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Financial Inclusion as a Catalyst for Women's Economic Empowerment: Evidence from Punjab, Pakistan

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ABSTRACT

Financial inclusion plays a key role in empowering women especially in taking part in economic activities. The present study is carried out to assess the impact of financial inclusion on women's economic empowerment in South Punjab, a neglected area of Punjab, Pakistan. The sample of 150 married women of reproductive age (19-49) (Mage=34.43, S.D=8.43) having at least one child was selected from district Multan, Muzaffargarh and Dera Ghazi Khan. The independent variables were listed as age, married life in years, education years, job status, members earning in family and financial inclusion. Women economic empowerment (the dependent variable) was categorized as highly empowered, moderately empowered and least empowered. Through ordered logit model, the marginal effects of different independent variables were estimated. Results indicate that with one more unit of financial inclusion, women are more likely to be highly empowered as compared to moderately and least empowered women. The findings revealed that the variables viz., married life in years, status of job and number of earning members in family appeared to be non-significant to affect women's economic empowerment. The variables including, age of respondents and financial inclusion were positively statistically significant, while years of education was negatively significantly and more likely to impact economic empowerment of highly empowered women as compared to moderately and least empowered women. The recommendations in light of the results have also been discussed.

Introduction

Financial inclusion idea is not novel, as it started from 2000s. It was predicted that poor people couldn't entertain from modern financial services by the access to banks and other financial institutions. They are excluded from basic financial services as well. There is need for affordable

access to financial services that can help poor and average income people to use financial services (Islam,2014).

Financial inclusion is also means by the access, quantity, usage and quality of financial services. Quantity of financial services refers towards the opportunities available to the people and the quality of the financial services is associated with the knowledge and education about how to use the financial services. According to World Bank report (2018) suitability of financial services and product enhance positively the capacity of these financial resources. (Newnham, 2020, p. 1). There was not a single definition of financial inclusion but the term financial inclusion also referred as the access towards the financial savings, investments, assets insurances, payments and the transaction in most suitable way (Onukogu, 2020). It is also defined as access and usage of quality, sustainability and secure financial services from population. The financial services includes the financial products availability and services provides by the financial institutions of the economy. These services and products includes the bank accounts, credit cards, loans, ATM services and any form of credits (Ibtasam et al.,2018).

Financially stable economy is that whom majority of the population is well aware and well prepared through usage and access of financial products and services (Garcia et al.,2019). The world prospects of financial awareness shows that around two billion people worldwide have no financial accounts and more than 50% of the poor households are unbanked, it means that they lack formal form of financial services like, investment planning, savings and insurance. These are all because of insufficient usage of financial institutions and lack of financial environments provided to them.

Financial inclusion also stress on the solutions, which help to enable access to financial services for all members living in a society, especially the neglected portion of the society who cannot enjoy financial services and have no access to financial institutions. Digital financial services objective is to deal with financial inclusion complications in inadequate banking infrastructure in emergent economies. Pakistan is resource-limited economy that face many challenges to attain financial inclusion. Global gender gap exists, but this gap in emerging economies is huge where women and children suffer excessively. This gap creates lack of financial competence, empowerment and security in the country. In poor economies ratio of women who are banked is 37%, this shows a huge gap of technical knowledge (Ibtasam et al.,2018).

Financial inclusion has great impact on women's economic empowerment. Different studies viz., Ibtasam et al., 2018; Garcia et al., 2019, showed that financial inclusion is mandatory for women's economic empowerment and to achieve desirable economic development goals. Financial inclusion itself cannot work effectively, financial knowledge (financial literacy) is very much important to gain the absolute results of financial inclusion through assets holdings, savings, poverty, account holding in banks, access to banks and access to better digital financial services. All these dimensions and sources of financial inclusion can affect women's economic empowerment. No doubt globally women have been unserved as compared to men in financial inclusion and services of financial inclusion. There is immense need to have a great concern that women are also a great part of the economy and economy cannot grow without their participation. For the purpose of development and growth of the economy the government should increase women's participation in financial services or in women's financial inclusion. Different initiatives had also been taken as branch free banking systems and digitalized systems by government officials.

