement.

The literature is mainly concerned with the theoretical and conceptual development of FI in microfinance institutions and self-help organisations. There was a massive body of work on FI in India, such as self-help organisations (Swain and Varghese, 2009; Basu and Srivastava, 2005; Shah *et al*., 2007; Sinha, 2006), and Grameen bank loans without collateral (Yunus, 2004; Dev, 2006). Furthermore, the present state of financial inclusion plans advanced after 2014 have helped to a great extent in bringing the people belonging to the lower segment of society into formal financial channels (Tulasi*et al*., 2017; Singh and Naik, 2018; Pillai, 2016; Verma and Garg, 2016).

The critical factors for being financially excluded or out of the financial framework are lack of financial literacy (Fernandes *et al*., 2014; Lusardi and Mitchell, 2014), society's preferences towards informal channels (Frisancho, 2016; Karlan *et al.,* 2016), institutional biases (Muravyev *et al.,* 2009; Fletschner, 2009; Agier and Szafarz, 2013; Brana, 2012; Corsi and De Angelis, 2016),

social limitations (Hummel, 2013; Guérin *et al*., 2013; Bylander, 2014), and lack of confidence in financial institutions (Karlan *et al.,* 2014; Mehrotra and Nadhanael 2016; Bachas *et al.,* 2015).

2.4.2 Current State of Research on PJD, PJJB, PSB and APS

Few studies sought to establish the critical determinants for the level of FI in India, such as education, income, financial information, access, usage, and self-help groups, utilising primary datasets (Bhanot *et al.,* 2012; Bhutoria and Vignoles, 2018; Siddiqui and Siddiqui, 2017; Bhatt and Pawar, 2015). FI is measured by the accessibility and ease of using financial services for distinct classes of people along similar lines. The number of bank account holders has increased, bringing almost 80% of individuals within the official financial structure (Global Findex Report, 2017). According to the RBI, 251 million account holders used mobile banking in 2018, and the number of mobile banking transactions hit 3,047 billion in 2018-19. The ongoing FI strategies, such as PJD, PSB and PJJB, have encouraged poor and disadvantaged individuals to create zero parity ledgers and take advantage of low-cost insurance protection schemes (Barik and Sharma, 2019). With a 55 per cent increase in women candidates' share, this improvement has assisted in closing FI disparities amid the different gatherings of the populace. In another study, Bapat and Bhattacharya (2016) used a qualitative survey to assess the shift in FI of the urban poor. Based on data from 202 slum dwellers in Pune, they found that family units with younger age groups and higher ability to save favourably affect the FI of urban poor and are bound to look for advances from formal monetary institutions. According to the literature, most empirical studies have been conducted in rural regions (Pahuja, 2007; Mukherjee and Chakraborty, 2012; Noman, 2013; Makar and Kalita, 2008; Faizi and Gupta, 2019), with little attention dedicated to metropolitan regions (Gundannavar,1992).

2.5 Measurement of Financial Inclusion

There is growing research on measuring financial inclusion in developing countries (Demirgüç-Kunt, Klapper and Singer, 2013). In the literature, financial inclusion has been quantified using a variety of metrics. A substantial number of researchers have used secondary datasets to determine the degree of financial inclusion in various areas using the multidimensional index of banking services (Kim, 2016; Laha and Kuri, 2014; Ambarkhane *et al*., 2014; Rai Choudhury, 2016; Laha, 2015; Park and Mercado, 2016). Beck *et al*. (2007) analysed FI utilising eight indicators: the number of bank offices, the number of ATMs per capita per square kilometre, the quantity of advance and deposit accounts per capita, and the regular advance and deposit size comparative with GDP per capita. Chakrabarty (2012) grouped the measurements used to evaluate FI into stages. For access, the number of branches per 1,000 and ATMs for every 1,000 square kilometres uses alternative banking Internet and Communication Technology (ICT) based business correspondent (BC), the branch to BC outlet ratio, and the number of villages serviced per BC. The implementation stage evaluates the development of schemes through practical analysis and penetration through financial inclusion and the number of transactions, product returns, and periodic surveys to determine the feasibility of delivery models. Fletschner (2008) focused on savings, payments, credit, and delivery as criteria to assess FI. Demirguc-Kunt and Klapper (2012) built the Global Findex datasets, which analysed FI consideration in 148 nations dependent on formal accounts, savings behaviour, source of borrowing, and use of insurance products. Honohan (2005) assessed FI in 160 countries by utilising supply-side and demand-side measures such as payment, savings mobilisation, monitoring of fund users, and risk transformation.

On the other hand, FI has been quantified in the literature utilising various measurements. The "distance-based approach" utilised by UNDP serves as the foundation for index building.

Chakravarty and Pal (2013) created an FII using an axiomatic framework covering data from 1972 to 2009. The PCA approach was used to produce some FI indicators (Lenka and Sharma 2017; Bagil and Dutta, 2012; Lenka and Bairwa, 2016). FI indices were developed by several researchers (Arora, 2010; Kumar and Mishra, 2011; Bihari, 2011) based on financial access, availability, consumption of formal financial services, demand-side and supply-side factors. Few studies sought to establish the critical determinants for the level of FI in India, such as education, income, financial information, access, usage, and self-help groups, utilising primary datasets (Bhanot *et al*., 2012; Bhutoria and Vignoles, 2018; Siddiqui and Siddiqui, 2017). Sarma (2010) developed the Index of Financial Inclusion (IFI) for 49 nations based on penetration, availability, and usage to identify high, medium, and low IFI nations. Arora (2010) used the Socio-Economic Index to assess financial inclusion regarding access, convenience and cost. Gupte *et al*. (2012) calculated FI based on FII penetration, availability, utilisation, simplicity of use and cost. Gupte *et al*. (2012) estimated financial inclusion based on FII based on penetration, availability, usage, ease and cost. Rahman (2013) measured the FI level of the general population in Malaysia through the Index of Financial Inclusion (IFI) based on accessibility convenience, take-up rate, satisfaction level and responsible usage. Yorulmz (2013) accessed FI through an index in turkey based on access, availability and usage. The previously mentioned indices have considered factors dependent on the administration of the financial institution.

Notwithstanding, in light of the new discussion on FI, other recently launched projects by the GOI require equal consideration. Gupte *et al*. (2012) assessed FI through FII measured based on penetration, availability, usage, simplicity, and cost. The above-described indices considered factors identified with banking administrations. Though, in light of the ongoing discussion on

financial inclusion, other newly introduced programmes by the GOI deserve equal consideration as there are scarcity of studies assessing the lately launched FI schemes by GOI.

2.6 Barriers to Financial Inclusion

The point when financial exclusion occurs involuntarily is risky. However, exclusion warrants legislative intercession when people whose marginal gain from utilising financial services surpasses their marginal costs but were excluded due to market failures such as excessive account fees, long distances, and lack of appropriate products. Market disappointments happen in different conditions, including incomplete information, non-competitive marketplaces, contractual flaws, and a lack of physical infrastructure (Allen *et al*., 2012; Ahmed-Karim and Alders-Sheya, 2015; Ghosh, 2013a). According to Carr *et al.* (1996), the roots of women's disempowerment are illiteracy, social isolation, caste system, reliance on local and informal moneylenders, lack of articulation, lack of chances, non-participation in decision making, wife-beating, lack of knowledge, and patriarchal system. It advocates for women's empowerment, mainly on a social level.

Between 1969 and 1980, 20 private banks in India were nationalised to redirect credit to agriculture, small-scale businesses, and priority sector loans, particularly to the poorest sectors of society. Regulators have taken a range of steps at the national and international levels to improve the condition of FI, such as lowering criteria for opening bank accounts, expanding bank branches, enhancing microfinance programmes, and supporting branchless banking (Bhaskar, 2013; Lee, 2012; Coleman, 2006; Ghate, 2008). Consequently, rural bank branches expanded from 1,833 in 1969 to 48,536 in 2015, even though just 43% of the entire population had bank accounts in 2014, and 1.7 billion people worldwide are excluded from the official financial system 2017 Findex poll. This condition may be rectified by recognising the significant issues and implementing remedial

steps. FI obstacles primarily focus on demand-side difficulties, i.e., problems encountered by beneficiaries, and supply-side issues, i.e., problems encountered by service providers (Dev, 2006). Previous research has looked at the barriers to financial inclusion in the context of farmers (Dev, 2006), entrepreneurs (Fan and Zhang, 2017), technology (Schuetz and Venkatesh, 2020), state-level (Ananth, S., & ncü, 2013), at nation level (Boitano and Aranda, 2020), and inter-country comparison (Demirguc-Kunt *et al.*, 2013). The problem of financial inclusion obstacles for women was investigated to a lesser degree. Table 2-6 summarises the challenges mentioned in the literature:

Table 2-6 Barriers to Financial Inclusion

S. No.	Barriers to Financial Inclusion	Authors
1	Not allowed to go to the bank	Murugesan and Ganapathi (2010); Jabeen *et al.* (2020); Dar and Ahmed, (2021)
2	Social and cultural norms to inheriting property	Mahmood (2011); Bolin (2020); Dall'Aglio *et al.* (2020)
3	Lack of money	Zulfiqar, Chaudhary and Aslam (2016); Abdu and Adem (2021); Dar and Ahmed, (2021)
4	Low affordability of schemes	Soliwoda (2020); Ali (2017); Dror *et al.* (2009); Ghosh (2013b)
5	Lack of collaterals	Mani (2016); Agwu (2021)
6	Loyalty to local savings and loan associations	Kaluwa and Kunyenje (2019); Chakravarty *et al.* (2014); Jowett (2003)
7	Do not trust banks	Abdu and Adem (2021); Lanie (2017); Sherraden (2013)
8	ATM inoperative	Kaluwa and Kunyenje (2019)
9	Debit card is inactive	Atkinson and Messy (2013)
10	Lack of financial literacy regarding banks and banking products	Candiya Bongomin, Munene, Ntayi and Malinga (2017); Atkinson and Messy (2013); Grohmann *et al.* (2018)

11	Do not know the usage of debit cards	Barik and Sharma (2019); Dangi and Kumar (2013)
12	Do not know the usage of mobile banking	Barik and Sharma (2019); Soyemi *et al.,* (2020)
13	Lack of confidence in approaching banks	Cull *et al.* (2012); Abel (2020)
14	Banks are far	Bermeo (2019); Nargis and Habib (2020)
15	Lack of internet access	Abdu and Adem (2021)
16	Time constraint	Somji (2020); Chatterjee, Fan, Ryu and Kim (2020)

Along with India's prosperity narrative, there is a parallel growth story of impoverished urban populations increasing and their inhumane settlements expanding in size. According to a 2013 RBI research, there are 100 million urban poor living in urban slums, and their population is predicted to rise from 26 per cent to more than 36 per cent to 50 per cent over the next 25 years (Chakrabarty, 2013). Access to financial services is critical for achieving social development and social protection for the disadvantaged. The formal financial system encourages savings, access to low-interest lending, and risk management through insurance.

In this manner, the FI of the urban poor is essential for bringing them into standard monetary services and providing access to financial products and services. Despite the pros of being a part of a formal financial framework, most grown-ups overall are not monetarily involved (Beck *et al.,* 2007). The underbanked or unbanked poor was amassed in developing nations such as South Asia, Africa, and the Middle East and North America (MENA) regions (Demirguc – Kunt *et al.,* 2015). The World Bank has offered free access to the worldwide information assortment (viz., Findex) to

appropriately screen financial exclusion, considering factors like access and usage of financial intermediaries to foster a country's formal financial framework.

The development in the financial sector has made financial services cheap and fast reaching to most distant areas. On the other side, the literature lacks models for barriers to FI worldwide. Thus, the far reach of FI services cannot be considered as access. Global experiences have shown that there are multiple answers to economic exclusion. The numerous methodologies used to accomplish FI in different countries worldwide (Bansal and Kumar, 2011). One perspective that has arisen across geographies is the rise of the contemporary form of banking.

The rising usage of mobile services characterises other kinds of financial services —such as mobile banking and non-banking channels, which are supplemented primarily by the fact that technological advancements and enormous developments have reduced costs in terms of money in emerging countries and time (Huefner, 2015).

2.7 Research Gaps

The review of literature done in the previous section highlights the existing research gaps as follows:

- There is an absence of a structured approach towards measuring the extent of financial inclusion among women specially from the lower segment of the society in India.
- There is paucity of literature on effects of education, awareness regarding the insurance schemes and location of women on the choice of insurance schemes
- A limited number of studies have analysed the effect of financial inclusion on economic empowerment of women in Indian slums

- A limited scholarly attention has been paid towards exploring the effect of economic empowerment on the social and political empowerment of women in slums.

- Though, few studies have been done on challenges that women in Indian urban slums face while accessing financial services under PJD, PSB and PJJB but limited studies have been done on evaluating the relative significance of these barriers.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Background

On the basis of the research gap discussed in section 2.6, the objectives of the thesis have been developed in this chapter. The chapter also discusses the hypothesis, variables of the study, population, and reason for selecting sample areas, research instruments, and statistical tools.

3.2 Objectives of the Thesis

Following are the objectives of the study:

1. To develop an index to study the extent of financial inclusion.

2. To examine the effects of location, education and awareness regarding Insurance schemes on the subscription of "*Pradhan Mantri Jeevan Jyoti Bima Yojana*" (PJJB), "*Pradhan Mantri Suraksha Bima Yojana*" (PSB) schemes.

3. To examine the effects of Financial Inclusion on the Economic Empowerment of Women.

4. To examine the effects of Economic Empowerment on Social and Political Empowerment.

5. To evaluate the challenges faced by the respondents in accessing tools of financial inclusion.

3.3 Hypotheses Formulation

The proposed study would examine and verify the following hypotheses:

H_{10}: *No significant difference between the Education of respondent and subscription of PJJB and PSB.*

H_{11}: *Significant difference between the Education of respondent and subscription of PJJB and PSB.*

H$_{20}$: No significant difference between awareness of PJJB and PSB among respondents and subscription of PJJB and PSB.

H$_{21}$: Significant difference between awareness of PJJB and PSB among respondents and subscription of PJJB and PSB.

H$_{30}$: No significant difference between the location of respondents and subscription of PJJB and PSB.

H$_{31}$: Significant difference between the location of respondents and subscription of PJJB and PSB.

H40: No significant effect of levels of Financial Inclusion on Economic Empowerment of women.
H41: Significant effect of levels of Financial Inclusion on Economic Empowerment of Women.

H50: No significant effect of Economic Empowerment on Social Empowerment.
H51: Significant effect of Economic Empowerment on Social Empowerment.

H60: No significant effect of Economic Empowerment on Political Empowerment.
H61: Significant effect of Economic Empowerment on Political Empowerment.

3.4 Research Design

This thesis aims to examine the degree of financial inclusion of women in slums and its impact on their empowerment. The study in this thesis is empirical, and appropriate strategies were followed to collect relevant data for fulfilling the research objectives. The researcher explored relevant literature to gain insights into the research question. Since limited information is available about the financial involvement of women in slums, thus a pre-testing is done by interviewing ten women to gain an in-depth understanding of the problem statement. The literature and information available from interviews were then used to develop an initial questionnaire to conduct a pilot

study. The pilot study was conducted on 27 women to check the feasibility of the questionnaire. The results of the pilot study were used to develop the final questionnaire. As a final sample, the data was gathered from women living in urban slums who owned bank accounts under PJD in Ludhiana, Punjab and Patna, Bihar.

Reasons for Selecting the Sample Area

The data has been gathered from women living in the slums of Ludhiana and Patna and are having bank accounts under PJD. The study has been conducted in two different socio-economic environments to understand the effect of FI on WE in slums. The socio-economic characteristics of both cities are discussed in table 3-1.

Table 3-1 Socio-Economic Status of Ludhiana and Patna

Indicators	Basis	Ludhiana	India	Patna
Population	Female Literacy Rate	77.8%	65.46%	61.96%
	Per Capita Income	Rs. 1,52,332	Rs. 1,15,224	Rs. 63,063
Employment	Unemployment Rate Females (per 1000)	36 (Punjab)	52	165 (Bihar)
	Work Participation Rate	51.54%	39.8%	35.46%
Health Indicators	Birth Rate (per 1000 population)	17.3 (Punjab)	22.8	28.9 (Bihar)
	Infant Mortality Rate (per 1000 live births)	21 (Punjab)	34	38 (Bihar)

Economic	FDI	130 (Punjab)	2147	24 (Bihar)
	FDI Per Capita	Rs. 83	Rs. 756.46	Rs. 2.4
Education	GER Higher Education (Females)	27.6 (Punjab)	22.7	11.5 (Bihar)
	Pupil Teacher Ratio	16 (Punjab)	21	48 (Bihar)

The details of the sample area have been discussed below:

3.4.1 Slums in Ludhiana

The city of Ludhiana is located in the state of Punjab that ranks 5th among the most urbanized states in India. In the last two decades, the urban population increased by 73 per cent resulting in 133 urban centres. It is the largest city in the state of Punjab for area and population. The city attracts large migration of workers who live in the city to work in various industries. Ludhiana is a prime industrial centre also known as "*Manchester it of India*". It is the hub of Indian hosiery and industrial capital of the small-scale industry. Currently, there are over 300,000 micro and small-scale units working under different sectors. According to the 2011 census, Ludhiana city has 218 slums with 69,831 households with a total population of 363,122 (MCL, 2015). The city of Ludhiana is divided into four zones: A, B, C and D, and zone B and C have 2/3rd of the total slums in the city. So out of the total sample of 825 females, 550 respondents were selected from zone B, and C and the rest 275 responses were taken from zone A and D.
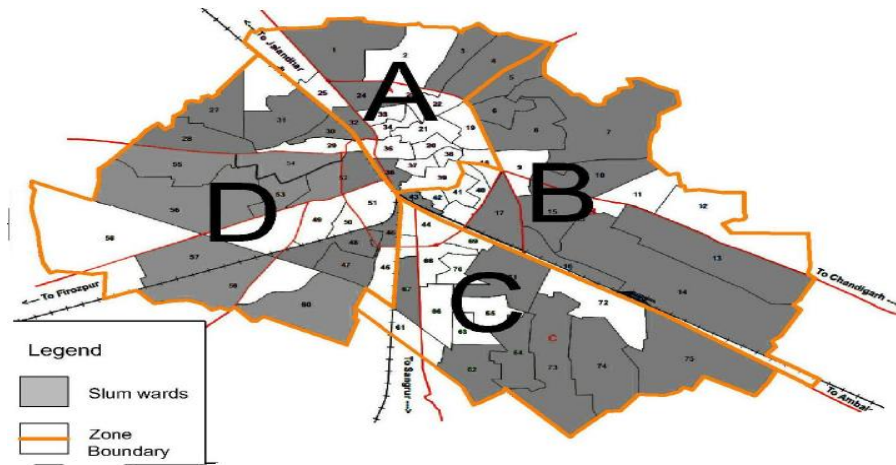
Figure 3-1 Zonal Division of Ludhiana (Source: Municipal Corporation Ludhiana, GOI)

The table below presents the distribution of slums by their population.