In the early 2014 in order to overcome that drop in financial inclusion services from women, different organizations and associations work together to increase the financial inclusion services

based on sex- disaggregation. There were leading organizations together to work on it viz., the alliance for financial inclusion, The European bank for reconstruction and development, the financial alliance for women, the world bank group, international monetary fund, the inter-American development bank, IDB invest, the international finance corporation, the Organization for Economic Cooperation and Development (OECD) and the United Nations Capital Development Fund (UNCDF).

Women in Pakistan face many challenges and barriers towards financial inclusion, viz., gender biases, low level of economic participation of women, limited education, limited financial skill, limited financial literacy and limited geographic access to banks. Research piloted in year 2017, revealed that Habib Bank Limited which is largest commercial bank in Pakistan, revealed the fact that many women were hesitating while coming to banks and communicating with staff, reason was male staff did not attend and treat with respect. On the other hand 23 percent women in Pakistan participate in economic activities. Women having lowest participation in economic activities is main reason for the number of unbanked women in Pakistan. Another reason is that more than 60 percent of the population live in the rural areas where transport is unreliable and women face limited bank access.

Financial institutions can play a positive role in shaping financial inclusion progress among women. These institutions include; financial service providers, exchange companies, development finance institutes, commercial banks, Mudarbas, mobile money operators and insurance companies (WFID Partnership, 2022).

Scope of the Study

It explains the dimensions of financial inclusion including; access, use and quality of financial services. The Access includes: account ownership, branch/digital banking reach, microfinance participation Use of financial services includes: savings, credit uptake, loan repayments, digital payments, mobile banking. Quality and depth of financial inclusion services includes, financial literacy, trust in formal institutions, frequency of interaction with banks and other enabling services includes collateral-free credit, cash transfers, insurance uptake etc.

Significance of the Study

The present study is significant due to the fact, it is closely associated with sustainable development goals 2020 agenda presented by United Nations Development Program. The purpose of the agenda was to highlight and present the solutions of most critical challenges faced by the world. The SDGs are connected with eradication of poverty, zero hunger, environmental issues, health, empowerment, peace, justice and economic growth. These goals work as a map for development of any country, especially Pakistan. The present study covers three important goals out of 17 from SDGs. These are poverty (that is taken independent variable here) reduction through financial inclusion services is the first goal in SDGs agenda by 2030. The other one is financial service knowledge and education of respondents that is associated with the goal 4 in SDGs. Thirdly, the Women economic empowerment is taken as a dependent variable in the study is associated with the goal 5 which is gender equality and women empowerment in SDGs by 2030 agenda.

Literature Review

Jones (2008) highlighted the financial inclusion achievement towards poverty reduction and its impact on women's economic empowerment in Britain. Ali et al. (2008), pointed out the impact of financial services quality (FSQ) on rural and urban women's economic empowerment. As, the

quality of financial services lead to increase the employment opportunities of women, their income levels and their overall participation in every sphere of economic activities that automatically enhanced their economic empowerment. The findings of the study revealed that the women economic empowerment was measured through poverty among women that how much poverty affect the quality of financial services and then its overall empowerment was measured. The findings revealed that quality of financial services had positive and significant impact on women's economic empowerment.

Another theory of financial inclusion supports the small and medium led changes in any part of the financial inclusion system that will lead to big changes in financial inclusion practices and services. There are different decisions on the provision of formal financial service. Most of the studies stressed that there must be government who should provide the formal financial services (Aggarwal and Klapper, 2013).

Community echelon theory postulates that community leaders and people who head the surroundings can play an important role in developing and providing the financial services to the common people. On the other hand public service theory supports the financial inclusion services (Arun & Kamath, 2015).

Indrawati et al. (2016) studied the financial sector development progress on participation of women in economic activities. Peria et al. (2016), pointed out the foundations of financial inclusion based on understanding ownership and use of formal accounts. Findings revealed that there was positive and significant impact of financial inclusion services on women's participation in economic activities. The suggestions showed the availability based on the improvement and betterment in financial inclusion services in Punjab, Pakistan.

Bhattacharya et al. (2017), explored the interaction of financial inclusion towards saving behavior of empowered women in Hispanic low-income families. The research work focused on the association of financial knowledge and financial attitudes with financial outcomes by focusing on predominantly low-income Hispanic families including women having economic participation. The findings revealed that there was positive and significant association between financial inclusion with women's economic empowerment in among Hispanic low and middle-income households. Siddik (2017) examined the impact of financial inclusion on women's empowerment in different ways. Firstly through formal financial system that enhanced the ability of women to take active part in economic activities and increase women economic empowerment. The second one was as women included in financial awareness programs they will participate more in economic activities that will increase economic empowerment of women. Thirdly, financial inclusion can enhance asset holding and can increase women's economic empowerment. The findings of the study showed that access to financial services and quality of financial services enhance women's economic empowerment.

Menkhoff et al.(2018), explored that good financial inclusion contributes to good financial decision making has positive impact on women's economic empowerment. However, that was the first study that examined the link between financial literacy and financial inclusion at the country level. The study revealed that access to finance, financial infrastructure and financial services has positive and significant impact on women's economic empowerment.

Ibtasam et al. (2018), examined the economic and financial aspects in broader way in association with women's economic empowerment. Results revealed that financial aspects, including quality and access of financial services has significant impact on the abilities and participation of women in economic spheres. Findings revealed that financial stability was matter of great concern that had

greater influence on women's economic empowerment. The constraints women facing while taking economic decisions affected women's economic empowerment a lot.

Garcia et al. (2019) pointed out the impact of financial inclusion on multiple economic scenarios where women participate. The findings of the study revealed that access and usage of financial products and services had significant and positive impact on gender equality and women's economic empowerment. Ahmed et al. (2019) explored that the impact of financial inclusion on women's economic empowerment and financial resilience in Bangladesh, using World Bank data on global financial inclusions. The study concluded that women respondents with financial accounts were more resilient than those without accounts. Effendi et al. (2019) examined the impact of financial inclusion along with poverty on women's economic well-being and empowerment on household level in developing countries. Poverty was a significant problem for developing countries such as Indonesia, even though it had achieved rapid financial development. The study revealed that there was positive and significant impact of financial inclusion on women's economic well-being and empowerment. There was positive association between financial inclusions, the asset ownership, saving behavior and has negative relationship with financial inclusion.

Bhatia et al. (2019), pointed out the dimensions of women's economic empowerment and its association with financial services including quality and access to financial services. In present study women's economic empowerment was a dependent variable and age, area, married life and financial inclusion were independent variables here. The study also revealed that women living in village areas and slums do not have limited access but had difficulties in managing risks, financial risk, informal job loss risks, informal credits and socially related risks involved.

Long & Morgan (2020), pointed out the impact of financial inclusion and saving behavior on women's economic empowerment in Laos. It was survey based study developed by OECD and development international networking on financial knowledge and education. The findings revealed that there is positive and significant impact of financial inclusion on women's economic empowerment.

Onukogu (2020) focused on the financial inclusion status in Nigeria especially in the context of women's economic empowerment. It was discovered that the women empowerment was highly associated with financial inclusion but, the Nigerian women were so weak in terms of financial inclusion services and less empowered compared to other nations in the world. Financial inclusion barriers were faced by Nigerian women and were dependent on their counterparts. Lastly, the household income control and the Income level paradox was used for the potential to gain financial services and empower women at some extent. There are theories that support impact of financial inclusion on women's economic empowerment (Naveed and Rehman, 2020). Public good theory of financial inclusion was initially presented by Paul Samuelson in the 1950s. The theory state that access and quality of financial services must be treated as public good. It means that access to financial inclusion should be a public good for everyone not limited. The whole society must enjoy the access to financial resources and services independently. Furthermore, it states that all financial services must be free in access to everyone as ATM for transaction, account opening process and banking information for savings and investment purposes must be free (Ozili 2020). The government should also give cost free opportunities to financial services providers. The supply of financial services must be cost free (Hedayat, 2020).

Pal et al. (2021) examined the impact of financial decision making on women's economic empowerment. The results of the study revealed that job status, participation in economic decision-

making, participation in household decision making and in participation in welfare purposes has positive and significant impact on women's economic empowerment.