Table 3-2 Distribution of Slums by their Population Size

Sr. no	Population Size	Number of Slums
1	<500	32
2	501 – 1000	52
3	1001 – 2000	50
4	2001 – 3000	40
5	3001 – 5000	16
6	5001 – 10000	10
7	10001 – 15000	2
8	Information not available	16
		218

Source: Municipal Corporation Ludhiana, GOI

3.4.2 Slums in Patna

The capital of Bihar i.e. Patna has a long glorious past, located on the southern bank of the Ganges. Since Patna serves as a home to pilgrimages of various religions such as Buddhism and Jainism worldwide, it makes it a major economic centre in eastern India. Patna district is administered by Patna Regional Development Area (PRDA). It encompasses 234.70 square kilometres. Patna Municipal Corporation Area (PMC), under Patna Urban Agglomeration Area (PUAA), covers Patliputra Housing Colony, Digha-Mainpura, Sabazpura, Khalilpura, and Badalpura; Phulwarisharif (Nagar Panchayat), Dinapur Nizamut (Nagar Parishad), Danpur Cantonment Area, and Khagaul (Nagar Parishad), as well as Saidpura (Outgrowth of Khagaul). The entire land area is 146.16 square kilometres.

According to a SPUR assessment conducted in December 2010, Patna has 108 slums and 16,277 households[4]. Since 275 replies were to be collected from Patna slums, 129 replies (47 per cent of 275) were collected from Patna Municipal Corporation slums, 55 replies (20 per cent) from Dinapur Nizamat, 39 replies (14 per cent) from Khagaul, and 52 replies (19 per cent) from Phulwari Sharif.

Table 3-3 Slum details of Patna District

Sr.no	Area	Slums (in number)	Slums (in %)
1	Patna Municipal Corporation (PMC)	51	47
2	Dinapur Nizamat	22	20
3	Khagaul	15	14
4	Phulwari Sharif	20	19

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[4] Support Programme for Urban Reform an initiative supported by Government of Bihar and DIFD, UK.

	Total	108	100

Source: Municipal Corporation Patna, GOI
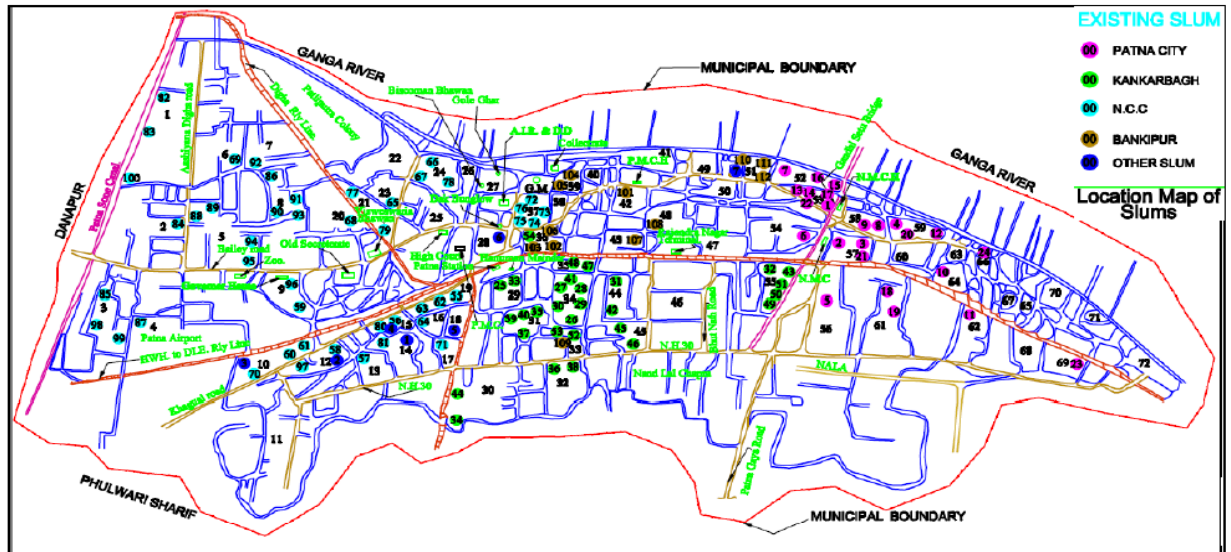
Figure 3-2 Location of Slum Pockets in Patna (Source: Municipal Corporation, Patna)

3.5 Period of Study

The data collection for this study was spread over 1.5 years. The data and information related to accounts opened under PJD, PJJB and PSB as per GOI, available up to 2021, have been incorporated.

3.6 Population

The study investigates the influence of financial inclusion on women's empowerment in developing-country slums. The purpose of a single-country study is to decrease demographic variety caused by the multi-country method (Khan, 2012; Kosberg et al., 2003; Syed and Ozbilgin, 2019). The information was gathered from women in urban ghettos in Ludhiana, Punjab, and

Patna, Bihar. The reason for choosing women from slums is that they have received little attention in the literature.

3.7 Sampling Design

The initial step in sampling design is to define the target population from which the sample is to be drawn. The total population of women in slums was 111,750 in Ludhiana and 36,591 in Patna as per Census in 2011. Of the combined population of Ludhiana and Patna, 75% of women in slums are from Ludhiana, and 25% are from Patna. The sampling unit is women with PJD accounts in urban slums. To decide the number of responses to be collected for the survey, the following steps are followed:

3.6.1 Sampling Method

Since the sample frame was not available, a stratified sampling method was followed to obtain data from the sampling unit.

3.6.2 Sample size

The study's primary variables - Social Empowerment, Political Empowerment, Economic Empowerment - were measured on a five-point Likert scale to ensure the data for the study as infinite and continuous.

3.6.3 Error Estimation

- Alpha Level (TYPE I error or rejecting a true null hypothesis) is always taken to be 5% in social science studies (Ary, Jacobs and Razavieh, 1996). So, $z = 0.05$ or z tab value $= 1.96$.

- The acceptable margin of error will be 5% as the data is metric/continuous (Krejcie and Morgan, 1970). It is denoted by 'e'.

- Variance estimation: Since a five-point Likert scale will be taken into consideration, so the variance will be - range of scale/6 = 5/6 = 0.8333 (Bartlett, Kotrlik and Higgins, 2001; Kothari, 2004; Krejcie and Morgan, 1970).

Calculation of Sample Size:

Sample Size = (z*sigma/e)^2

where, z = 1.96; Sigma = 0.8333; e = 0.05

So, for an infinite population where continuous/metric data is used for data collection, the sample size will be:

n = (z*sigma/e)^2

= (1.96*0.8333/0.05)^2

= 1067 will be the sample size

The sample size estimated was 1,140, out of which 855 (75 per cent) was taken from Ludhiana, and 285 (25 per cent) was taken from Patna. Taking into account the non-response rate, a sample of 1,140 responses were collected from women in slums, out of which 26 females refused to share the complete information and 14 females did not answer the complete set of questions due to the paucity of time, thus leading to dropping them in the final sample. Further, four responses were identified as outliers. Thus, the final sample considered for the study in this thesis was 1,096, out of which 823 respondents were from slums in Ludhiana, and 273 respondents were from slums in Patna. Since 2/3rd of the slum population is concentrated in B and C blocks of Ludhiana, 549 responses were taken from these blocks and the rest 1/3rd, i.e. 274 responses from A and D blocks. Similarly, in Patna, (47%) 128 responses were taken from PMC, (20%) 55 responses from Dinapur, (14%) 38 responses from Khagaul and (19%) 52 responses from Phulwari Sharif.

3.7 Survey Schedule Development

The data was collected through interviews schedule with women in the slums at Ludhiana and Patna. Based on the literature, a schedule was developed to measure women empowerment in slums. Since limited literature on women empowerment of urban slums is available, the dimensions of women empowerment were explored by interviewing ten women in slums. Based on inputs from interviews and the literature, the dimensions of women empowerment, i.e., social, political and economic, were developed. The schedule was pretested using 30 female respondents from slums and was further refined. The final version of the developed schedule was then circulated to gauge women empowerment based on three dimensions, i.e. economic, social, and political.

The schedule was further divided into the following sections:

Section I – The general information was sought in this section about women in slums, such as their qualifications and employment type. The information in the section was used to explain the demographic profile of respondents.

Section II – This section obtained information that was used to estimate the Financial Inclusion Index (FII).

Section III – This section obtained information to measure women empowerment through social, political and economic dimensions. The information was gathered on a five-point Likert scale where "1" denoted "Strongly Disagree", "3" denoted "Neutral" and "5" denoted "Strongly Agree".

3.8 Methodology to evaluate the extent of Financial Inclusion among Women in Slums

The first research objective in this thesis is to assess the extent of the financial inclusion of women in slums in Ludhiana and Patna. For this objective a *Financial Inclusion Index (FII)* was developed to assess their involvement in the formal financial system. This index integrates the values of

63

different variables into a single measure that reflects the levels of financial inclusion in slums. The methodology for the development of the index is discussed below:

3.8.1 Calculation of Financial Inclusion Index:

A multidimensional approach was followed while developing the Financial Inclusion Index. Developing the index was similar to that of UNDP to develop some notable development indices such as HDI and GDI (Sarma, 2008; Sarma and Pais, 2011). Similar to these indices, the proposed FII was computed by first ascertaining a dimension index for each dimension of financial inclusion. The" two dimensions involved in the computation of FII were – Bank A/c (which includes the frequency of usage of such account and the debit cards issued along with it), Availing Financial Products (which includes awareness and availing insurance schemes under PJJB & PSB, availing loan from the formal channel and availing APS).
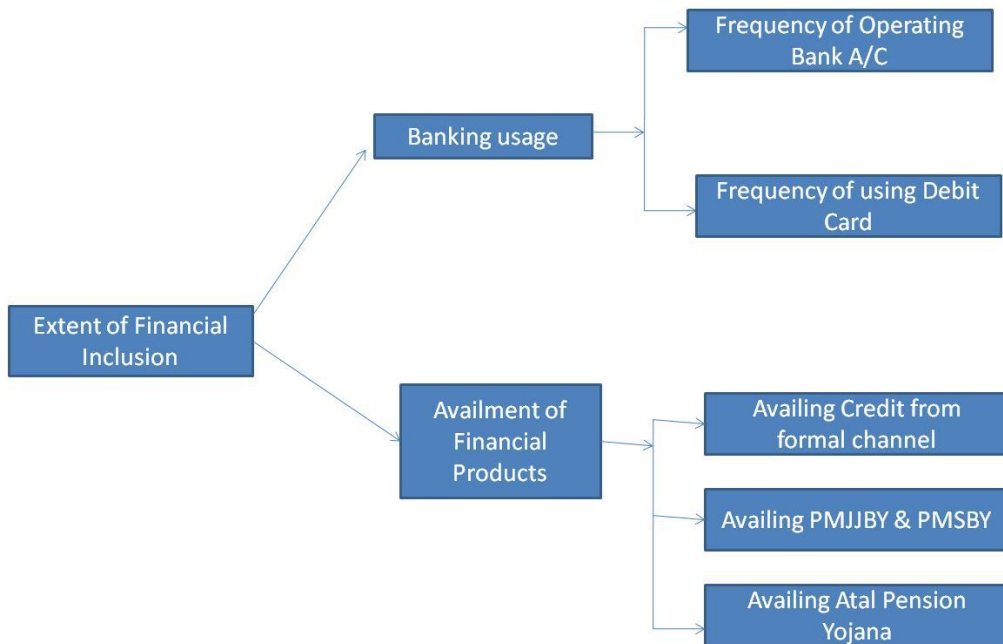
Figure 3-3 Framework for the Calculation of Extent of Financial Inclusion Index

Steps for calculating "FII:"

1. The "dimension index for the kth dimension, d_k, has been calculated as follows:

$$D_k = A_k - m_k / M_k - m_k \dots\dots\dots\dots\dots (1)$$

Where,

A_i = Actual Value of Dimension k; M_k = Maximum Value of Dimension k;

m_k = Minimum Value of Dimension k

The formula as referenced above ensures that $0 < dk < 1$. The higher the value of dk, the higher the achievement in dimension "k". Given that there are two dimensions of financial inclusion to analyse, a woman "k" will be represented by a point dk = (d1, d2) on the 2-dimensional Cartesian Space (Sarma, 2008).

Point W (0,0) in 2-dimensional Cartesian Space represents the adverse condition (financial exclusion), while point B (1, 1) represents an ideal situation (complete financial inclusion). Since there are two perspectives of financial inclusion to study, a woman's attainments in these perspectives will be represented by a point M = (d1, d2).

2. It is crucial to comprehend where M corresponds to the worst point W and the ideal point B. The higher the interval between points M and W, and the shorter the interval between points M and B, the higher the financial inclusion. Two places might have a similar interval from B yet different intervals from W, and vice versa. Thus, if two respondents have their realisation points at the same distance from B but at different intervals from W, the respondent with the higher interval from W shall be highly financially included. In comparison, the respondent with the shorter interval from B shall be highly financially included.

3. Both intervals are considered while calculating FII, and a simple average of the Euclidian interval between M and W and the inverse Euclidean interval between M and B is calculated.

4. To calculate FII, calculate M_1 (interval between M and W) and M_2 (inverse interval between M and B) and then take the simple average of M1 and M2 to get FII, the final index. The formulae are as follows:

$$M_1 = \sqrt{d_1^2 + d_2^2} / \sqrt{w_1^2 + w_2^2} \ldots\ldots\ldots\ldots \text{ (2)}$$

The formula (2) gives normalized Euclidian interval of M from worst point W. Higher value of M_1 implies higher financial inclusion.

$$M_2 = 1 - \sqrt{(w_1 - d_1)^2 + (w_2 - d_2)^2} / \sqrt{w_1^2 + w_2^2} \ldots\ldots\ldots\ldots\ldots \text{ (3)}$$

The formula (3) gives an inverse normalized Euclidean interval of M from ideal point B. The numerator of the second element is the Euclidian interval of M from the ideal point B, normalizing it by the denominator and subtracting by 1 gives the inverse normalized interval. The higher value of M_2 denotes a higher level of financial inclusion.

$$FII = \tfrac{1}{2}(M_1 + M_2) \ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{ (4)}$$

The formula (4) is a simple average of M1 and M2, consolidating both the worst and the ideal points.

5. In the present study, all the dimensions of financial inclusion have been acknowledged as equally crucial and given equal weightage, so wk = 1 for all the k. so, the formula for the financial inclusion index is:

$$FII = \tfrac{1}{2}[\sqrt{d_1^2 + d_2^2} / \sqrt{2} + \{1 - \sqrt{(1 - d_1)^2 + (1 - d_2)^2} / \sqrt{2}\}] \ldots\ldots\ldots\ldots \text{ (5)}$$

6. Based on the score secured on FII, the women have been divided into the following three categories (Sarma and Pais, 2011), viz:

- Highly Financially Included if the values of FII range between 0.6 to 1.

- Medium Financially Included if the values of FII range between 0.3 to 0.6

- Low Financially Included if the values of FII are less than 0.3

The score for each respondent in respective dimensions has been calculated as follows:

Table 3-4 Calculation of FII Scores

Variables for Extent of Financial Inclusion	
Category	Score
I. Usage of Banking Services	
A. Frequency of Operating Bank A/C	
1. Having Bank A/C with no usage	1
2. Bank A/C Rarely used	2
3. Bank A/C Annually used	3
4. Bank A/C used once in two months	4
5. Bank A/C used monthly	5
6. Bank A/C used fortnightly	6
7. Bank A/C used weekly	7
B. Frequency of using Debit Card	
1. No Use of Debit Card	1
2. Debit Card used Rarely	2
3. Debit Card used Annually	3
4. Debit Card used once in two months	4
5. Debit Card used monthly	5
6. Debit Card used fortnightly	6
7. Debit Card used weekly	7
II. Awareness and Availment of Financial Products	
1. Awareness of PMSBY	1

2. Awareness of PMJJBY	1
3. Availed PMSBY	1
4. Availed PMJJBY	1
5. Availed Loan from Formal Channel	1
6. Availed APY	1

3.9 Methodology to assess the impact of education, awareness and location on the choice of Insurance schemes

The next objective of the study in this thesis is to distinguish whether location, education and awareness regarding insurance schemes (PJJB, PSB) affect the subscription of these schemes. The education profile of the respondents, awareness regarding PJJB, PSB and subscription of PJJB, PSB were measured through the schedule. The nature of these variables is furnished in Table 3-5.

Table 3-5 Characteristics of Variable for Objective II

Variable	Type	Measurement	IV/DV
Education	Categorical	No formal education, Education below matriculation, Matriculation/ Higher Secondary, Other Technical Course and Graduation and above	Independent Variable
Location	Categorical	Ludhiana and Patna	Independent Variable
Awareness of PSB and PJJB	Categorical	No Awareness, Awareness of PJJB and Awareness of PSB	Independent Variable
Choice of PSB and PJJB	Categorical	PSB, PJJB, Both and None	Dependent Variable

The education profile, location and awareness of PSB and PJJB are independent variables (IV), and choice of PSB and PJJB are dependent variables (DV). To test the impact of IV on DV chi-square test was applied.

3.10 Methodology to assess the impact of Financial Inclusion on Women Empowerment

The third objective of this thesis is to examine the effect of financial inclusion on female empowerment in urban slums. For this, the first step is to develop a measurement metric to measure women's empowerment. Because there is little literature on women empowerment in urban slums, the characteristics of women empowerment were investigated by interviewing ten women in slums. The dimensions of women's empowerment, i.e., social, political, and economic, are produced based on the interviews and literature. The schedule was pretested with ten female slum dwellers and was modified by removing statements. The final version of the schedule to measure the empowerment of women based on economic, political and social factors was created using factor analysis.

To further analyse the influence of financial inclusion on women's empowerment, females in the slums were divided into three categories based on the Financial Inclusion Index score: low, medium, and high financial inclusion. Then, a dummy regression was applied on the summated score of empowerment aspects dependent on the amount of financial inclusion. The mechanism for determining the impact is discussed further below:

Table 3-6 Nature of Variables under the third Objective

Variable	Type	Measurement	IV/DV
Financial Inclusion – Measured through Financial Inclusion Index	Categorical	Categories of High, Medium and Low based on Financial Inclusion Index	Independent Variable
Economic Empowerment Social Empowerment	Continuous	Summated rating scale	Dependent Variable

Political Empowerment			

Financial Inclusion

In the context of the current study, all the women residing in slums of Ludhiana and Patna who are included in the formal financial sector were considered to be financially included, which were measured through FII, and the women were further categorised into three levels of financial inclusion as per their score in the FII (as mentioned in section 3.8.1).

Women Empowerment

Women empowerment is a latent variable in this thesis measured through the observed indicators that reflect women who have increased participation in traditionally male-dominated societies. The proxies for women empowerment are economic, social and political empowerment explained as follows:

Economic Empowerment (EE): Women can expand their access to economic resources and make decisions that benefit them and their families. EE was assessed in the current study using the scale of "Raj *et al.* (2018), Basu (2006), Postmus et al. (2013)." The items of the scale were measured using a five-point Likert scale.

Social Empowerment (SE): It refers to the power that a woman receives for participating in the decision-making process within the household, along with equal status and freedom of movement within society. SE is measured through the scale of "Basu (2006) and Boley *et al.* (2016)." The items of the scale were measured using a five-point Likert scale.

Political Empowerment (PE): It refers to increasing women's political participation and leadership and supporting human rights. The PE of women is measured through the scale of Niemi et al.

(1991) and Boley et al. (2016). The items of the scale were measured using a five-point Likert scale.