Mutua & Juster, (2021), examined the need of awareness related to financial services and revealed the fact that there was positive and significant impact on women's economic empowerment. The knowledge of financial services had positive and significant influence on women having more participation in economic activities.

Ernawati et al. (2022) explored how financial inclusion through social capital which was a meditative variable. The mediating variable (social capital using four dimensions i.e., trust, bonding & bridging, and collective action) was associated with financial inclusion. Findings revealed that there was positive and significant impact of financial inclusion on women's economic empowerment. The study had a partial mediating effect with social capital along with financial inclusion.

Achulo et al. (2022) identified that financial inclusion along with its dimensions has positive and significant impact on empowerment of women. Findings of the study revealed that financial inclusion reduces the ratio of poverty that leads to enhance the women's participation in economic activities and enhance women's economic empowerment and reduces gender inequality. Aziz et al. (2022) examined the reasons why females are discouraged and more likely to be removed from the formal financial system than males in Asian countries. Results of the study discovered that gender has a great link with financial services and religious viewpoints were also interconnected with women's low involvement in financial services.

Arshad (2023) aimed to conduct an empirical investigation of financial inclusion impact on women overall empowerment. The various dimensions of financial inclusion was analyzed on women empowerment in developing countries using the panel data for the time period covered 2004–2019. The least Square GMM technique was applied for estimation. Findings of the study discovered positive correlation of financial inclusion on women empowerment.

Different theories support the study in form of multiple beneficiaries of financial inclusion in form of poor people or most ignored people of the society. These are the people who are most ignored people and had limited access to financial services (Bhandari, 2018).

Research Question

What is the impact of financial inclusion on women's economic empowerment in Punjab, Pakistan?

Research Objective

To assess the impact of financial inclusion on women's economic empowerment in Punjab, Pakistan.

Hypothesis

H1: There is positive and statistically significant impact of financial inclusion on women's economic empowerment in Punjab, Pakistan.

Data and Methodology

Data were collected from three districts of South Punjab, Pakistan, including districts D.G. Khan, Muzaffargarh and Multan. Mixed sampling technique was used; primarily we selected the Punjab Province, at the second step three districts namely Multan, D.G. Khan and Muzaffargarh were

purposively selected, as these are representative of South Punjab. Finally the disproportionate convenient sample of 150 working women in these three districts, 50 from each district was selected. The sample size of 150 women justified that there were not available women which fulfil the restrictions of married women and having at-least one baby. These restrictions was applied due to the circumstances they were facing after getting married in their surrounding and its impact on their economic empowerment. As the sample frame was not available, despite using random sampling, we followed convenient and not random sampling technique due to restriction bias to collect data.

Inclusion/ Exclusion Criteria

The women with reproductive age (19-49), having at least one child ,doing jobs anywhere in public or private sector in three districts of South Punjab, Pakistan were included in the study. The women below 19 years and above reproductive age of 49 years, widows, divorcee and single women were not included in the sample.

The Ordered logit regression model, first used by Peter McCullagh in (1980) in "regression models for ordinal data", has been used to attain the results. It is used when dependent variable is ordinal in values. If the variable having different options mainly consists on the pattern of "agree", "disagree", "indifferent or indecisive", "stongly agree "and "strongly disagree", containing different numbers in form of "1", "2", "3", "4", "5" in sequence. Results are attained using SATA 16 software.

The marginal effect are also calculated in the present study. The marginal effects reveal the derivatives (change) in the probability of variables, when one of the independent variables raises by one unit. The purpose of the marginal effects is to see the change in predictor's value. Marginal effects in data analysis are used for the purpose to understand the impact of “one unit change in an independent variable on the dependent variable”. There are different reasons that marginal effects are important in analysis. They help to deal with complex models output in a more simple way and terms. They are used to check the non-linear relationship i.e., in logit and probit models. Marginal effects provide the simple view that how future predictions change.