3.10.1 Factor Analysis

Factor analysis was applied to ascertain the measurement of women empowerment, i.e. social, political and economic, by extracting maximum common variance and putting them into a common score. The methodology for factor analysis has been discussed below:

3.10.1.1 Exploratory Factor Analysis (EFA)

For EFA on the data, Principal component analysis (PCA) was performed using Varimax rotation and SPSS 22.0 (Kakati and Dhar, 2002)to explore interrelationships among variables in the thesis and to reduce a considerable number of variables into a few manageable sets (Stewart, 1981). EFA is used to put the structural model to the test. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic "that reflects the proportion of variance that may be attributed to underlying variables." High numbers (around 1.0) often imply that factor analysis may be helpful for data. If the value is less than 0.50, the factor analysis findings will most likely be inaccurate. A hypothesis was tested to identify if the correlation matrix was an identity matrix using Bartlett's test of sphericity which indicated that the variables were unrelated and inappropriate for structure discovery. All the values of significance level less than 0.05 imply that factor analysis would be helpful with data. Items with factor loading less than 0.4 were dropped (Hair et al., 2010). The data was reduced to four phases. First, the inter-item correlation was examined, and items with values less than 0.3 were deleted. The elements with a value less than 0.50 on the diagonal axis were eliminated in the second stage, the anti-image correlation matrix. The extracted communalities were examined in the third stage, and items with values less than 0.50 were removed. The fourth

and last step was to eliminate the rotated component matrix, the statements with the cross or multiple loading and values less than 0.40 were removed.

3.10.1.2 Confirmatory Factor Analysis (CFA)

CFA is a multivariate statistical procedure for ascertaining how well the measured variables depict the number of constructs. CFA is employed as a confirmatory test for measurement theory. It is a technique for determining how well measured variables reflect a concept. CFA is used to evaluate the fitness, reliability, and validity of latent constructs. Using principal component analysis, the multi-factor CFA was performed on 14 items to evaluate the measurement model. Convergent and discriminant validity were utilised to assess the constructs' validity.

3.10.1.3 Reliability

The degree to which the scale of a construct can be replicated in the future is referred to as the reliability of the construct (Joppe, 2000). The amount to which a questionnaire, test, observation, or other measuring process gives the same conclusions on repeated trials is known as reliability. A construct's reliability can be assessed through discriminant validity and convergent reliability.

Cronbach's Alpha

It denotes the degree to which objects interact with each other. Internal consistency indicates that many items measure the identical concept and correlate with each other. On the other hand, low inter-item correlation implies that certain items are not chosen from the exact domain and are consequently unreliable (Churchill, 1979). Cronbach's alpha is a widely acknowledged metric of internal consistency. The minimal acceptable requirement for showing internal consistency is an alpha value of 0.70 (Kennedy et al., 2002).

3.10.1.4   Validity

The extent to which a construct accurately indicates the precise notion that the researcher intends to measure is known as validity. While reliability is concerned with measuring equipment or procedure's accuracy, validity targets the effectiveness of research in measuring what researchers aim to test. The validity of research decides if it genuinely measures what it is supposed to assess or how reliable the research results are. The two types of validity criterion are – content and construct validity.

   a.   Content validity:

The extent to which the items' content corresponds with the concept specification (Hinkin, 1995). It can be ascertained through existing subject-matter literature or discussions with subject-matter specialists.

   b.   Construct validity:

Construct validity is the extent to which an assortment of measured items accurately reflects the hidden theoretical notion. It is concerned with measuring accuracy (Joppe, 2000) and can be shown through discriminant, convergent and nomological validity.

   •   Convergent validity

      Convergent validity evaluates how well the trait component explains the correlation within the two measures. As a result, markers of a particular concept should converge or share a significant amount of variance. It is concerned with how well a measure correlates with others attempting to measure the identical concept.

It is possible to establish it in the following ways:

a) Factor loading:

A higher level of convergence is established when values of factor loadings are greater than 0.50 or preferably greater than 0.70.

b) The average variance extracted (AVE):

AVE is a brief indication of convergence in CFA. The following standardised loadings are used to compute AVE:

AVE = Sum of squared standardised factor loadings / No. of items

Convergent validity is established when AVE is greater than 0.50.

c) Composite reliability

It evaluates the dependability and internal consistency of the measured variables that reflect the hidden construct. It is readily calculated by squaring the total of factor loadings for constructions and error terms being calculated for a construct (Hair et al., 2001). The thumb rule for composite reliability is 0.70 or higher (Fornell & Larcker, 1981).

- Discriminant validity

The discriminant validity of a measure relates to how it varies from other measures attempting to assess distinct concepts. It may be examined by analysing the AVE. Fornell and Larcker (1981) emphasised the importance of evaluating the discriminant validity of the construct used in the study. They recommended that AVE for each construct be more significant than the squared correlation between constructs.

3.10.2 Statistical Techniques applied in the Study

The data acquired through the schedule was analysed using appropriate statistical methods to evaluate the hypothesis. The following strategies were employed in the study:

3.10.2.1 Regression with Dummy Variables

In the current study, multivariate regression analysis and dummy variables for financial inclusion levels were used. The data has been categorised into three categories: Low FI, Medium FI and High FI. The dummies were designed for three degrees of FI: high, medium, and low.

In this case, the dummy variables are coded as follows:

Table 3-7 Coding of Dummy Variables

Financial Inclusion Levels\Dummy Variables	D1	D2	D3
Low	0	0	0
Medium	0	1	0
High	0	0	1

The following is the regression equation for investigating the impact of FI on aspects of WE:

   a) The regression equation for analysing the effects of FI on EE using a dummy variable is shown below:

$$EE = \beta_0 + \beta_1 D_1 + \beta_2 D_2 + e$$

Where EE = Economic Empowerment of Women

β_0 = Intercept; β_1 = Co-efficient of D_1; β_2 = Co-efficient of D_2

D_1 = Dummy for Medium Financial Inclusion; D_2 = Dummy for High Financial Inclusion

FI = Financial Inclusion; e = Error Term

3.11 Methodology for assessing the impact of Economic Empowerment on Social and Political Empowerment

The fourth objective in this thesis is to evaluate the influence of the economic dimension of WE on their social and political dimensions. For this, the factors for this goal were measured by the dimensions of women empowerment determined using EFA and CFA. Table 3-6 lists the properties of the variables. The link between economic empowerment and social and political empowerment is tested using linear regression.

Table 3-8 Characteristics of Variable for Objective IV

Variable	Type	Measurement	IV/DV
Economic Empowerment	Continuous	Summated rating scale	Independent Variable
Social Empowerment			Dependent Variable
Political Empowerment			Dependent Variable

The essential assumptions of linear regression linearity, homoscedasticity, independence, and normality were tested first before proceeding to the final analysis.

3.12 Methodology to assess the Barrier to Financial Inclusion

For the fourth objective in this thesis, i.e., identifying the barriers to financial inclusion among women living in slums, ISM and MICMAC analyses were used. ISM has been used to detect the barriers to banking and financial "services (Ketkar et al., 2012; Behl et al., 2016; Rana et al., 2018; Salimifard et al., 2010). The" ISM technique is explored more below.

3.12.1 Interpretive Structural Modelling

ISM is a relational mathematics-based technique that explains and transforms ill-structured mental illustrations about the system under study into an individual interconnected, organised collection of system constituents (Warfield and Cardenas, 1994).

The following sub-sections describe the phases involved in the ISM technique:

1. Structural Self Interaction Model: A branch manager of Union Bank of India with over eighteen years of experience, a professor from Kurukshetra University and two individuals from two different NGOs, namely – Aagaz Charitable Foundation and HELPS Welfare Society in Ludhiana, were contacted in order to identify and better understand the issues faced by women in accessing the financial services. Their perspectives were sought to discover the contextual links between them and the various hurdles to financial inclusion. The four symbols mentioned below were used to signify the directional relationship between two components (x and y):

    I.   A when "x" leads to "y" and not vice-versa;

   II.   B when "y" leads to "x" and not vice-versa;

 III.   C when both "x" and "y" lead to each other and

 IV.   D when there is no connection between both "x" and "y"

The Structural Self Interaction Model for the elements under consideration was then developed by entering the experts' responses to each pair-wise interaction between the components.

2. Reachability Matrix: The reachability matrix was then prepared by converting each entry in the SSIM into 1's and 0's as per the following rules:

I.   The (x, y) entry in the reachability matrix becomes 1, and the (y, x) entry becomes 0 when (x, y) entry in SSIM is A.

II.   The (x, y) entry in the reachability matrix becomes 0, and the (y, x) entry becomes 1 when (x, y) entry in the SSIM is B.

III. Both the (x, y) entry and the (y, x) entry in the reachability matrix become 1 when (x, y) entry in the SSIM is C.

IV.   Both the (x, y) entry and the (y, x) entry in the reachability matrix become 0 when (x, y) entry in the SSIM is 0.
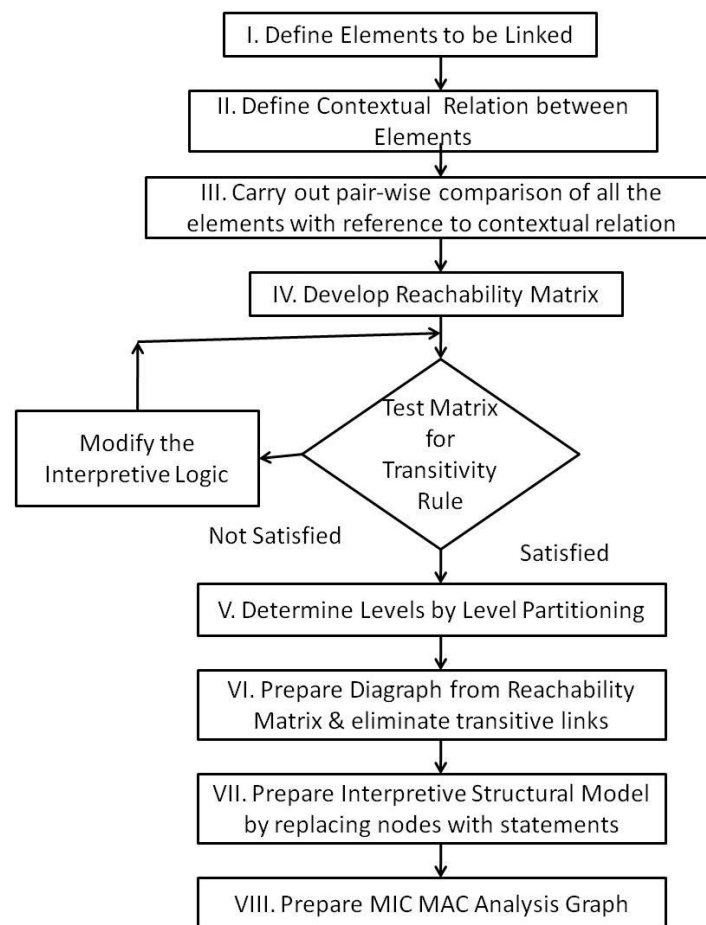
Figure 3-4 Steps involved in ISM technique

Once the reachability matrix for all factors was developed from the structural self-interaction model, it was checked for the transitivity rule. The transitivity rules checks if factor X depends on factor Y and factor Y depends on factor Z, then factor X should depend on factor Z. If the transitivity rule is not satisfied, then the SSIM is further revised and again worked out till the reachability matrix meets the conditions of the transitivity rule."

3. Level Partitioning: The reachability set and antecedent sets were derived for each matrix from the final reachability matrix. The reachability set consists of the factor itself and the other factors that it may affect. In contrast, the antecedent set consists of the factors themselves and the factors that may affect it. Further, the intersection of these sets was determined for the factors and the intersection levels were determined for different factors. The factors for which the reachability and the intersection sets were the same occupy the first level in the Interpretive Structural Modelling hierarchy. The first-level factors were those factors that did not lead to the other factors above their level in the hierarchy. Once the first-level factor was recognised, it was removed from being considered. The exact process was replicated to obtain the factors at different levels. The process continued until the level of each factor was defined. These levels helped in constructing the digraph, and the final Interpretive Structural Model was obtained.

4. Developing Diagraph: "The elements were then summarised graphically in order of their levels, and the directional links were drawn as per the connections depicted in the reachability matrix. A more simplistic version of the initial digraph was obtained by eliminating the transitive relationships one at a time, which were not of much importance (Sushil, 2012). Only those transitive relationships were preserved whose interpretation was crucial as per the experts.

5. Interpretive Structural Model: Eventually, the digraph was transformed into an ISM model by combining the factors simultaneously, substituting the nodes with statements and designating them per their hierarchy.

6. MICMAC Analysis Model: The barriers were then sorted by converting the reachability matrix into a MICMAC diagram, which aided in assessing the FI barriers' driving and dependence powers. In general, a barrier with higher dependence power indicates that several other barriers should be taken care of before this barrier can be omitted. A barrier with a high driving power means that its removal allows resolving several other barriers (Attri et al., 2013). Following the arrangement adopted by preceding researchers (Mandal and Deshmukh, 1994), the barriers were classified into four groups, namely:

- Autonomous variables where both driving and dependence powers are weak;

- Dependent variables where driving power is weak, but dependence power is high;

- Driving variables where driving power is high, but dependence power is weak; and

- Linkage variables where both driving and dependence powers are high.

CHAPTER 4 FINANCIAL INCLUSION INDEX

4.1 Background

This chapter introduces the Financial Inclusion Index, which was developed to assess the level of financial engagement in slums. Based on the results of the FII, women in slums were classified into different levels of financial inclusion.

This thesis investigated financial inclusion among women living in slums in two cities: Ludhiana and Patna. The first goal of this investigation, i.e. calculating the Financial Inclusion Index (FII), is addressed in this chapter. The information was gathered using an interview schedule for FII. In section 3.8 of the preceding chapter, the process for developing FII was outlined. The index's creation is based on recently announced financial inclusion programmes by the Government of India, such as the PJJB, PSB, and APS. The demographic profile of respondents is shown in the next sub-section, followed by the current condition of FI in India and the findings of FII.

4.2 Profile of Respondents

Of the respondents who participated in the study from Ludhiana, 56% (460 females) of respondents were employed as full-time labour, 24% (197 females) were employed as part-time labourers, and 20% (164 females) were unemployed. From Patna, 40% (109 females) of respondents were employed as full-time labour, 32% (87 females) of respondents were employed as part-time labourers, and 28% (76 females) were unemployed.
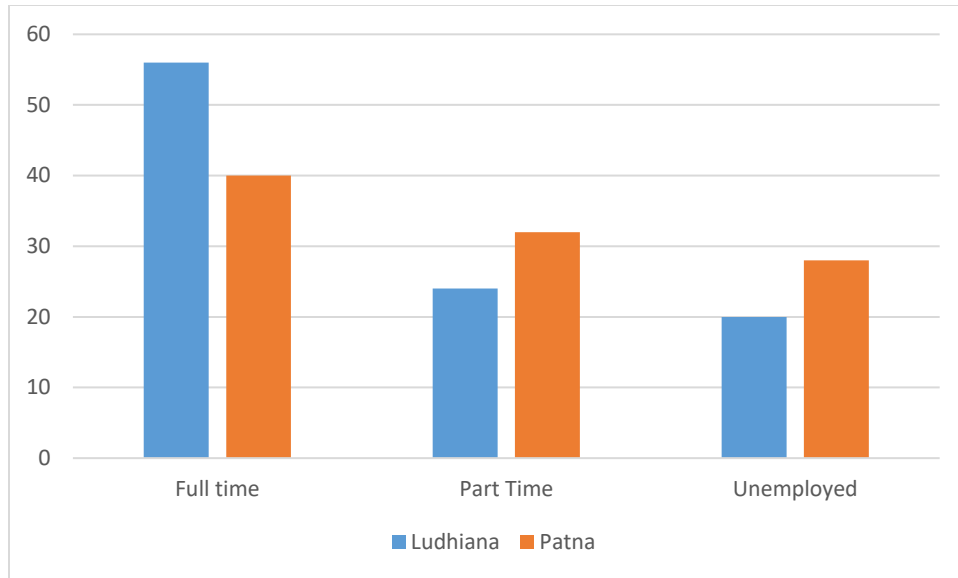
Figure 4-1 Profile of respondents as per Employment Type

4.3 Current State of Financial Inclusion

Figure 4-2 displayed the number of Pradhan Mantri Jan Dhan Yojana beneficiaries in the country's public, commercial and regional rural banks as of January 2021. The data on enrolment in these initiatives was obtained from the Government of India (www.pmjdy.gov.in/). According to the data, the overall number of beneficiaries was higher in public sector banks than in private and regional rural banks. Female beneficiaries were the most numerous in public sector banks compared to the other two categories, i.e., female beneficiaries outnumber private sector banks by more than 18 times. Furthermore, under the PJD, deposits in the accounts were 25 times higher in public sector banks than in private sector banks. This demonstrates that public sector banks provided more elaborative banking services to the general public than the private and regional rural banks.
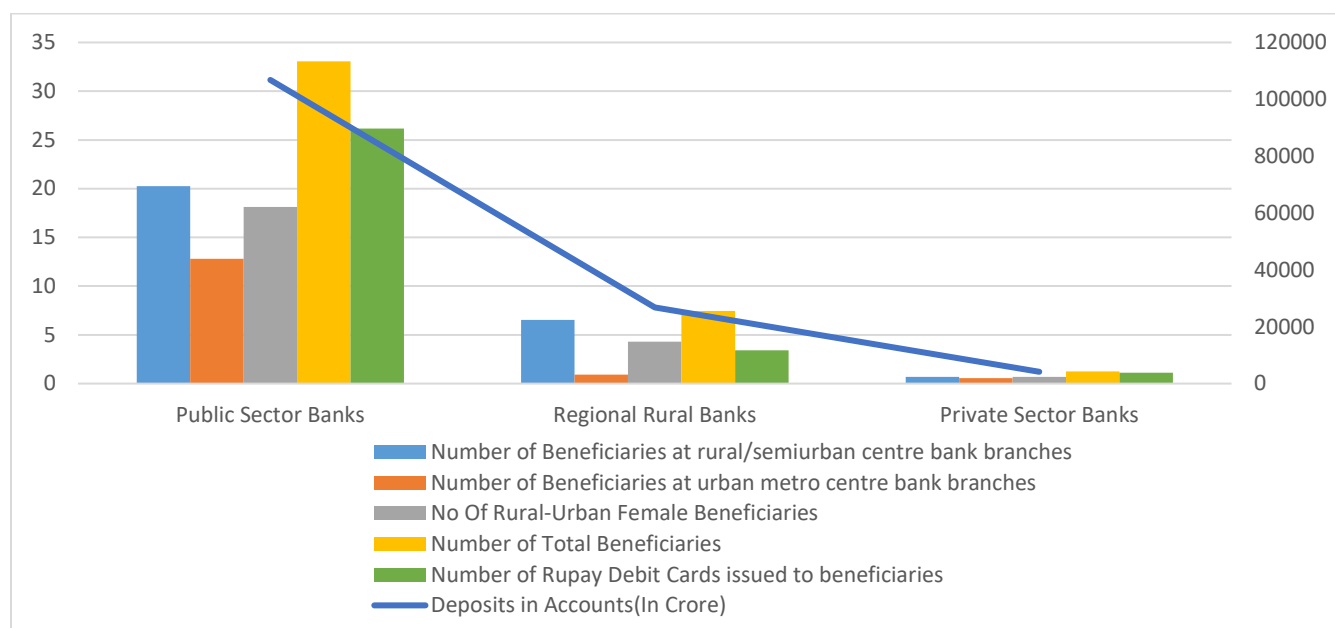
Figure 4-2 Beneficiaries Enrolled in PJD