The Econometric Model

With the help of literature view, following econometric model is constructed for the present study:

$$WEE = \gamma_0 + \gamma_1 AREA_i + \gamma_2 AGE_i + \gamma_3 EDU_i + \gamma_4 ML_i + \gamma_5 JOBS_i + \gamma_6 MEARN_i + + \gamma_7 FI_i + w_i \dots \dots \dots (1)$$

Where:

γ_0 = Intercept and $\gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6, \gamma_7$ are slope of co-efficient of the attached variables

$AREA_i$ = Area of residence

AGE_i = Women's own age

EDU_i = Women's level of education

ML_i = Married life span in year

$JOBS_i$ = Jobs status

$MEARN_i$ = Members earning in the family

FI_i = Financial Inclusion

w_i = Error term

The reason of why ordered Logit model has been used in the present study is that outcome (explained) variable women's economic empowerment has been arranged in three groups viz., highly empowered, moderately empowered and least empowered. The Ordered Logit model for the present study is as follows:

The construction of ordered logit model following Diebold (2014), Batool et al. (2017).

as:

$$y_{it}^* = x_{it}'\beta + e_{it} \quad (1)$$

In above equation “ y_{it}^* ” is known unobserved”.

The “ e_{it} ” is dispersed as; $e_{it} \sim \text{logist}(0,1)$ (2)

It is assumed that there are “ N ” well-ordered outcomes;

$$It(y_{it}^*) = \{0 \text{ either } y_{it}^* < c_1 \text{ 1 or } c_1 < y_{it}^* < c_2 \text{ 2 either } c_2 < y_{it}^* < c_3 \dots \text{“}N\text{” either “}c_N < y_{it}^* \text{”}\} \quad (3)$$

Above “ c ’s” are unpredictable parameters to be considered with “ β ”.

Marginal effects of logit model “ $\partial E(y|x)/\partial x_i$ ” are not easy to find straight,

They are not simply provided by ‘ β_i ’s”. So, they need to be calculated from the original values. On the other hand, we have the values of “ $(y|x) \partial x_i$ ”= “ $(x'\beta)$ ” (4)

$$R^2 = 1 - \ln L1 / \ln L0 \quad (5)$$

Table 1: Description and operational definition of the study variables

Variable Abbreviation	Explanation	Variable status	Expected Sign
WEE ₁ *	Women's economic empowerment	Explained	Relationship with WEE
AREA	Area of residence; urban=1, rural=0	Explanatory	+ve
AGE	Age of respondent in years; chronological age	Explanatory	-ve
ML	Married life span ; conjugal marriage	Explanatory	+ve
EDU	Education of women; years of education	Explanatory	-ve
JOBS	Job status; permanent=1, contract base/temporary=0)	Explanatory	+ve
MEARN	Members earning in the family=total members	Explanatory	+ve
FI*	Financial Inclusion= It is the access towards the financial savings, investments, assets insurances, payments and the transaction in most suitable way (Onukogu, 2020).	Explanatory	+ve

Source: Author's own construction of table using MS word.

Note: The explanation of the star-variables in the Table is given below:

Women's Economic Empowerment (WEE₁*)

A five- item scale is women's economic empowerment index (Batool & Batool, 2018) is used to represent women's economic empowerment. The items included in the index are: (i) "Purchasing of items of everyday use (e.g., grocery, vegetable etc.)" by women (ii) "Purchasing of durable goods (e.g., refrigerator, TV, vacuum cleaner, car etc.) by women" (iii) "Increasing family's sources of income /saving by working and adding income" (iv) "Purchasing of gifts for friends/relatives (on events of weddings and birthdays etc.)" by women (v) "Purchasing of dresses /clothes (your own/children) from women by their own choices".

Women economic empowerment categorized into three categories namely; (i) highly empowered (ii) moderately empowered and (iii) least empowered using the mean ± 2 Standard Deviation and Mean-2 Standard Deviation.