4.3.1 Sources of Awareness of PJD Account

Figure 4-3 depicts the sources of the PJD Accounts among women living in slums in Ludhiana and Patna. The data showed that TV and radio played the most crucial role in raising awareness of PJD among females in Ludhiana and Patna, accounting for 42 per cent in Ludhiana and 56 per cent in Patna. Furthermore, banks were making efforts to raise awareness about opening bank accounts under PJD, with 21 per cent in Ludhiana and 18 per cent in Patna. Bank correspondents played a big part in developing awareness in Ludhiana, i.e. 37%, but failed to do so in Patna, but friends and relatives played a significant part in establishing awareness in Patna, i.e. 32%, compared to Ludhiana, where it was only 12%. In this sense, NBFCs and money lenders have no role to play. As a result, it was determined that television, radio, banks, and bank correspondents played essential roles in raising knowledge about opening bank accounts under the PJD programme by females in both Patna and Ludhiana, such as friends, relatives, self-help organisations, and NGOs.
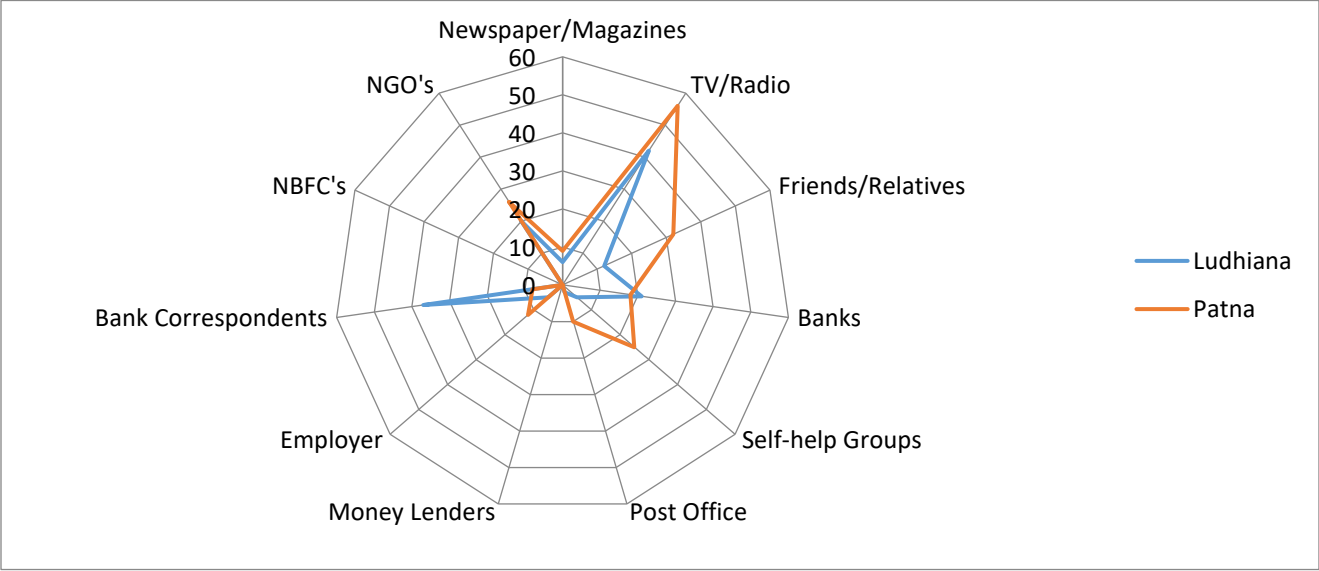
Figure 4-3 Source of Awareness regarding PJD Account

4.3.2 Loan Availment

Figure 4-4 shows the number of women who availed loans from several sources in the slums of Ludhiana and Patna. The data showed that 79 per cent of respondents in Ludhiana and 86 per cent of respondents in Patna availed loans from official or informal sources. More than three-fourths of females in both cities availed loans from a formal or informal source to meet their necessities.
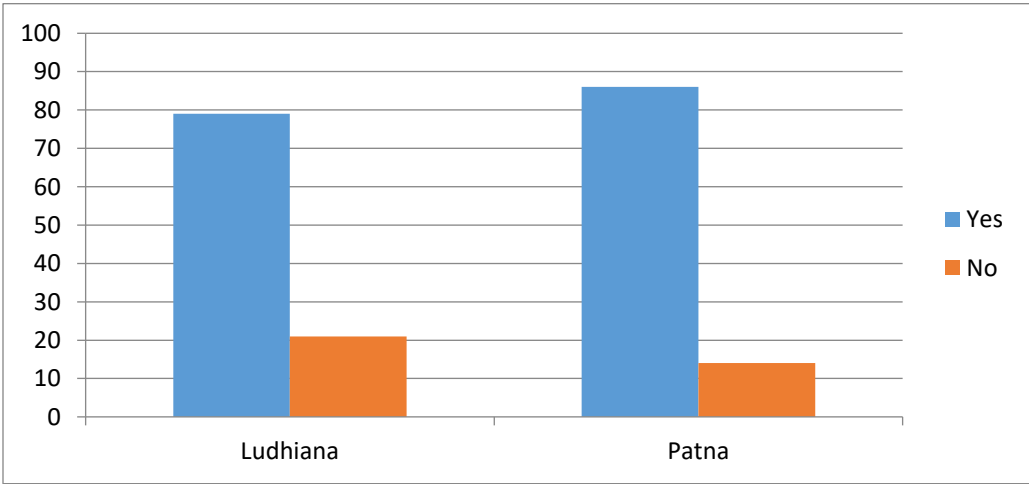
Figure 4-4 Availed Loan from both Formal & Informal source

4.3.2 Purpose of Loan

The women in slums of Ludhiana and Patna availed loans from both formal and informal sources mainly for marriage, i.e., 64% and 52% in Ludhiana and Patna respectively, 31% females in Ludhiana and 47% females in Patna availed loans for healthcare purposes. 8% in Ludhiana and 4% in Patna availed loans for starting their venture, and 14% in Patna and 5% in Ludhiana availed loans for their children's education. Thus, it can be inferred that most females availed loans to for their children's marriage, after which they prioritised health for availing of the loan. Education happens to be the least contributing factor for availing of loans among this population. However, the situation was found better in Patna as compared to Ludhiana for prioritising education.
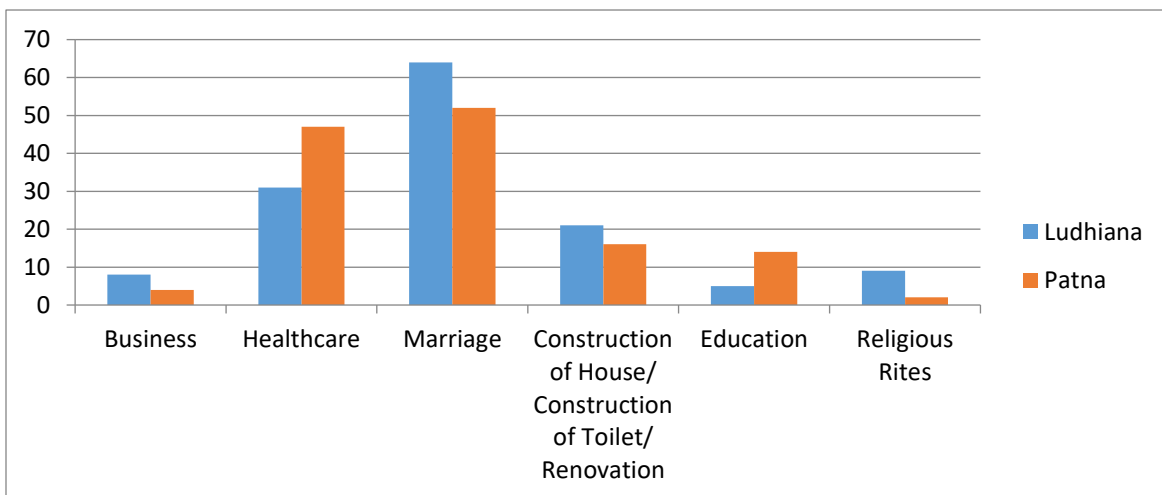
Figure 4-5 Purpose of Loan

4.4 Objective I – Financial Inclusion Index

To develop an index to study the extent of financial inclusion

In this thesis, Financial Inclusion refers to incorporating women from Patna and Ludhiana slums into the official financial system. In this thesis, the term formal financial system refers to holding a bank account under PJD, the frequency with which the said account and the debit card associated

with it are used, a loan obtained from the formal financial system, and insurance obtained under at least one of the specified schemes, namely PJJB and PSB, in addition to receiving APS. A planned schedule was used to gather data from 1,140 females in the urban slums of Ludhiana and Patna. Out of 1,140 responses, 40 were eliminated owing to insufficient information, and four were considered outliers. As a result, data from 1,096 respondents was used. An index was created to determine the financial inclusion of these respondents (Sarma, 2008; 2012).

4.4.1 Development of Financial Inclusion Index

In fostering the FII, a multifaceted approach was taken into consideration. The index was built based on the methodology used by UNDP to compute development indices such as HDI and GDI (Sarma, 2008; Sarma and Pais, 2011). The FII proposed in this thesis was prepared by first building a measurement list for each dimension. The index is created utilising two measurements: (i) usage of banking services and (ii) awareness and subscription of financial products following the GOI's launch of the FI program. The two aspects used in calculating FII are bank accounts (which include the frequency with which such accounts are used and the debit cards issued with them) and the use of financial products (which includes awareness and subscription of insurance schemes under PMJJBY & PMSBY, availing loan from formal channel and subscription of Atal Pension Yojana). The index was created to determine financial inclusion among women in urban slums in Ludhiana and Patna. To assess their level of participation in the formal financial system, the index values were divided into three categories: high (FII values ranging from 0.6 to 1), medium (FII values ranging from 0.3 to 0.6) and low (FII values ranging from 0.3 to 0.6). Sarma (2008); Sarma and Pais (2011); Sarma (2012). Table 4-1 presents an overview of the results of FII.

Table 4-1 Summary of Financial Inclusion Index in percentage

Location of women in slums	High FII (values between 0.6 to 1) (%)	Medium FII (values between 0.3 to 0.6) (%)	Low FII (values less than 0.3) (%)	Total
Patna	6.96	45.05	47.98	273
Ludhiana	3.65	30.98	65.37	823
Total (∑total respondents in FII category/1096*100)	4.4	34.4	61.2	1096

According to the statistics of FII in the summary table 4-1, only 49 women (4.47 per cent of the total respondents) were exceptionally financially active, with computed index values of more than 0.6. The medium financially involved category included 378 women with computed index values ranging from 0.3 to 0.6, while most women (n=496) fall into the low financially involved group with calculated index values less than 0.3. Furthermore, 173 out of these 496 were on point O of Euclidian distance, i.e., the worst-case situation in which point $O = (0,0)$ in 2-dimensional space.

4.4.2 Findings and Discussion of Results

The sample consisted of women living in urban slums and eligible for the survey. Women needed to a have PJD bank account to be eligible to participate in the survey. The data was further analysed to understand the current status of financial inclusion among female slums dwellers. The survey found that the primary source of awareness among women regarding the financial inclusion schemes were Bank correspondents, Banks, NGOs and self-help groups in both cities of Ludhiana and Patna. Bank's business correspondents were specialists of banks giving financial services to unbanked families and were significant to the data channels. Banks invested considerable resources on bank correspondents or bank Mitras as they generated significant cash and remittance

transactions (PTI, 2015). The outlets of bank correspondents or Bank Mitras in both provincial and metropolitan regions were prepared for giving banking services like account opening, the deposit of money, withdrawal, fund transferring and service related to insurance and pension through biometric authentication (PTI, 2015). TV, radio, and newspapers played critical roles in generating awareness regarding the scheme.

The index developed in this thesis was proposed to quantify women's FI status living in ghettos. The index was constructed based on usage of bank account and availing of financial products. The bank account usage was measured based on the frequency of bank transactions and usage of debit cards. The usage of PJD accounts was estimated by the frequency of its operations, i.e., deposits and withdrawals made by the account holders. The frequency of operations decides the active usage of the bank accounts. The frequency of transactions was monthly for both cities. This highlighted females actively using bank accounts in urban ghettoes, and it might be due to receiving government benefits transferred to their accounts. The results were consistent with the previous literature (Singh and Naik, 2018; Kumar and Joseph, 2017). The PJD account holders not only received financial incentives instead, the beneficiaries were eligible for debit cards that facilitated access to additional banking services and also provided life insurance cover up to INR 30,000 ($400) and an accidental cover of INR 200,000 ($1,350) if the card was used once before 90 days[5]. The results indicated that the female slum dwellers were aware of the Rupay cards, but the awareness regarding the life insurance and accidental insurance associated with debit cards were limited, and the majority of females had not yet used the debit cards. Due to the lack of financial training for females in slums, imparting the same could accelerate its usage (Kemal,

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[5] Scheme Details PMJDY, Link: https://pmjdy.gov.in/scheme

2019). The results were found consistent with the literature (Singh and Naik, 2018; Iyer and Jose, 2017).

Banks were found the least preferred source for credit by female slums dwellers. The results showed that formal credit penetration in urban slums (i.e., Ludhiana and Patna) was shallow. One reason for low credit access by females was restricting their access to economic opportunity, income-earning activity by the opposite gender to retain the household's power situation (Kabeer, 2001). Since females got restricted information on credit programs, most of them may fail to understand the process and effectiveness of microcredit programs (Lusardi and Tufano, 2009; Bhattacharjee, 2016). The results also highlighted that marriage and healthcare were the primary reasons for availing of loans by women in urban ghettoes.

In this thesis, the availment of financial products is measured based on availing life insurance (PJJB), health insurance (PSB) and pension scheme (APS). The schemes encourage workers in unorganised sector to plan their retirement. The results indicated relatively moderate awareness of insurance schemes among women in slums. However, the awareness of PSB was higher compared to that of PJJB amongst female slum dwellers. The results indicated that in both cities - Ludhiana and Patna - women had higher subscriptions for PSB, but females in Ludhiana slums had more awareness than those in Patna. The results also indicated that the awareness and subscription for PSB were higher than that of PJJB and APS in both cities. Females in slums were more inclined towards health insurance than life insurance and pension plan, and these results were in line with Owusu-Sekyere and Bagah (2014) work that highlighted urban females in developing countries had a favourable approach towards health care insurance. The findings of the thesis are in response

to the status of female beneficiaries under various schemes initiated by the Ministry of Finance[6]. The index calculated based on the variable mentioned above were further categorised into low, medium and high. The index was based on women who already have PJD accounts, and it was constructed to measure the frequency of usage of banking services and other financial services. Thus, the index is unique as it measures the extent of usage of financial services among women in slums who already own a bank account under the scheme.

Based on the aforementioned financial inclusion schemes, a financial inclusion index (FII) was calculated, referring to the work of Sarma (2008) and Sarma (2012). The respondents were divided into three categories based on FII: high, medium and low financial inclusion. The results indicated that 39 per cent of the women in urban slums had high to medium access and usage of the formal financial system. The consequences of this investigation are in line with the past literature (Rajeev and Vani, 2017; Sriram and Sundaram, 2015; Mettenheim et al., 2013; European Commission, 2011), which stated that the low-cost formal financial schemes improved the access and utilisation of monetary services by individuals with restricted assets. Mzansi scheme in Africa, due to its no-frill account and negligible maintenance costs, resulted in high ownership of basic savings bank accounts (Triki and Faye, 2013) and L' Assistance – a micro-insurance scheme in Morocco insured 240,000 women previously uninsured (Crepon et al., 2011). Thus, it can be interpreted that the cost associated with accounts and affordable insurance premium were significant driving forces in increasing financial inclusion in developing nations.

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[6] Ministry of Finance (March 3, 2020) Press Release Link: https://pib.gov.in/PressRe leasePage.aspx?PRID=1604929&fbclid=IwAR1NrT-w5Y8JXpenrx3x2eIyz-TXOKXDY06BfljpX88tPuyRPNnRmqO_AJo

CHAPTER 5 FACTORS AFFECTING PREFERENCES FOR INSURANCE PLANS

5.1 Background

This chapter investigates women's preferences for insurance plans, such as the PJJB and the PSB, and reports the current state of enrolment in these programmes.

5.2 Current Status of Pradhan Mantri Suraksha Bima Yojana (PSB)

The PSB — a one-year accidental death and disability cover renewable after one year – was established by the GOI in 2015.
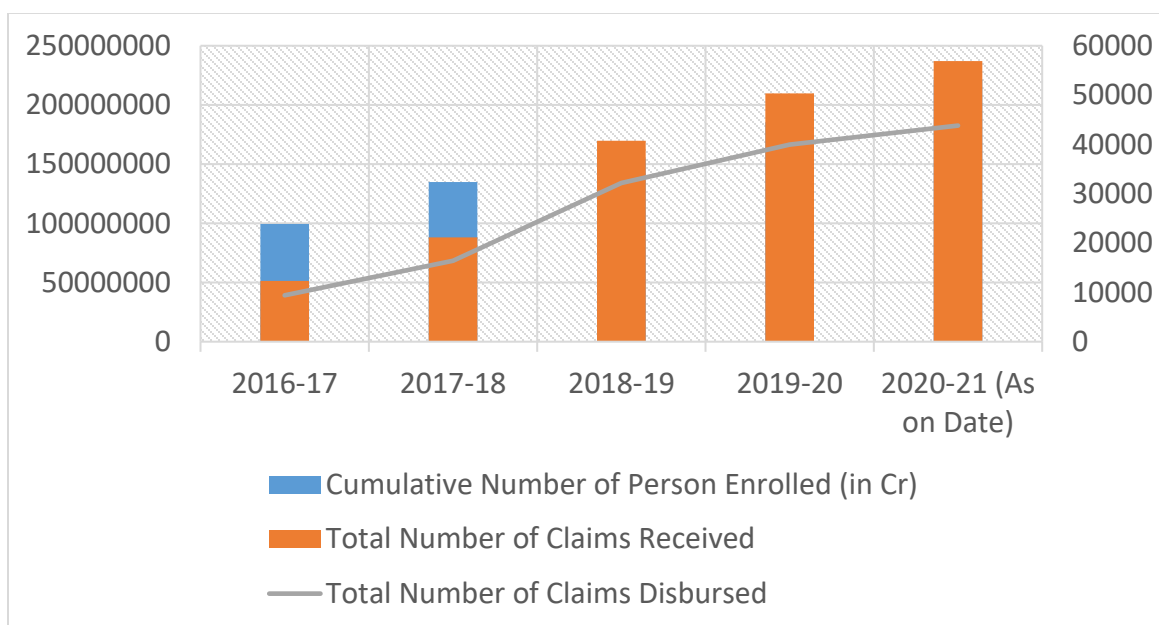
Figure 5-1 Current Status of PMSBY Scheme

The GOI designed the PSB to ensure that persons suffering from permanent total and impartial disability might benefit from this insurance coverage. State and private insurance organisations managed this social security programme in collaboration with scheduled commercial banks,

regional rural banks and cooperative banks. The current circumstance of PSBs in India is portrayed in Figure 5-1 which reviewed enrolment information, the total number of cases received and the total number of cases dispensed. The number of individuals who enrolled in the program has expanded over the long haul, as has the general number of claims paid out.

5.3 Current Status of Pradhan Mantri Jivan Jyoti Bima Yojana (PJJB)

The PJJB is a Social Security Scheme that began in 2015. A one-year life coverage program is renewed from one year to another and gives coverage to death due to any cause. It is offered to those aged between 18 to 50. The policy offered Rs. 2 lakh disaster protection for one year, from 1st June to 31st May, at a premium of Rs.330/- per annum per part and was recharged each year. It is managed by the Life Insurance Corporation (LIC) of India and Indian private insurance firms.
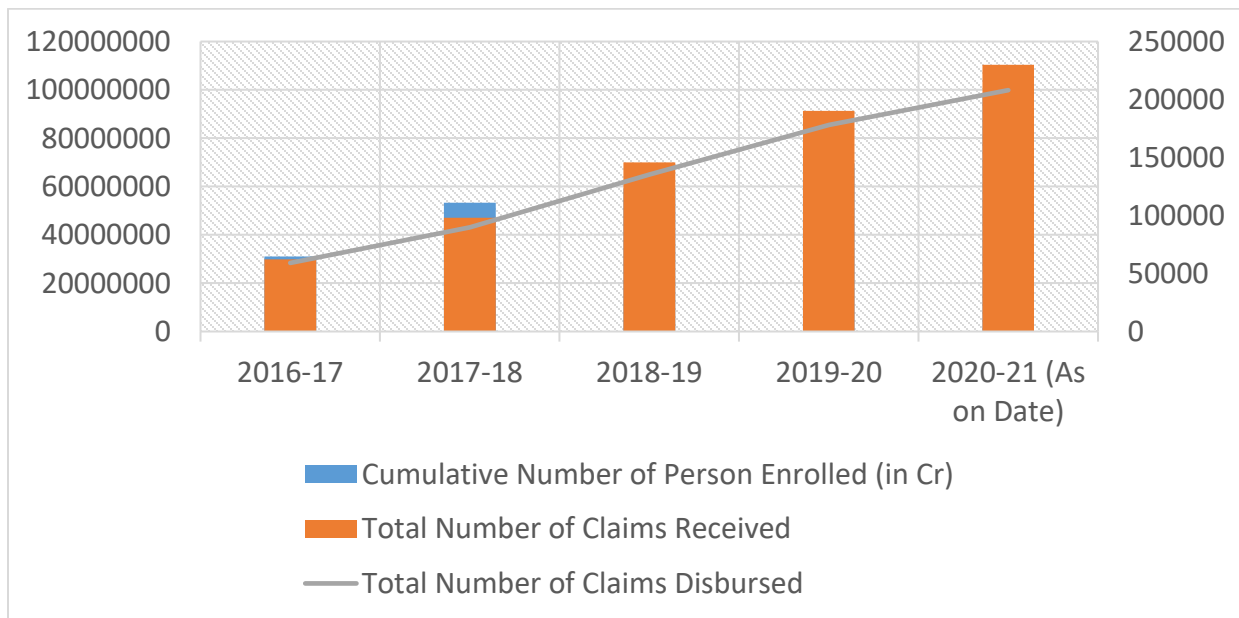
Figure 5-2 Current Status of PJJB Scheme

The participating banks are Master policyholders, and they have partnered with insurance firms for enrolment. Figure 5-2 depicted the current situation of PMJJBY Schemes, with figures indicating a larger enrolment in these schemes, as well as an increase in the total number of claims disbursed.

5.4 Objective II – Factors affecting Insurance Preferences

To study whether education, awareness and location of respondents affect the choice of tools of financial inclusion.

This thesis explores the variables affecting women in slums to participate in programmes such as the PSB, an accidental, and PJJB, a life insurance programme. The variables under consideration were - the respondent's education profile assessed across five categories, location measured across two categories, awareness of PSB and PJJB assessed across three categories, and choice of PSB and PJJB assessed across four categories (refer to Table 3.5). Since all the variables under study were categorical, the Chi-Square test was used to examine their correlations.

The following hypotheses were developed to evaluate their connection:

H_{10}: *No significant difference between the Education of respondents and subscription of PJJB and PSB.*

H_{11}: *Significant difference between the Education of respondents and subscription of PJJB and PSB.*

H_{20}: *No significant difference between the awareness of PJJB and PSB among respondents and subscription of PJJB and PSB.*

H_{21}: Significant difference between the awareness of PJJB and PSB among respondents and subscription of PJJB and PSB.

H_{30}: No significant difference between the Location of respondent and subscription of PJJB and PSB.

H_{31}: Significant difference between the Location of respondent and subscription of PJJB and PSB.

5.5 Effect of Education on the subscription of PSB and PJJB

The Chi-Square Test was used to determine if education affected the choice of subscription of PSB and PJJB.

5.5.1 Effect of Education on Subscription of PJJB

Table 5-1 shows the results of whether the respondents' education affects their subscription to PJJB. The respondents' education level was classified into five categories: below matriculation (21.17 per cent), matriculation / upper secondary (35.76 per cent), graduate (30.38 per cent), postgraduate (11.41 per cent), and technical course (1.27 per cent). According to the findings, the chi-square test statistics of 35.874 (sig. value 0.05) indicated a link between the respondents' education and their PJJB subscription. As a result, the Null Hypothesis (H10) was rejected. As the data on the education profile of respondents was divided into five categories, Cramer's V was also checked to determine the correlation between these two nominal variables. Cramer's V value was found at 0.181 (sig. value 0.05), indicating that the relationship between education and PJJB subscription was weak because the value is less than 0.5. (Field, 2013).

Table 5-1 Chi-square test of Education and Subscription of PJJB

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	35.874[a]	4	.000
Likelihood Ratio	38.194	4	.000
Linear-by-Linear Association	26.652	1	.000
N of Valid Cases	1096		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.08.			

Symmetric Measures			
		Value	**Approx. Sig.**
Nominal by Nominal	Phi	.181	.000
	Cramer's V	.181	.000
N of Valid Cases		1096	

5.5.2 Impact of Education on Subscription of PSB

The outcome of the impact of education of the respondents on their subscription to PSB is presented in Table 5-2. In the results, the chi-square test statistics of 62.12 (sig. value < 0.05) indicated an association between the respondents' education with their PSB subscription. So Null Hypothesis (*H10*) was rejected. Since the data of the education profile of respondents was on five different categories, the Cramer's V value was also checked to identify the level of association between these two nominal variables. The Cramer's V Value was found as 0.238 (sig. value < 0.05), indicating the weak association between education and PSB subscription as the value was below 0.5 (Field, 2013).

Table 5-2 Chi-square test of Education and Subscription of PSB

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	62.126[a]	4	.000
Likelihood Ratio	65.711	4	.000
Linear-by-Linear Association	42.891	1	.000
N of Valid Cases	1096		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 30.58.			
Symmetric Measures			
		Value	**Approx. Sig.**
Nominal by Nominal	Phi	.238	.000
	Cramer's V	.238	.000
N of Valid Cases		1096	

5.6 Effect of Location on Subscription of PJJB and PSB

To investigate the hypotheses *H30-H31*, the Chi-Square Test was used to determine whether the location affected the choice of subscription of PJJB and PSB.

5.6.1 Effect of Location on Subscription of PJJB

Table 5-3 shows the results of whether geography on PJJB membership affected the respondents' membership to PJJB. In the results, the chi-square test statistics of 0.529 (sig. value > 0.05) indicated no relationship between the respondents' location and their PJJB membership. As a result, the Null Hypothesis (H30) was accepted. As the respondents' geographical profiles were divided into two groups, the Phi-value was also checked to determine the correlation between these

two nominal variables. The Phi-value was 0.22 (sig. value > 0.05), indicating that there was no

correlation between geography and PJJB subscription among the respondents (Field, 2013).

Table 5-3 Chi-square test of Location and Subscription of PJJB

Chi-Square Tests					
	Val	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.529[a]	1	.467		
Continuity Correction[b]	.396	1	.529		
Likelihood Ratio	.520	1	.471		
Fisher's Exact Test				.491	.262
Linear-by-Linear Association	.529	1	.467		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 40.30.					
b. Computed only for a 2x2 table					
Symmetric Measures					
				Value	Approx. Sig.
Nominal by Nominal		Phi		.022	.467
		Cramer's V		.022	.467
N of Valid Cases				1096	

5.6.2 Effect of Location on Subscription of PSB

Table 5-4 shows the effect of respondents' region on their membership to PSB. In the results, the

chi-square test statistics of 0.843 (sig. value > 0.05) indicated no relationship between the

respondents' geography and their PSB membership. As a result, the Null Hypothesis (H30) was accepted. As the data on respondents' geographical profiles were divided into two groups, the Phi-value was also checked to determine the correlation between these two nominal variables. The Phi-value was 0.006 (sig. value > 0.05), indicating that there was no correlation between geography and PSB subscription among the respondents (Field, 2013).

Table 5-4 Chi-square test of Location and Subscription of PSB

Chi-Square Tests					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.039[a]	1	.843		
Continuity Correction[b]	.014	1	.906		
Likelihood Ratio	.039	1	.843		
Fisher's Exact Test				.873	.456
Linear-by-Linear Association	.039	1	.843		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 69.23.					
b. Computed only for a 2x2 table					
Symmetric Measures					
			Value	Approx. Sig.	
Nominal by Nominal	Phi		-.006	.843	
	Cramer's V		.006	.843	
N of Valid Cases			1096		

5.7 Effect of Awareness regarding PSB on Subscription of PJJB

Table 5-5 presents the effect of awareness regarding PSB on the subscription of PJJB. In the results, the value of Chi-Square test statistics of 117.265 (sig. value < 0.05) indicated an association between the awareness of respondents regarding PSB and the subscription of PJJB. Hence, the Null Hypothesis was rejected (*H20*). Further, to check the level of association between these two variables, the Phi-Value was checked, which was 0.327 (sig. value < 0.05), indicating a weak relationship (Field, 2013) between the awareness regarding PSB and the subscription of PJJB.

Table 5-5 Chi-square test of Awareness regarding PSB on Subscription of PJJB

Chi-Square Tests					
	Value	**Df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Pearson Chi-Square	.039[a]	1	.843		
Continuity Correction[b]	.014	1	.906		
Likelihood Ratio	.039	1	.843		
Fisher's Exact Test				.873	.456
Linear-by-Linear Association	.039	1	.843		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 69.23.					
b. Computed only for a 2x2 table					
Symmetric Measures					
			Value		**Approx. Sig.**
Nominal by Nominal		Phi	-.006		.843
		Cramer's V	.006		.843
N of Valid Cases			1096		

5.8 Effect of Awareness regarding PJJB on Subscription of PJJB

Table 5-6 presents the effect of awareness regarding PJJB on the subscription of PJJB. In the results, the Chi-Square test statistics of 322.992 (sig. value < 0.05) indicated an association between the awareness regarding PJJB and its subscription amongst the respondents. So, the Null Hypothesis was rejected (*H20*). However, to check the degree of association between these two variables, the Phi-Value has to be determined, which was 0.543 (sig. value < 0.05), indicating a strong association between the awareness regarding PJJB and its subscription since the value was above 0.5 (Field, 2013).

Table 5-6 Chi-square test of Awareness regarding PJJB on Subscription of PJJB

Chi-Square Tests					
	Value	**Df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Pearson Chi-Square	322.992[a]	1	.000		
Continuity Correction[b]	319.827	1	.000		
Likelihood Ratio	357.150	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	322.697	1	.000		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 59.19.					
b. Computed only for a 2x2 table					
Symmetric Measures					
			Value		**Approx. Sig.**
Nominal by Nominal	Phi		.543		.000
	Cramer's V		.543		.000

N of Valid Cases	1096	

5.9 Effect of Awareness regarding PSB on Subscription of PSB

The Chi-Square test examined the effect of PSB knowledge on its subscription, as presented in Table 5-7. The test statistics result of 479.071 (sig. value 0.05) suggested a link between PSB awareness and membership. As a result, the Null Hypothesis was rejected (*H20*). The Phi-Value, which is 0.661 (sig. value 0.05), was also tested to determine the degree of relationship between these two variables. As the score was more than 0.5, it indicated a strong relationship between PSB awareness and subscription (Field, 2013).

Table 5-7 Chi-square test of Awareness regarding PSB on Subscription of PSB

Chi-Square Tests					
	Value	**Df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Pearson Chi-Square	479.071[a]	1	.000		
Continuity Correction[b]	476.022	1	.000		
Likelihood Ratio	590.132	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	478.634	1	.000		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 123.14.					
b. Computed only for a 2x2 table					
Symmetric Measures					
				Value	**Approx. Sig.**
Nominal by Nominal		Phi		.661	.000

	Cramer's V	.661	.000
N of Valid Cases		1096	

5.10 Effect of Awareness regarding PJJB on Subscription of PSB

Table 5-8 depicts the results of whether awareness regarding PJJB affected the subscription of PSB. The Chi-Square test statistics of 99.673 (sig. value < 0.05) indicated an association between the awareness regarding PJJB and the subscription of PSB. So, the Null Hypothesis was rejected (*H20*). However, to determine the degree of association between these two variables, the Phi-Value was also determined. In this case, the Phi-Value was 0.302 (sig. value < 0.05) which clearly stated that there was a weak relationship between the awareness regarding PJJB and the subscription of PSB (Field, 2013).

Table 5-8 Chi-square test of Awareness regarding PJJB on Subscription of PSB

Chi-Square Tests					
	Value	**df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Pearson Chi-Square	99.673[a]	1	.000		
Continuity Correction[b]	98.240	1	.000		
Likelihood Ratio	96.994	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	99.582	1	.000		
N of Valid Cases	1096				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 101.68.					
b. Computed only for a 2x2 table					
Symmetric Measures					

		Value	Approx. Sig.
Nominal by Nominal	Phi	.302	.000
	Cramer's V	.302	.000
N of Valid Cases		1096	

5.11 Discussion of Results

As the variables that affected the use of insurance programmes recently implemented by the Indian government Were examined, Education, location, and awareness of schemes on the subscription of insurance schemes were studied (Summary of the results is presented in table 5-9).

Table 5-9 Summary of Results

Independent Variable	Dependent Variable	Result
Education	Choice of PSB and PJJB	Significant
Location		Not Significant
Awareness of PSB and PJJB		Significant

The findings of the thesis showed that education has a considerable effect on the use of insurance schemes (PSB and PJJB in this thesis) which is consistent with prior research (Fletcher and Frisvold, 2009; Akomea-Frimpong et al., 2021; Barua et al., 2016; Khan and Ahmed, 2013; Matul et al., 2013). That means, having a better level of education may enhance the likelihood of having greater access to preventative and life insurance. However, the influence of geography on insurance subscription (PSB and PJJB in this thesis) is not considered consistent with earlier research (Lashley and Warner, 2015; Johnson *et al.,* 2019; Panda *et al.,* 2015).

Moreover, awareness of insurance schemes can be considered as a part of financial literacy had a considerable impact on insurance scheme subscription (PSB and PJJB in this thesis), which is consistent with prior research (Calderone et al., 2018; Gaurav *et al.,* 2011; Eling, Pradhan, and Schmit, 2014; Biener, Eling, and Schmit, 2014; Adetunji and DavidWest, 2019; Kodongo, 2018). That means insufficient literacy levels impede women's use of insurance products. As a result, boosting financial literacy among slum women is critical to the success of FI initiatives in developing nations such as India (Atkinson and Messy, 2013). A gender-sensitive approach to financial literacy may enhance access to and utilisation of financial inclusion programmes.

CHAPTER 6 WOMEN EMPOWERMENT THROUGH FINANCIAL INCLUSION

6.1 Background

This chapter presents the examination of FI on Empowerment dimensions of Women in Slums and the outcomes of objectives three and four, followed by a discussion of results.

6.2 Dimensions of Women Empowerment

The dimensions of women empowerment were identified using EFA and CFA, and the results are detailed below:

6.2.1 Exploratory Factor Analysis

The results of EFA are discussed below:

Table 6-1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.839
Bartlett's Test of Sphericity	Approx. Chi-Square	9.093E3
	Df	91
	Sig.	.000

SPSS 22.0 was used to perform EFA, which included PCA and Varimax rotation. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is a statistic that reflects the proportion of variance in variables that may be attributed to underlying causes. High numbers (around 1.0) often imply that factor analysis may be helpful in the data. If the value is less than 0.50, the factor analysis findings will most likely be ineffective. The factor analysis was appropriate for this data

since the KMO value was 0.839 (more than 0.7), and Bartlett's test of Sphericity[7] was significant at a p-value of 0.05.

Table 6-2 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.383	38.451	38.451	5.383	38.451	38.451	3.452	24.660	24.660
2	2.238	15.985	54.436	2.238	15.985	54.436	3.252	23.228	47.887
3	1.935	13.822	68.258	1.935	13.822	68.258	2.852	20.371	68.258
4	.992	7.088	75.346						
5	.684	4.886	80.232						
6	.510	3.646	83.878						
7	.384	2.742	86.620						
8	.362	2.586	89.206						
9	.337	2.405	91.611						
10	.309	2.205	93.816						
11	.258	1.844	95.660						
12	.235	1.675	97.335						
13	.199	1.421	98.756						
14	.174	1.244	100.000						

---

[7] Bartlett's Sphericity Test examines the hypothesis via correlation matrix is an identity matrix, indicating that the variables are unrelated and hence inappropriate for structure discovery. Small values of the significance level (less than 0.05) imply that factor analysis may be helpful with data.
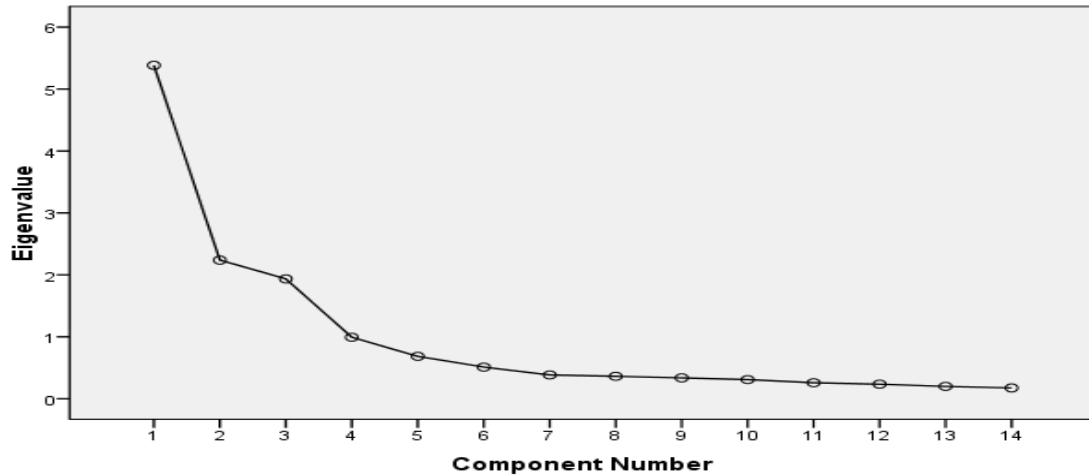
Figure 6-1 Scree plot

According to Table 6-2 of Total Variation Explained, 14 components were formed during the procedure, and the first three components explain the most amount of variance, i.e. 68.25 per cent. Thus, the first three identified criteria were taken into account for further analysis, and the same findings can be seen in the scree plot (Figure 6-1) shown above. The item loadings are also validated using the Rotated Component Matrix.