Financial Inclusion (FI*)

Financial Inclusion also referred as the access towards the financial savings, investments, assets insurances, payments and the transaction in most suitable way (Onukogu, 2020). It was measured by following the (18) items questionnaire of OECD, (2022), including the questions related to; i. Are you independent to make decisions about your own money or salary you receive? ii. Saving money at home is safe rather than deposit it in banks. iii. I am satisfied with my present financial position iv. I am clear about my finance and budgeting. v. Do you set some (personal or with your partner) financial goal vi. I have some most important financial goals. Vii. I save and then invest to meet my most important financial goals. viii. I have payment products, such as prepaid cards, current account etc. ix. I have saving, investment and retirement products, such as pensions, investment accounts, saving accounts, saving clubs, bonds and crypto-assets etc. x. I prefer insurance products, such as car insurance, home insurance, etc. xi. Credit products helps to financial inclusion such as, mortgages, credit cards, micro-loans, etc. xii. I can save some money at the end of the month from my salary. xiii. High inflation means the cost of living is increasing rapidly and saving declines xiv. I am independent enough to save my money and take saving decisions in my future as well. xv. It is less likely that you will lose all of your money if you save it in more than one place. Xvi. I prefer to have saving account as it helps to save my money and reduce my expenditures. Xvii. Financial inclusion helps to reduce poverty? Xviii. Financial inclusion helps to improve living standards of people by providing them financial awareness and financial assistance.

Account Ownership (ACOWn*)

It is the lawful responsibility and rights possessed by the user (customer) of that accounts, which are open by their financial institutions, included i.e., banks or other financial institutions. It includes, both single and joint accounts ownership.

Asset Ownership (AOWn*)

Kindness and Li (2024) defines asset ownership and rights of the people including individuals or entity that possess the control individual asset (physical or financial) both. The assets may include the land, other property, financial property, intellect based property, financial instruments and legal assets that includes the values, benefits and profits.

Saving (SAV*)

Kagan et al. (2024) defines that saving is the money that is put aside or excluded from the general spendings of daily life from the disposable income of the individuals over a period of time. It is the

net amount or surplus that individuals keep after excluding all the expenditures and the things that have to be paid.

Poverty (POV*)

Chen et al. (2024) defines that poverty is the state where people lack financial resources to fulfil their needs and essentials and standards of their lives. In this condition people are deprived from meeting their essential human wants. It can be further elaborated as it is the lack of the clean water, housing, good food required for healthy life and medical care as well.

Investment (INV*)

Hayes et al. (2024) defines investment as an asset that is possessed by individuals to generate more income from it. It is the value addition in any sort of (physical or financial) asset to for the greater return in the business.

The Analysis

Table 2: Impact of Financial Inclusion on Women's Economic Empowerment

Demographics of the sample (N=150)

Variables	Categories	Frequency	Frequency (%)
Area of residence	Rural	70	46.67
	Urban	80	53.33
Age of Respondent in Years	19-23	9	6.0
	24-28	30	20.0
	29-33	32	21.33
	34-38	19	12.66
	39-43	32	21.33
	44-49	28	18.68
	50-54	20	13.33
Married Life of respondent in years	10-15	40	26.67
	16-20	33	22.0
	21-25	38	25.33
	26-30 and above	39	26.0
Education of Respondent in years	10	17	19.22
	12	46	28.30
	14	25	18.21
	16	32	25.10
	18 and above	30	20.0
Job Status of respondent	Not permanent	77	51.3
	Permanent	73	48.7
Earning members in Family	1-3	49	32.67
	4-6	56	37.33
	7-9	45	30.0

Source: Author's own illustration

The Table 2 represents the demographics used in the study. Sample consists of 150 married women, taken from Multan, Muzaffargarh and D.G.Khan. The area of residence means rural and urban areas, 70(46.67%) belong to rural and 80(53.33%) women are from urban area. The age of respondents in years includes, different age groups. The women who lie in age group of 19-23 are 9(6.0%) and women in age group of 24-28 are 30 (20.0%). women in age group of 29-33 are

32(21.33%), women in age group of 34-38 are 19(12.67%), women in age group of 39-43 are 32(21.33) and women in age group of 44-49 are 28(18.7%). The marital life in years of women includes the groups of 10-15 which is 40(26.67%), group of 16-20 includes the women 33(22.0%), the group 21-25 includes 38(25.33%) and 26-30 and above includes 39(26.0%). The education level includes different years of education, as 10 year (matric), includes women 17(19.22%), 12 year (Intermediate) includes 46(28.30%), and 14 year of education (graduation) includes 25(18.21%) women. The 16 years of schooling includes the women 32(25.10%). The women having education of 18 years and above are 30(9.17%) in the sample.

The job status of respondents includes the status of having permanent and non permanent jobs. The number of women having permanent job status are 77(51.3%) and those having non permanent jobs are 73(48.7).

The earning members in the family includes the three groups. The group one included 1-3 members that includes, 49 (32.67%) in number. The group second includes the 4-6 members having values of 56 (37.33). In the last group lies between the number of 7-9 members possess the values of 45 (30.0).

Table 3: Descriptive Statistics of study variables (N=150)

Variable	Mean	Std. Dev.	Min	Max
WEE	2.127	.678	1	3
AREA	0.7	.46	0	1
AGE	34.427	8.429	19	49
ML	10.593	6.864	1	32
EDU	14.24	2.741	10	22
JOBS	.487	.501	0	1
MEARN	3.467	1.863	1	9
DEPP	7.153	4.215	1	17
FI	63.1	7.846	32	77

Source: Author's own calculation using the primary data.

The Table 3 represents the list of independent variables, mean, maximum, minimum values and standard deviation of women economic empowerment (dependent variable) and the list of other independent variables including, AREA, AGE, ML, EDU, JOBS, MEARN, DEPP and FI for the sample of 150 women in South Punjab, Pakistan.

Table 4: Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) WEE	1.000								
(2) AREA	0.424* (0.000)	1.000							
(3) AGE	-0.391* (0.000)	-0.145 (0.076)	1.000						
(4) ML	-0.182* (0.026)	-0.098 (0.231)	0.579* (0.000)	1.000					
(5) EDU	-0.421* (0.000)	0.058 (0.484)	0.288* (0.000)	0.114 (0.166)	1.000				
(6) JOBS	-0.320* (0.000)	0.084 (0.304)	0.408* (0.000)	0.224* (0.006)	0.676* (0.000)	1.000			
(7) MEARN	0.314* (0.000)	0.024 (0.844)	-0.174* (0.000)	-0.123 (0.000)	-0.487* (0.000)	-0.482* (0.000)	1.000		

	(0.000)	(0.775)	(0.033)	(0.135)	(0.000)	(0.000)			
(8) DEPP	0.432*	0.031	-0.368*	-0.187*	-0.640*	-0.645*	0.716*	1.000	
	(0.000)	(0.708)	(0.000)	(0.022)	(0.000)	(0.000)	(0.000)		
(9) FITOT	0.293*	0.066	-0.205*	-0.155	-0.152	-0.236*	0.252*	0.335*	1.000
	(0.000)	(0.422)	(0.012)	(0.059)	(0.064)	(0.004)	(0.002)	(0.000)	

Source: Author's own calculation using the primary data. (Note: * $p < .01$)

The Table 4 represents the inter-correlation of the study variables including the dependent variables. Most of the inter-correlation is significant which justifies the relationship.

Table 5: The simple ordered logit model: The Impact of Financial Inclusion on Women's Economic Empowerment (N=150)

WEE	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
AGE	-.097	.027	-3.52	0	-.15	-.043	***
ML	.023	.03	0.75	.452	-.036	.081	
EDU	-.277	.094	-2.95	.003	-.461	-.093	***
JOBS	.63	.498	1.27	.205	-.345	1.606	
MEARN	.154	.109	1.41	.158	-.06	.367	
FI	.058	.022	2.57	.01	.014	.102	**
cut1	-4.622	2.085	.b	.b	-8.709	-.535	
cut2	-1.356	2.039	.b	.b	-5.352	2.64	
Mean dependent var	2.127		SD dependent var	0.678			
Pseudo r-squared	0.174		Number of obs	150			
Chi-square	52.469		Prob > chi2	0.000			
Akaike crit. (AIC)	264.329		Bayesian crit. (BIC)	288.414			

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's own calculation in Stata 16 software

The Table 5 consists of seven columns wherein column 1 shows the list of the independent variables. The column 2 carries values of the coefficients of the independent variables. The column 3 and 4 consist of standard errors and t-values, respectively. The column 5, 6, 7, and 8 carry p-values, the confidence interval at 95% , and the levels of significance and non-significance, respectively.