Table 6-3 Rotated Component Matrix

	Component		
	1	2	3
PE5	.840		
PE2	.820		
PE4	.806		
PE1	.805		
PE3	.783		
EE4		.866	
EE5		.850	
EE1		.828	

EE3		.689	
EE2		.641	
SE3			.875
SE2			.871
SE1			.832
SE4			.652

Items with factor loadings less than 0.4 were deleted, and the final result is shown in Table 6.3. The three components extracted had Eigen values greater than one and explained 68.25% of the variance. Cronbach's Alpha was used to assess the internal consistency of the structures.

Table 6-4 Reliability Statistics

Empowerment Dimensions	Cronbach's Alpha	N of Items
EE	.86	5
SE	.85	4
PE	.89	5

Cronbach's Alpha is a measure of internal consistency. It is regarded as a scale dependability metric. Cronbach's Alpha of 0.7 is regarded as adequate in EFA (Nunnaly, 1994; Santos, 1999). Cronbach's alpha values for all empowerment dimensions ranged from 0.85 to 0.89.

6.2.2 Confirmatory Factor Analysis (CFA)

The multi-factor CFA measurement model was tested on 14 items. AVE and CR were used to determine convergent validity. The amount of variation captured by a concept with Variance

attributable to measurement error was measured by AVE (Fornell and Lorcker, 1981). Like Cronbach's alpha, CR is a measure of internal consistency of scale items (Netemeyer *et al.,* 2003). To assess convergent validity, CR>0.7 (Hu and Bentler, 1999), AVE>0.5, and CR>AVE must be present (Malhotra and Dash, 2011). MSV and ASV were used to evaluate discriminant validity. MSV was determined to be 0.121, while ASV was determined to be 0.130. Thus, convergent and discriminant validity was established using the values of AVE and CR from the Table 6-5 with the outcomes of the factor analysis.

Table 6-5 Factor loadings, AVE, Cronbach's Alpha and Critical Ratio for Dimensions of Women Empowerment

Factor	Dimension	Statement	Factor Loading
F1	**Economic Empowerment**	Eigenvalue = 5.4; Variance = 38.45%; AVE = 0.61; α = 0.86; CR = 0.88	
	EE1	I have say in amount of money to be saved per month	.828
	EE2	I manage resources for repayment of credit	.641
	EE3	I work to generate further income	.689
	EE4	I participate in decision about the usage of savings and credit use	.866
	EE5	I have say in purchasing basic utilities	.850
F2	**Social Empowerment**	Eigenvalue = 2.2; Variance = 15.98; AVE = 0.66; α = 0.85; CR = 0.82	
	SE1	Important decisions in the family are taken mutually by me and husband	.832
	SE2	I can move out of home freely without any restrictions for work	.871
	SE3	Working freely has improved my social status.	.875

	SE4	I know most of the women living in my locality	.652
F3	**Political Empowerment**	Eigenvalue = 1.9; Variance = 13.82%; AVE = 0.65; α = 0.89; CR = 0.91	
	PE1	I have Knowledge of parties operating in the area	.805
	PE2	I have good understanding of important political issues of country.	.820
	PE3	My vote make difference to development in my area	.783
	PE4	I Participate in political discussion in family	.806
	PE5	I have access to information about political demonstration	.840

Total Variance = 68.26%; KMO = 0.839; Sig = 0.00

F1 = Economic Empowerment; F2 = Social Empowerment; F3 = Political Empowerment

6.3 Objective III – Financial Inclusion on Economic Empowerment

To study whether Financial Inclusion of Women affects their Economic Empowerment.

The financial inclusion of women in the current study was already described in sub-section 3.10.2 in chapter 3. EE entails women's participation in decision-making on the amount of money to be saved, the purchase of necessary utilities, the use of savings, the repayment of credit, and the generation of new revenue. Sub-section 3.10.1 in chapter 3 described the approach for testing the connection. The FII index was computed, which was used as a proxy for FI. Through factor analysis, the proxies for Women empowerment – Economic component were found and subsequently investigated to assess the effect on financial inclusion. Based on the work of Sarma (2012), the independent variable, financial inclusion, was classified into three levels: high FI, medium FI and low FI (as calculated in sub-section 3.10 in chapter 3). The data on the first two FI categories, Medium and High FI, were coded as dummy variables (equal to 1 if the response is

affirmative, else 0), and their effect on the empowerment characteristics was examined using linear regression. For objective III, the following hypotheses were proposed:

H_{40}: *No significant effect of levels of FI on EE of women.*

H_{41}: *Significant effect of levels of FI on EE of Women.*

The results are shown below:

6.3.1 Result of Effect of Financial Inclusion on Economic Empowerment of Women

The R, R^2, and Adjusted R^2 values are presented in Table 6-6. R denotes correlation, while R^2 denotes how much of the total variance in the dependent variable can be explained by the independent variables. The adjusted R^2 is that version of R^2 updated to account for the number of predictors in the model.

Table 6-6 Result of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455[a]	.207	.206	2.95775

From the above Table 6-6, it may be interpreted that Financial Inclusion explains 20.6 per cent variation in EE.

Table 6-7 Results of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2508.124	2	1254.062	143.349	.000[b]
	Residual	9596.898	1097	8.748		
	Total	12105.022	1099			

Table 6-7 informs the fit of the regression equation as determined by the F-ratio. The table reveals that the independent variable, financial inclusion, statistically predicts the dependent variable, EE, $F(3,1096) = 143.34$, p 0.0005, indicating that the regression model fits the data well. The total regression model is statistically significant and predicts EE's dependent variable because the p-value is less than 0.05.

Table 6-8 Table of Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.528	.114		118.473	.000
	Medium	2.393	.190	.343	12.581	.000
	High	5.669	.430	.359	13.194	.000

The coefficients table in Table 6-8 presents the information needed to forecast EE from FI and establish if FI adds statistically substantially to the model. The *p-value* is less than 0.05 at both levels, the regression model is a good fit, and the null hypothesis (**H40**) is rejected. Observations with an FII score of less than 0.3 are coded as "0," and two dummy regressors are produced for medium (between 0.3 and 0.6) and high (greater than 0.6) financial inclusion, D1 (low), D2 (medium), and D3 (high) serve as the baseline for the intercepts and slopes of other financial inclusion categories. According to table 6-8, increasing FI (from low to high) statistically predicts EE. It suggests a considerable rise in women's EE in the Ludhiana and Patna slums for every unit rise in FI. The general equation for predicting EE from high, medium, and low levels of FI is:

EE = 13.528 + 2.39 medium + 5.67 high

6.4 Objective IV – Economic Empowerment on Social and Political Empowerment

To study whether Economic Empowerment of women affects their Social and Political Empowerment

This thesis examines whether women's EE affects their SE and PE. SE relates to women's freedom to go out of the house without limitation, involvement in family decision-making, employment status, and relationships with their neighbours. PE refers to women's knowledge of political parties functioning in their region, their comprehension of political problems, their awareness of the worth of their votes, and their engagement in political discussions within their families. Linear regression is used to examine the effects of EE on the SE and PE of women in the slums of Ludhiana and Patna, and the following hypotheses were proposed:

H_{50}: *No significant effect of EE on SE.*

H_{51}: *Significant effect of EE on SE.*

H_{60}: *No significant effect of EE on PE.*

H_{61}: *Significant effect of EE on PE.*

To apply linear regression, assumptions of linearity, independence of errors, normality and homoscedasticity were tested, which are explained as follows:

6.4.1 Linearity

The mean values of the outcome variable, i.e., SE and PE, lay along a straight line for each increment of the predictor, i.e., EE. It signifies that the relationships modelled in this thesis are linear. When a linear model simulates a non-linear connection, the conclusions are limited in their

generalizability. Since the *p-value* of deviation from linearity is more than 0.05 in Table 6-9 for ANOVA, there is no divergence from linearity, and there is a linear connection between the variables under research – EE and SE and PE (Berry, 1993; Field, 2013).

Table 6-9 Result of ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
SocE * EcoE	Between Groups	(Combined)	1174.285	18	65.238	10.860	.000
		Linearity	1032.714	1	1032.714	171.918	.000
		Deviation from Linearity	141.571	17	8.328	1.386	.134
	Within Groups		6493.587	1081	6.007		
	Total		7667.872	1099			
PolE * EcoE	Between Groups	(Combined)	1545.155	18	85.842	11.237	.000
		Linearity	1186.251	1	1186.251	155.281	.000
		Deviation from Linearity	358.905	17	21.112	2.764	.085
	Within Groups		8258.171	1081	7.639		
	Total		9803.326	1099			

6.4.2 Independence of Errors (Absence of Auto Correlation)

The residual terms should be uncorrelated for any two observations (or independent). It is referred to as error independence or the absence of autocorrelation. This assumption is checked in this thesis with the Durbin-Watson Test value as shown in Table 6-10, which looks for serial correlations between mistakes. It precisely checks to see if nearby residuals are connected. The test statistic ranges from 0 to 4, with a value of 2 indicates that the residuals are uncorrelated. As the Durbin-Watson test score is 2.069, there is no auto-correlation or error independence among variables (Berry, 1993; Field, 2013).

Table 6-10 Outcome of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.367[a]	.135	.134	2.45824	2.069
a. Predictors: (Constant), EcoE					

b. Dependent Variable: SocE

6.4.3 Normality

Since the values of both Skewness and Kurtosis lie between -2 and +2 in the following Descriptive Statistics, Table 6-11, the data is normally distributed (Trochim and Donnelly, 2006; Field, 2009; Gravetter and Wallnau, 2014).

Table 6-11 Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EcoE	1096	18	6	24	14.61	3.319	11.015	.168	.074	-.198	.147
PolE	1096	20	5	25	13.93	2.987	8.920	.109	.074	.069	.147
SocE	1096	15	5	20	13.84	2.641	6.977	-.130	.074	-.221	.147
Valid N (listwise)	1096										

6.4.4 Homoscedasticity

The variance of the residual terms should be consistent at each level of the predictor variable. It indicates that the variance of the residuals at each predictor level should be the same (homoscedasticity). The variations along the line of greatest fit stay consistent as we proceed down the line, as seen in the scatterplot in Figure 6-2. As a result, the data assumption of homoscedasticity is fulfilled (Berry, 1993; Field, 2013).
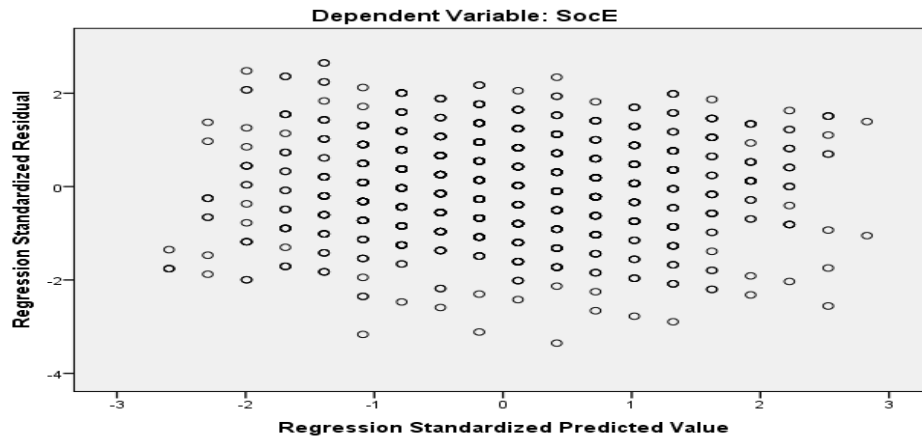
Figure 6-2 Scatterplot

6.4.5 Results of Effect of Economic Empowerment on Social Empowerment

Table 6-12 provides the results of regression analysis, including the R, R^2, and Adjusted R^2 values. It indicates a poor correlation between variables, i.e. 0.37, and the EE component accounts for 13.4% of the variation in the SE component.

Table 6-12 Results of Regression of Impact of Economic Empowerment of Social Empowerment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.367[a]	.135	.134	2.45824	2.069
a. Predictors: (Constant), EcoE					
b. Dependent Variable: SocE					

Tables 6-13 show the fit of the regression equation as determined by the F-ratio. The table reveals that the independent variable, economic empowerment, statistically predicts the dependent variable, social empowerment, $F(2,1097) = 170.90$, p 0.0005, indicating that the regression model fits the data well. The total regression model is statistically significant and predicts the dependent variable, Social Empowerment, because the p-value is less than 0.05.

Table 6-13 Results of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1032.714	1	1032.714	170.90	.000[b]
	Residual	6635.158	1098	6.043		
	Total	7667.872	1099			
a. Dependent Variable: SocE						
b. Predictors: (Constant), EcoE						

Table 6-14 is the coefficients table which provides the necessary information to predict SE from EE and determine whether EE contributes statistically to the model. Since the p-value at both levels is below 0.05, the regression model is a good fit, and hence the null hypothesis (*H50*) is rejected.

Table 6-14 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.569	.335		28.582	.000
	EcoE	.292	.022	.367	13.073	.000
a. Dependent Variable: SocE						

The general equation to predict social empowerment from economic empowerment is:

SE = 9.569 + 0.292 (EE)

6.4.6 Results of Effect of Economic Empowerment of Political Empowerment

Table 6-15 displays regression analysis results, including the R, R^2, and Adjusted R^2 values. It shows a poor correlation between variables 0.35, and the EE component accounts for 12% of the difference in the PE component.

Table 6-15 Results of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.348[a]	.121	.120	2.80142	1.970
a. Predictors: (Constant), EcoE					
b. Dependent Variable: PolE					

Table 6-16 presents the fit of the regression equation as determined by the F-ratio. The table reveals that the independent variable, economic empowerment, statistically predicts the dependent variable, political empowerment, F (2,1097) = 151.15, p 0.0005, indicating that the regression model fits the data well. The total regression model is statistically significant and predicts the dependent variable, Political Empowerment, because the p-value is less than 0.05.

Table 6-16 Result ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1186.251	1	1186.251	151.154	.000[b]
	Residual	8617.075	1098	7.848		
	Total	9803.326	1099			
a. Dependent Variable: PolE						
b. Predictors: (Constant), EcoE						

The coefficients table in Table 6-17 shows the information needed to forecast social empowerment from economic empowerment and establish if economic empowerment adds statistically substantially to the model. As the p-value is less than 0.05 at both levels, the regression model is a good fit, and the null hypothesis (H60) is rejected.

Table 6-17 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.354	.382		24.516	.000
	EcoE	.313	.025	.348	12.294	.000
a. Dependent Variable: PolE						

The general equation to predict political empowerment from economic empowerment is:

PE = 9.354 + 0.313 (EE)

6.5 Discussion of Results

This chapter presented the results of two objectives - three and four - which investigated the influence of FI on the empowerment components of women living in slums. Overall, this study of the thesis makes two contributions: one, it advances the literature on financial inclusion of women in urban slums, and two, it assesses the effectiveness of recently introduced financial inclusion programmes by the GOI. As noted in this study, all types of financial inclusion procedures affect WE, by demonstrating that FI influences women's EE (Datta and Sahu, 2017; Bayulgen, 2015; Hashemi et al., 1996; Kabeer, 1999). The analysis results show that participating in formal financial services is statistically significant with different components of empowerment. The study

also found that women who have more access to and use of financial services, such as establishing a bank account and purchasing insurance, had more EE.

The fourth objective investigated the impacts of women's EE in ghettos on their SE and PE dimensions. The findings support the research that women's EE is essential for SE (Raj et al., 2018; Acharya et al., 2010; Folayan et al., 2020) and less EE for women reduces their decision-making capacities, hence diminishing female agency (i.e., the capacity to make things happen) (Acharya et al., 2010; Kabeer, 1999). There is a substantial probability that women with less EE may have to bear violence and abuse (Koenig et al., 2003). It also impacts women's ability to make the decisions for their off-springs (Devries et al., 2011; McLaughlin et al., 2012; Kavak et al., 2018; Lanier et al., 2018). Subsequently, women's EE contributes altogether to their SE.

The study also examined the effects of EE on the PE of women living in slums. EE and PE have a statistically significant link. Our study's findings were consistent with earlier research (Kumar et al., 2019; Brody et al., 2017; Kumar et al., 2018; Eyben et al., 2008; Hashemi et al., 1996; Kabeer, 1999; Basu, 2006; Bhattacharyya, 2019; Malhotra and Schuler, 2005). The findings support that increasing women's economic engagement enhances their ability to receive information about public entitlement programmes, and access to such programmes includes both the supply and demand sides of financial inclusion (Kumar et al., 2019). The capacity to take part in paid work may strengthen women's independence and transform them into economic agents fit for controlling valuable assets, putting resources into their well-being and education of self as well as of their families and effectively taking an interest in political issues (Kabeer, 2005; Esplen and Brody, 2007; DFID, 2010). Duflo (2012) and Chakraborty (2017) investigated the beneficial relationship between EE and PE. As a result, it may be concluded that economically empowered women are more likely to be politically informed and contribute to national progress.

CHAPTER 7 CHALLENGES IN ACCESSING FINANCIAL SERVICES

7.1 Background

This chapter presents the challenges faced by women in accessing financial services (i.e., opening a bank account under PJD and subscribing to PJJB and PSB). The challenges are prioritised through Interpretive Structural Modelling, and the result is finally discussed.

7.2 Objective V – Challenges in Accessing Financial Services

To evaluate the challenges being faced by the beneficiaries in accessing tools of financial inclusion

The fifth objective of this thesis is to identify the challenges and prioritize them based on their capacity to affect the most in accessing financial services. For this purpose, the ISM technique and MICMAC Analysis have been applied to these barriers and categorised into different categories.

7.2.1 Interpretive Structural Modelling

ISM is a relational mathematics-based technique that explains and transforms ill-structured mental illustrations about the system under research into a specific, interconnected and coordinated set of system constituents (Warfield and Cardenas, 1994). Sub-section 3.12 in chapter 3 explains the ISM technique (Sushil, 2012). To prioritise the impediments, professionals who were well-versed in banking and financial services were consulted. To identify the numerous hurdles women encounter in obtaining financial services, two NGOs in Ludhiana, Aagaz Charitable Foundation and HELPS Welfare Society, were contacted. These non-governmental organisations (NGOs) have been working for the welfare and development of women for over a decade. In addition, a

professor from Kurukshetra University and a branch manager of Union Bank of India with over eighteen years of expertise were invited. The following issues were found with the assistance of professionals and then analysed:

Table 7-1 Barriers to Financial Inclusion

Element No.	Financial Inclusion Challenges
F1	Not allowed to go to bank
F2	Lack of financial literacy regarding bank and banking products
F3	Do not know the usage of debit cards
F4	Do not know the usage of mobile banking
F5	Limited access to smartphones
F6	Do not trust banks
F7	Loyalty to local savings and loan associations
F8	Lack of confidence in approaching banks
F9	Banks are far
F10	Bank officials do not cooperate
F11	Lack of collaterals
F12	Lesser funds to save
F13	Lack of internet access
F14	Time constraint
F15	ATM inoperative
F16	Debit card is inactive
F17	Low affordability of schemes

F18	Lack of awareness regarding schemes

The results of ISM are presented below:

7.2.1 Structure Self Interaction Matrix

With the assistance of many specialists, the first stage was to determine the contextual link among factors, i.e. obstacles to FI (given in Table 7-1) and create an SSIM. The Structural Self Interaction Matrix was then calculated with four distinct representations for every pair-wise interaction among the elements, which is shown below:

   I.   A when "x" leads to "y" and not vice-versa;

  II.   B when "y" leads to "x" and not vice-versa;

 III.   C when both "x" and "y" lead to each other and

 IV.   D when there is no connection between both "x" and "y"

The structural self-interaction matrix is shown below in table 7-2.

Table 7-2 Structural Self-Interaction Matrix

Barriers	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not allowed to go to bank	A	A	A	D	B	C	C	B	B	D	C	D	B	D	A	B	B
Lack of financial literacy regarding bank & banking products		C	C	B	C	C	C	B	B	D	A	B	B	D	C	D	C
Don't know the usage of debit cards			D	D	B	A	B	B	B	D	B	D	B	B	B	D	D

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Don't know the usage of mobile banking				B	B	D	B	B	B	D	D	B	B	D	D	D	D
Limited access to smart phones					D	D	D	D	D	D	B	C	D	D	D	D	A
Don't trust banks						A	D	D	B	D	D	D	D	B	A	D	B
Loyalty to local savings and loan associations							B	B	B	D	D	D	D	B	A	D	B
Lack of confidence in approaching banks								D	B	D	D	D	D	D	A	D	A
Banks are far									D	D	D	D	D	D	A	D	A
Bank officials don't cooperate										D	D	D	D	D	A	D	A
Lack of collateral											B	D	D	D	D	D	D
Lesser funds to save												A	D	D	A	A	D
Lack of internet access													D	D	D	D	A
Time constraint														D	A	D	A
ATM inoperative															A	D	D
Debit card is inactive																	D	D
Low Affordability of Schemes																		D
Lack of Awareness regarding Schemes																		

7.2.2 Reachability Matrix

The first reachability matrix is created before arriving at the final reachability matrix, as stated below:

Initial Reachability Matrix

The Structural Self Interaction Matrix is further converted into a binary matrix known as the initial reachability matrix by substituting A, B, C, and D with 1 and 0 as relevant. The substitution of 1s and 0s was done following the guidelines outlined below:

I.   The (x, y) entry in the reachability matrix becomes 1, and the (y, x) entry becomes 0 when (x, y) entry in SSIM is A.

II.   The (x, y) entry in the reachability matrix becomes 0, and the (y, x) entry becomes 1 when (x, y) entry in the SSIM is B.

III.   Both the (x, y) entry and the (y, x) entry in the reachability matrix become 1 when (x, y) entry in the SSIM is C.

IV.   Both the (x, y) entry and the (y, x) entry in the reachability matrix become 0 when (x, y) entry in the SSIM is 0.

The initial reachability matrix for the hurdles to financial inclusion has been constructed following the guidelines mentioned above and displayed in Table 7-3.

Table 7-3 Initial Reachability Matrix

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18
F1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0
F2	0	1	1	1	0	1	1	1	0	0	0	1	0	0	0	1	0	1

F3	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
F4	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F5	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1
F6	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0
F7	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
F8	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	1
F9	1	1	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	1
F10	1	1	1	1	0	1	1	1	0	1	0	0	0	0	0	1	0	1
F11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
F12	1	0	1	0	1	0	0	0	0	0	1	1	1	0	0	1	1	0
F13	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1
F14	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1
F15	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0
F16	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
F17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
F18	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1

7.2.3 Final Reachability Matrix

The final reachability matrix was created once the transitivity rule was satisfied, as demonstrated in Figure 7-1. The driving power and dependent power of each variable have also been determined in the final reachability matrix. All the variables (including the variable itself) that may help attain that variable are the driving power for each variable. On the contrary, dependence power is the total number of factors (including the variable itself) that may assist in achieving it. Under the MICMAC Analysis, this driving power and dependence power shall be utilised to divide challenges into four groups, i.e. autonomous, dependent, linkage, and drivers (independent). Table 7-4 depicts the final reachability matrix, with transitivity denoted as 1a.

Table 7-4 Final Reachability Matrix

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18	Driving Power
F1	1	1	1	1	1a	1a	1	1	0	0	1a	1	1a	0	0	1	1a	1a	14
F2	1a	1	1	1	1a	1	1	1	0	0	1a	1	1a	0	0	1	1a	1	14
F3	1a	1	1	1a	0	1a	1	1a	0	0	0	1a	0	0	0	1a	0	1a	10
F4	0	1	1a	1	0	1a	1a	1a	0	0	0	1a	0	0	0	1a	0	1a	9
F5	1a	1	1a	1	1	1a	1a	1a	0	0	0	1a	1	0	0	1a	0	1	12
F6	1	1	1	1	0	1	1	1a	0	0	0	1a	0	0	0	1	0	1a	10
F7	1	1	1a	1a	0	1a	1	1a	0	0	0	1a	0	0	0	1	0	1a	10
F8	1	1	1	1	1a	1a	1	1	0	0	0	1a	0	0	0	1	0	1	11
F9	1	1	1	1	1a	1a	1	1a	1	0	0	1a	0	0	0	1	0	1	12
F10	1	1	1	1	1a	1	1	1	0	1	0	1a	0	0	0	1	0	1	12
F11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
F12	1	1a	1	1a	1	0	1a	1a	0	0	1	1	1	0	0	1	1	1a	13
F13	1a	1	1a	1	1	1a	1a	1a	0	0	0	1a	1	0	0	1a	0	1	12
F14	1	1	1	1	1a	1a	1a	1a	0	0	0	1a	0	1	0	1	0	1	12
F15	1a	1a	1	1a	0	1	1	0	0	0	0	0	0	0	1	1	0	0	8
F16	0	1	1	1a	0	1a	1a	1a	0	0	0	1a	0	0	0	1	0	1a	9
F17	1	1a	1a	1a	0	0	1a	1a	0	0	0	1a	0	0	0	1a	1	0	9
F18	1	1	1a	1a	1	1	1	1a	0	0	0	1a	1a	0	0	1a	0	1	12
Dependence	15	17	17	17	10	15	17	16	1	1	4	16	6	1	1	17	4	15	190

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7.3.4 Partition of Reachability Matrix

The next phase was level partitioning, which came after building the final reachability matrix. The purpose of partitioning was to determine the hierarchy of each variable. Initially, the reachability and antecedent sets for each variable were defined. The reachability set consists of the element itself and the other elements that it may assist in reaching. In contrast, the antecedent set comprises the element itself and the other elements that may assist in reaching it. The intersection of these sets is then assessed for each element. The top-level element in the ISM hierarchy is where the reachability and intersection sets are the same, and it would not aid in the achievement of any element above their own. After identifying the top-level element, it is split from the other elements. The following level of items is then computed using the same method. These indicated levels aid in the construction of the digraph and the final model.

Table 7-5 Iterations

Barriers	Reachability	Antecedent	Intersection	Level
1	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 16, 17, 18	1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 17, 18	
2	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 16, 17, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 16, 17, 18	
3	1, 2, 3, 4, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18	1, 2, 3, 4, 6, 7, 8, 12, 16, 18	**Level 1**
4	2, 3, 4, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18	2, 3, 4, 6, 7, 8, 12, 16, 18	**Level 1**
5	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 16, 18	1, 2, 5, 8, 9, 10, 12, 13, 14, 18	1, 2, 5, 8, 12, 13, 18	

Barriers	Reachability	Antecedent	Intersection	Level
6	1, 2, 3, 4, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 18	1, 2, 3, 4, 6, 7, 8, 16, 18	
7	1, 2, 3, 4, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18	1, 2, 3, 4, 6, 7, 8, 12, 16, 18	**Level 1**
8	1, 2, 3, 4, 5, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 18	1, 2, 3, 4, 5, 6, 7, 8, 12, 16, 18	**Level 1**
9	1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 16, 18	9	9	
10	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 16, 18	10	10	
11	11	1, 2, 11, 12	11	**Level 1**
12	1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 16, 17, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 18	1, 2, 3, 4, 5, 7, 8, 12, 13, 16, 17, 18	
13	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 16, 18	1, 2, 5, 12, 13, 18	1, 2, 5, 12, 13, 18	
14	1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 16, 18	14	14	
15	1, 2, 3, 4, 6, 7, 15, 16	15	15	
16	2, 3, 4, 6, 7, 8, 12, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18	2, 3, 4, 6, 7, 8, 12, 16, 18	**Level 1**
17	1, 2, 3, 4, 7, 8, 12, 16, 17	1, 2, 12, 17	1, 2, 12, 17	
18	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 18	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 16, 18	**Level 1**
Iteration 2				
Barriers	**Reachability**	**Antecedent**	**Intersection**	**Level**

1	1, 2, 5, 6, 12, 13, 17	1, 2, 5, 6, 9, 10, 12, 13, 14, 15, 17	1, 2, 5, 6, 12, 13, 17	**Level 2**
2	1, 2, 5, 6, 12, 13, 17	1, 2, 5, 6, 9, 10, 12, 13, 14, 15, 17	1, 2, 5, 6, 12, 13, 17	**Level 2**
5	1, 2, 5, 6, 12, 13	1, 2, 5, 9, 10, 12, 13, 14	1, 2, 5, 12, 13	
6	1, 2, 6, 12	1, 2, 5, 6, 9, 10, 13, 14, 15	1, 2, 6	
9	1, 2, 5, 6, 9, 12	9	9	
10	1, 2, 5, 6, 10, 12	10	10	
12	1, 2, 5, 12, 13, 17	1, 2, 5, 6, 9, 10, 12, 13, 14, 17	1, 2, 5, 12, 13, 17	**Level 2**
13	1, 2, 5, 6, 12, 13	1, 2, 5, 12, 13	1, 2, 5, 12, 13	
14	1, 2, 5, 6, 12, 14	14	14	
15	1, 2, 6, 15	15	15	
17	1, 2, 12, 17	1, 2, 12, 17	1, 2, 12, 17	**Level 2**
Iteration 3				
Barriers	**Reachability**	**Antecedent**	**Intersection**	**Level**
5	5, 6, 13	5, 9, 10, 13, 14	5, 13	
6	6	5, 6, 9, 10, 13, 14, 15	6	Level 3
9	5, 6, 9	9	9	
10	5, 6, 10	10	10	
13	5, 6, 13	5, 13	5, 13	

Barriers	Reachability	Antecedent	Intersection	Level
14	5, 6, 14	14	14	
15	6, 15	15	15	
Iteration 4				
Barriers	**Reachability**	**Antecedent**	**Intersection**	**Level**
5	5, 13	5, 9, 10, 13, 14	5, 13	Level 4
9	5, 9	9	9	
10	5, 10	10	10	
13	5, 13	5, 13	5, 13	Level 4
14	5, 14	14	14	
15	15	15	15	Level 4

7.2.5 Development of digraph

The elements were graphically organised based on the level iterations, and the digraph was constructed based on their connections, as seen in the final reachability matrix. By assessing their interpretation, the indirect ties were deleted (Goyal and Kumar, 2017), and only the transitive linkages whose meaning is critical were maintained and represented in the digraph. Variable 15, i.e., ATM inoperative, has been removed in this example, and the digraph has been created. Dotted lines show the transitive connections.
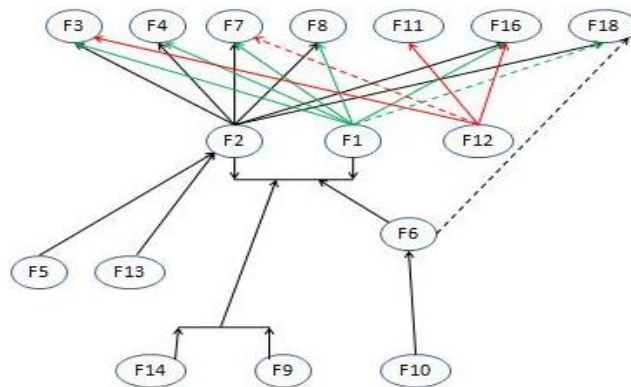

Figure 7-1 Digraph

7.2.6 Interpretive Structural Model

Finally, the interpretative structural model was established by substituting variable coding with the interpretation of variables in the digraph, as illustrated in Figure 7.2. The essential obstacle in the structural hierarchy is F9 – banks are far apart, and F10 – bank officials do not cooperate. This study showed that building branches near slums, as well as offering financial literacy to women in slums through financial literacy camps and promoting knowledge about the benefits of banking and its financial products, should be addressed since the next main obstacle is F2 – lack of financial literacy, and F1 – not being permitted to travel to bank and F12 – lesser funds to save. The last level's obstacles F3 – do not know how to use debit cards, F4 – do not know how to use mobile banking, F7 – allegiance to local savings and loan organisations, F8 – lack of trust when contacting banks, F11 – lack of collateral F16 – inactive debit card and F18 – lack of understanding about schemes may all be addressed with the support of well-planned and coordinated financial literacy courses by the government that reaches out to women living in slums.
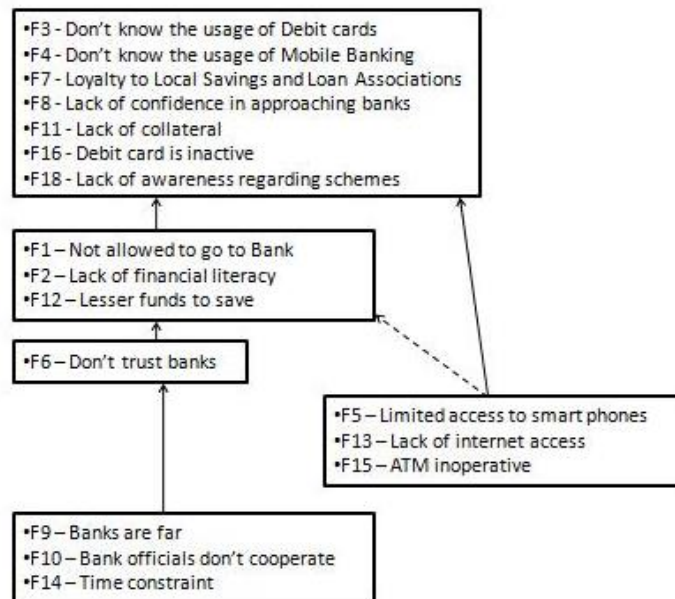

Figure 7-2 Interpretive Structural Model

7.2.7 MICMAC Analysis

These eighteen challenges were characterised by converting the final reachability matrix into a MICMAC diagram, which assists in evaluating the driving and dependent powers of the challenges in the implementation of FI for women in Ludhiana and Patna slums.

Table 7-6 MICMAC Analysis

Driving Power	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
18																		
17			IV Drivers							III Linkage								
16																		
15																		
14															1		2	
13																12		
12	9,10,14				13				5						18			
11																8		
10															6		3, 7	
9				17													4,16	
8	15																	
7																		
6																		
5		I Autonomous								II Dependent								
4																		
3																		
2																		
1				11														
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Dependence Power
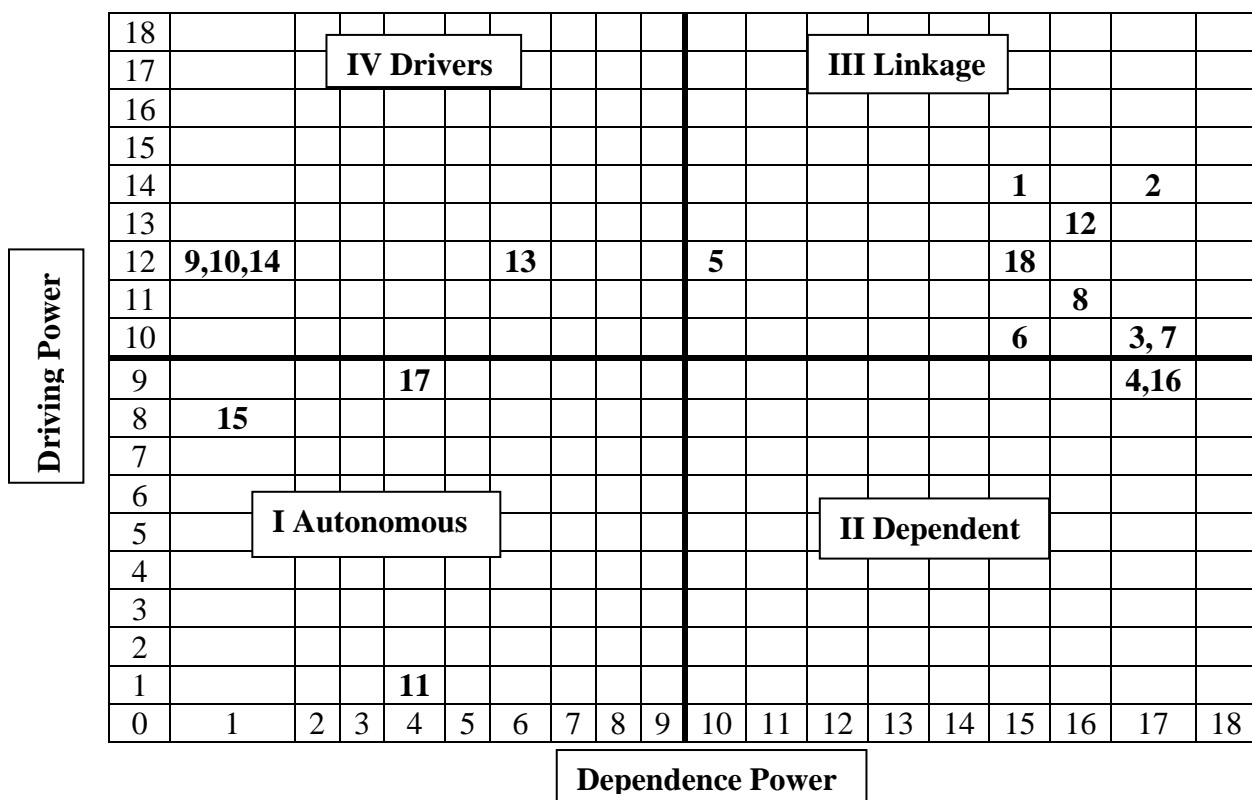
7.3 Discussion of Results

Financial inclusion is a global phenomenon that involves the integration of working people into the official banking system. According to the literature, integrating individuals into formal financial institutions ensures that individuals can establish and expand businesses, invest in education, manage risk, and assimilate economic shocks (Klapper and Singer, 2017). This issue is a high priority on the agendas of numerous institutions, with extensive attempts to increase access

and remove barriers in place. Financial inclusion constraints are widely classified as demand-based and supply-based (Atkinson and Messy, 2013). Individual-related variables that impact their involvement in the formal financial system are referred to as demand-side obstacles.

This study in the thesis was founded on the concept that various variables operate as barriers to women in slums for offering financial services. The Interpretive Structural Modelling methodology is applied to investigate the connections between the challenges that women experience in slums. The developed ties helped prioritise the challenges so that the most crucial challenges in accessing financial services could be taken care of immediately. The findings of the MICMAC Analysis of the eighteen obstacles are shown in Table 7-6 above. The following are some general remarks on barrier categorisation:

- F9 (Banks are far), F10 (Bank officials do not collaborate), and F14 (Time constraint) have the most driving strength but the least amount of dependence. As a result, these barriers can potentially affect other barriers and should be addressed first.

- F15 (ATM inoperative), F17 (Low affordability of schemes), and F11 (Lack of collaterals) are autonomous variables which imply that they are both weak drivers and weak dependents and hence they have little impact on the other variables.

- F1 (Not allowed to go to the bank), F2 (Lack of financial literacy about bank and banking products), F3 (Unaware of debit card usage), F5 (Limited access to smartphones), F6 (Loyalty to local savings and loan associations), F7 (Loyalty to local savings and loan associations), F8 (Lack of confidence in approaching banks), F12 (Lower funds to save), F18 (Lack of awareness about schemes) are the linkage barriers which means that every activity focused towards these nine barriers can affect and be influenced by additional obstacles.

- F4 (Time constraint) and F16 (Debit card is inactive) have the highest dependency power but the lowest driving power, implying that other driving factors should be handled before these variables because they are dependent.

If financial institutions overcome the constraints that women encounter in accessing financial services, they can increase women's empowerment. Banks are far away, bank staff do not cooperate, and time restrictions are the most significant hurdles to receiving financial services for women in slums. It is one of the hurdles to financial inclusion for women in slums since banks establish branches in metropolitan areas with an enormous population or near commercial complexes. The slums are often located in the most undeveloped metropolitan area and consist of loosely packed, dilapidated housing units with damaged or inadequate infrastructure, populated mainly by destitute people. Additionally, slums can be located both within and on the outskirts of cities (UN-Habitat, 2010). Because of the distinctive physical characteristics of slums and the complicated interaction of numerous socioeconomic circumstances, there are few banking services near slum neighbourhoods (Mahabir et al., 2016). Financial exclusion can also occur due to limited mobility, resulting in time constraints or social norms, even though a banking agent is close (Arnold and Gammage, 2019). Banks are far away, and time constraints make it impossible to travel to the bank, resulting in a lack of financial knowledge.

Furthermore, the disadvantaged find it challenging to interact with bank staff while doing routine duties such as withdrawing money or depositing cheques (Raja et al., 2015). Women in slums do not trust financial facilities due to a lack of collaboration from banking personnel. Furthermore, a lack of smartphone access and internet access contributes to a lack of financial awareness. Challenges at level four include not being permitted to go to the bank, a lack of financial literacy, and a lack of cash to save, which leads to not knowing how to use debit cards, not knowing how

to use mobile banking, loyalty to local saving and loan organisations, a lack of confidence in contacting the bank, lack of collaterals, an inactive debit card, and lack of information of programmes. The findings of this study in the thesis are consistent with earlier research on FI challenges (Demirgüç-Kunt and Klapper, 2013; Ozili, 2020; Cohen and Nelson, 2011; Atkinson and Messy, 2013). Thus, working on these hurdles may increase financial knowledge and facilitate access to financial services for women living in slums, allowing them to enter the formal financial system.

CHAPTER 8 CONCLUSION

8.1 Background

This chapter summarises the outcomes of this thesis on women's empowerment through financial inclusion. The study is based on survey of 1096 women residing in the slums of Ludhiana and Patna. The chapter discusses the conclusion, recommendations, limitations, and future study in the concerned field.

8.2 Conclusion and Recommendations

The thesis addressed five research questions to evaluate the impact of FI on women empowerment. In the thesis, a survey method has been used, and the data was collected from respondents in the slums of Ludhiana and Patna. The study followed a structured approach towards the evaluation of the women empowerment dimension through FI. The results of analysing the current status of financial inclusion schemes, such as PJD, PSB, PJJB and APS, launched in 2014-15 by the GOI, have been suggestive of the fact that the PJD scheme as a part of financial inclusion strategy has been quite successful especially for women. Both Ludhiana and Patna are some of the most developed cities in the state of Punjab and Bihar. The Ludhiana city has the industries such as Hosiery, Machine tools, Machine parts, Oil Engines, Oil Expellers, Agricultural impalements and others. The city attracts a migration population from all the regions of the state of Punjab and neighbouring states. The majority of this population constitutes the urban poor in the city. Patna city being the capital of Bihar, has long been the agricultural hub and centre of trade. The economy of the state has been spurred by the growth of the fast-moving consumer goods industry and green revolution business. Patna is one of the fastest-growing cities, and being the most economically

developed city in Bihar, it attracts migrants from all the regions of the state. The majority of these migrants are part of the population in urban slums. after studying the sample of 1096 samples through survey approach. The thesis identified that the primary source of awareness regarding the financial inclusion schemes among women were Bank correspondents, Banks, NGOs and self-help groups. The awareness regarding the FI schemes is crucial to WE. The modes like TV, radio, peer group, self-help group and NGOs played a critical role in creating awareness regarding the FI schemes among women in slums of Ludhiana. Whereas TV, radio, banks and bank correspondents were influential modes of awareness in Patna. Both non-profit organisations and SHGs play a vital role in spreading awareness regarding these schemes among women in slums (Desai and Joshi, 2012). The women at both locations prefer taking credit from informal sources, and most of the credit is used for healthcare, marriage, construction of toilets and house and education purposes. Women in Patna are more inclined to take loans for healthcare and education, whereas women in Ludhiana are more inclined to take loans for marriage and construction work related to their house. Since most of the loans are still taken from informal sources, it is an indicator that the women in slums lack financial literacy and due to which they do no prefer to access formal sources of taking credit. Also, very few women in both cities have availed loans for starting their ventures. Hence the state of FI of women in both the cities are unique owing to their socio-economic conditions. The conclusions drawn from the five research questions of the study have been discussed below.

8.2.1   The first objective of the thesis elaborated on examining the extent of the financial involvement of slum dwellers. After studying the elements of FI of slum dwellers in Ludhiana and Patna through the survey method, the study elaborates on the index calculation to measure the extent of financial involvement of slums dwellers. The FII is a multidimensional index calculated on the basis of bank account usage and subscription to financial products. The women in slums

are categorised into low, medium, and high levels based on the values of the index. The study identified that most of the women in slums lie in a low inclusion level, and very few women are under a high inclusion level. The result of the study indicates that low awareness of women in slums regarding the schemes, low bank account usage and negligible usage of debit cards were the primary reasons for the low inclusion of women. The digital payments and usage of mobile banking applications is still a challenge. The study also highlighted that the city of Ludhiana is ahead of Patna in terms of female literacy rate, work participation rate, and per capita income. However, the results of our study identified that the majority proportion of women in the high FII category is from the city of Patna and the majority proportion of women in the low FII category is from Ludhiana. From the results of the first objective, it can be concluded that most of the women at both the location are at low inclusion levels and lack of awareness is one of the primary reasons for low formal financial involvement. The GOI should create a supportive environment to enhance the impact of these schemes.

8.2.2   The second objective of the thesis elaborated on the effect of location, education and awareness on insurance schemes of "*Pradhan Mantri Jeevan Jyoti Bima Yojana*" (PJJB), the "*Pradhan Mantri Suraksha Bima Yojana*" (PSB). The data collected through the schedule for education level, locations and awareness of insurance was recorded as categories to test the effect on insurance schemes. It was noteworthy that even less-educated women have joined the formal banking system, and very few of them have sound awareness regarding these financial inclusion schemes, but subscriptions are not considerable. It was identified from the study that education and awareness are significant for the choice of insurance schemes, whereas location has no significant influence. The study also highlights that education has a weak effect, and awareness of schemes strongly affects the subscription of insurance schemes. Banks and governments undertake

the awareness of schemes through their financial literacy programs[8]. Thus, it can be concluded from the result of the study that financial literacy is essential for boosting the usage of financial services among women in slums, especially in the case of developing countries like India.

8.2.3   The next objective of the study examined the effect of FI on the economic dimension of women empowerment among women in slums. They were categorised into three levels to examine the effect on the economic dimension of WE. It is clear from the findings of the study that the latest FI schemes of GOI are currently addressing the economic dimension of WE. The FI influences the ability of women to decide the money to be saved, contribution in repayment of the debt, generation of income and participation in the purchase decision of household. It indicated that the FI of women influences EE. The study result also indicates that women in slums having higher access to financial services may become economically empowered.

8.2.4   The fourth objective of the thesis examined the effect of the economic dimension on the social and political dimension of empowerment. The influence of EE on SE and PE in practice results in developing a paradigm that intends to develop supportive approach towards participation in decision making, movement without any restrictions, awareness of locality, knowledge of political parties, understanding of political issues, participation in political discussion and information about political campaign. Thus, the economic dimension, social dimension, and political dimension in WE can be addressed from the study's findings. It can be concluded from the results of the study that economic engagement enhances social stature and political participation for women in slums. There is a positive influence of FI on the EE dimension of WE. EE further enhances the social-political dimensions of WE. The long-haul sustainability of these

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[8] Department of Financial Services, *Important Schemes*, Accessed on 17 July, 2021, Accessed at
https://financialservices.gov.in/banking-divisions/Important-Schemes

plans relies upon the generation of economic activities (Hermes and Lensink, 2011). Hence, supporting skill development training programs for women in slums shall prove to be a foundation for their overall empowerment.

8.2.5   The final objective of the study elaborated on assessing and prioritising challenges faced by women in slums in accessing financial services. The findings of the challenges to financial inclusion have several conclusions. The study identified 18 challenges to financial services from literature, and the framework is developed based on inputs from expert opinion. The result of the study is distinctive and prominent as it was unique to women in slums. Using a novel MCDM framework, the challenges to FI are ranked based on their causal relationships. The results from five iterations, the most crucial challenges to women in slums are banks are far, bank officials do not cooperate, time constraints, and internet access. These challenges lead to a lack of trust by women in banks. The other challenges women face are ATM inoperative, limited access to smartphones that lead to low financial literacy and not being allowed to go to banks. Thus, based on the significant barriers, it is recommended that the government focus and improve the network of bank branches to provide banking facilities in underdeveloped areas. The bank employees need to be sensitised and trained about addressing the issues of women in slums. Time constraint signifies that social norm still restricts women's mobility and do not encourage them to visit the bank branch. To conclude, the thesis suggests that the government should take sufficient steps in creating awareness regarding the schemes and their benefits to women so that they get financially included and thus economically empowered. It also suggests that out of 18 barriers under study in this thesis, the most significant barriers which need to be addressed are no cooperation from banking staff, lack of financial literacy, not allowed to go to the bank, do not know the usage of mobile banking and preference for local savings and loan associations. Since most of the

population was in the medium and Low Financial inclusion category, these challenges need to be addressed to move them into the high financial inclusion category.

Overall, the result of the thesis reveals that women in urban slums do not lack access to financial institutions. However, they suffer from economic risks such as unsteady earnings, non-contractual informal jobs, financial risks such as reliance on the cash economy, informal credit, and social risks such as social fragmentations. There is a substantial gap in the lives of poor urban women, so to bridge this gap, there is a need to systematically understand the financial lives of these households and customise the delivery mode that is affordable and scalable. Thus, the system may need to create new points for information collection to create a more inclusive financial system for women in slums. The thesis also underlines the critical necessity for developing a modified formal financial system to increase the scale of financial inclusion among women in urban slums.

8.3 Contributions

The current thesis has made a conceptual contribution to literature. As the first contribution, this thesis enhances the discourse on women's empowerment in ghettos through the GOI's latest financial inclusion programmes, such as PJD, PSB, PJJB and APS, launched in 2014. It is in contrast to previous studies that have focussed on FI of rural poor. Second, the thesis underlines the critical necessity for developing a formal financial system to increase the scale of financial inclusion among women in urban slums. Third, the thesis focuses on the development of the framework to assess the extent of financial inclusion. The framework to access the extent of FI is based on the construction of the index i.e. FII (refer to section 3.8). FII is a unique multi-dimensional index that measures the inclusion of women through their usage of financial products and is constructed based on the latest FI schemes. Third, the thesis prioritised the challenges

women face in slums in accessing financial services that require immediate attention to improve their overall formal financial involvement. Finally, the study accesses the state of FI of women in two cities, i.e. Ludhiana and Patna, which have not been accessed before. Overall, the thesis makes important contributions: one, it advances the literature on the financial inclusion of women in urban slums, and two, it assesses the effectiveness of recently introduced financial inclusion programmes by the GOI.

8.4 Practical Implications

The city of Ludhiana and Patna was chosen as the region for the study. The results of the current investigation have implications for developing regions worldwide. The result of the thesis provides practical implications for service providers like Banking Correspondents and Banks, who are primarily involved in driving the FI in the country. The thesis results indicate that incentives for women in the scheme play a crucial role in the access and usage of those schemes, such as PJD offering overdraft facilities to females with more enrolments of females compared to other schemes. The implication for the drivers of such schemes is that mere intention is not sufficient for FI. The scheme's design is equally essential (Bisht and Mishra, 2016). It is also important to break the inactivity or non-usage of account and debit cards to loosen the hold of informal financial service providers. As in the absence of its usage, females may reply to informal sources for their saving and credit needs. It is important to note that PJD has reduced the gap in bank ownership[9] , but the change-oriented objective of learning financial well-being has suffered. Thus, there is a

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[9] PMJDY helped more women financially empowered -
https://economictimes.indiatimes.com/news/economy/policy/pmjdy-helped-more-women-financially-empowered-report/articleshow/53065380.cms

need to improve financial literacy and redesign the FI program that helps women involved in the formal financial sector.

The government can use the results of this thesis to redesign the strategies to ensure better coverage of women in urban slums for such schemes. The convergence of dimensions of empowerment for women in urban slums and the strong relationships between women economic empowerment and financial inclusion provided insights to policymakers. These results can be used to develop tailor-made financial literacy programmes as per the needs of the women in slums. The policy decisions should accelerate procedures through the supportive mechanism, develop superior systems and easy interaction on platforms among different stakeholders to promote economic empowerment among women in slums. The policymakers can use the results of this thesis to work effectively on the barriers identified in accessing financial services by the respondents to ensure higher financial inclusion, thus leading to better economic empowerment of women.

8.6 Limitations

The thesis has certain limitations. First, we gathered data from the cities of Ludhiana and Patna, with a sample size of 1,096. As a result, broad generalisations for the entire country should be approached with caution. The data was collected on a set timeline, and hence the generalisation of results has limited application. The results may be influenced due to common method bias. This study does not use a longitudinal research design to determine the long-term influence of EE on SE and PE on the same group of respondents.

8.7 Future Research

The scope of future research is discussed below:

- An identical study may be undertaken to other Indian towns and cities worldwide, which will be highly beneficial in building Financial Inclusion tools.

- More indicators may be used to improve the Financial Inclusion Index.

- More variables may be considered to investigate Women Empowerment aspects better.

- In addition, extensive qualitative research in the future may provide a broad range of ideas about financial inclusion and women's empowerment. Further investigation may be required to compare the financial literacy of both cities.

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Appendices: Questionnaire

Place: ◯ Ludhiana ◯ Patna

Employment Status: ◯ Full time ◯ Part Time ◯ Unemployed

Labor Status: ◯ Regular ◯ Wage Earner ◯ Self-Employed ◯ Casual Labor

Education Profile: ◯ Below Matriculation ◯ Matriculation/ Higher Secondary

◯ Graduate ◯ Post Graduate

◯ Technical Course

1. Did you open your bank account under Pradhan Mantri Jan Dhan Yojana? ◯ Yes ◯ No

2. Are you aware of the fact that you can open a bank account with zero initial balance, accidental cover of Rs. 1 lakh and life cover of upto Rs. 30,000? ◯ Yes ◯ No

3. How frequently do you operate your bank account?

◯ Weekly ◯ Fortnightly ◯ Monthly

◯ once in two months ◯ Annually ◯ Rarely ◯ Never

4. Kindly mention the purpose for which the bank account is opened. Tick the relevant ones.

◯ Savings ◯ To receive funds ◯ Avail loan

◯ Get government subsidy ◯ For cash transactions

5. From which of the following source your came to know about PMJDY accounts

◯ Newspaper/ Magazines ◯ TV/Radio ◯ Friends/ Relatives ◯ Banks

◯ Self-help groups ◯ Post Office ◯ Money Lender ◯ Employer

◯ Bank Correspondent ◯ NBFCs ◯ NGOs

6. Do you use RuPay cards? ◯ Yes ◯ No

7. Usage of RuPay Cards? ◯ Purchase ◯ Transfer Amount

◯

○ Withdrawal   Not Yet Used

8. How often do you use your RuPay Card?

○ Weekly   ○ Fortnightly   Monthly

○ once in two months   ○ Annually   ○ Rarely   ○ Never

9. Are you aware of the fact that you can avail life insurance policy of Rs. 2 lakh by just paying a premium of Rs. 330 annual ○   Yes   ○   No

10. Are you aware of the fact that you can avail accidental insurance policy of Rs. 2 lakh by just paying a premium of Rs. 12 annually?   ○ Yes   ○ No

11. Have you availed insurance under these schemes?

○ Availed both these schemes   ○ Availed only life insurance scheme

○ Availed only accidental insurance scheme   ○ None

12 From which of the following source your came to know about PMJJBY and PMSBY accounts

○ Newspaper/ Magazines   ○ TV/Radio   ○ Friends/ Relatives   ○ Banks

○ Self-help groups   ○ Post Office   ○ Money Lender   ○ Employer

○ Bank Correspondent   ○ NBFCs   ○ NGOs

13. Have you ever availed loan?   ○ Yes   ○ No

14. From which sources have you availed loan?

○ Loan from local money lenders   ○ Banks

○ Loan from your employer   ○ Any other, please specify _____

15. What is the purpose of taking loan

○ Business   ○ Health care   ○ Marriage

○ Construction of house   ○ Education   ○ Last Rites

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16. Have you applied pension scheme under Atal Pension Yojana? Yes No

17. Mark the following question based on your opinion from 1 to 5

S. No.		5	4	3	2	1
		SA	A	N	D	SD
1.	I have say in amount of money to be saved per month					
2.	I manage resources for repayment of credit					
3.	I work to generate further income					
4.	I participate in decision about the usage of savings and credit use					
5.	I have say in purchasing basic utilities					
6.	Important decisions in the family are taken mutually by me and husband					
7.	I can move out of home freely without any restrictions for work					
8.	Working freely has improved my social status.					
9.	I know most of the women living in my locality					
10.	I have Knowledge of parties operating in the area					
11.	I have good understanding of important political issues of country.					

12.	My vote make difference to development in my area					
13.	I Participate in political discussion in family					
14.	I have access to information about political demonstration					

18. What challenges did you have to face while transacting with bank?

A. Individual issues:

- I wasn't allowed initially by the family to open bank account……………………
- I am not allowed to approach bank frequently for deposits or withdrawals…………
- I wasn't allowed to participate in financial literacy camp organized by the government   authorities……………………………………………
- I don't have knowledge regarding banks and its facilities…………………………
- I don't know how to use ATM card…………………………………………………
- I don't know how to use mobile banking system…………………………………
- I don't have the technology to use mobile banking system………………………
- I don't trust banks…………………………………………………………………
- It is convenient to take money from local money lenders……………………
  if yes, then kindly mention the reasons

  _____

- I don't feel confident enough in communicating with bank officials………………
- Banks are too far away……………………………………………………………
- Bank officials don't cooperate……………………………………………………
- Banks have strict norms……………………………………………………………
- Any other, please specify   _____

B. Bank related issues:

- ATMs don't operate…………………………………………………………………
- Debit card is inactive………………………………………………………………

- Insufficient counters in the bank to cater to everyone's needs efficiently………… [   ]
- Complaints of women not being addressed to by the authorities well on time……… [   ]
- Any other, please specify

  _____