The pseudo-R-square value is 0.174, which indicates that the model explains approximately 17.4% of the variability in WEE, but being pseudo, the R-square value does not matter here. The values of Chi-square is 52.469 and significant ($p=0.001$), which means that model is generally, statistically significant, it means that at least one predictor significantly affects WEE.

The results in Table 5 indicate that financial Inclusion have positive impact on economic empowerment of women in districts under consideration.

The variable AGE having coefficient value of -0.09 ($p < 0.01$) shows a significant and negative impact on WEE, which means, as age of women increases, their economic empowerment, participation in economic activities, decreases.

Variable EDU having coefficient value of -0.339 ($p < 0.002$) indicates significant and negative impact on WEE, which means as education level of women increases they have to face more

problems in terms of economic participation, from their families (spouse, in-laws, children) or non-availability of job satisfaction. Hence their economic empowerment decreases.

Among the six variables, two variables including, AGE and EDU are indicated to statistically significantly and negatively impact women economic empowerment, whereas, the variables viz., FI are shown to positively and statistically significantly impact on WEE. All the rest variable indicate having non-significant impact on women economic empowerment.

In order to show the impact of different independent variables on three categories of women economic empowerment, we estimated their marginal effects (Table 8). Because if the variable empowerment is taken as simple index, we cannot notice which category of women empowerment is responding to the independent variables. The survey showed that in the present sample varied with 20 highly empowered, 80 moderately empowered, and 50 least empowered women.

Table 6: Marginal effects Ordered Logit Model (N=150)

VARIABLES	Coefficient	Z-score p>z	Marginal Effect(1)	Marginal effect(2)	Marginal Effect(3)
Age	-0.096***	-3.52	0.0112***	0.0043***	-0.0155***
ML	0.022524	0.75	-0.00262	-0.00101	0.003632
EDU	-0.27708***	-2.95	0.032253***	0.012426**	-0.04468***
JOBS	0.63042	1.27	-0.07338	-0.02827	0.101654
MEARN	0.153684	1.41	-0.01789	-0.00689	0.024781
FI	0.057847*	2.57	-0.00673***	-0.00259*	0.009328***

Least, Moderate and High (n=150)

Source: Author's own calculation in Stata 16 software. *** p<0.01, ** p<0.05, * p<0.1. (cut1 | -4.622 SE = 2.08), (cut2 | -1.355 SE = 2.038). Log Likelihood =-124.1642. Pseudo R² (McFadden) = 0.1744. LR Chi2 (degree of freedom=8) =52.47. Prob > Chi2= 0.000

The Table 6 exhibits the marginal effects of different variables on three categories of women economic empowerment (dependent variable) in the model. The marginal effects show the degrees of change of the dependent variable with respect to different independent variables. The first column shows the list of the variables. The coefficients values (column 2) indicate the anticipated change in WEE (dependent variable) for a one-unit change in one independent variable, holding all the other variables constant. The column (5) shows that their significance levels (** = p < 0.05, = p < 0.001). P>|z|, column 3 designates the p-value connected with the z score (column 4) for the variable. The small p-value typically ≤ 0.05, proposes that null hypothesis must be rejected. Marginal effects (1), (2) and (3) represent the marginal effects of least empowered, moderately empowered and highly empowered women, respectively.

The Table 6 indicates that the variable having greater values or having higher marginal effects of category three means women are highly empowered.

The coefficient value of variable AGE is negative, which predicts that women having increase in their age lead to decrease their economic empowerment. Marginal effect of AGE of highly empowered women is (- 0.0155) moderately empowered are (0.0043) and least empowered are (0.0112), negative, positive and positive, respectively. Which means when age of women increases, they are about 1.55 percentage points less likely to be in the highly empowered, 0.43 percentage points more likely in moderately empowered , and 1.12percentage points more likely to be in least categories of women economic empowerment.

Our results match with results drawn by Adira and Abdisa, (2023), shows that as the age of women increased, they were found less empowered in economic domain, as they used to get limited participation in economic activities as compared to women of younger age (Lusadri and Mitchel, 2014; Hernandez et al., 2021; Dilshad et al., 2024; Kim and).

The coefficient value of variable of EDU is negative, predicting the opposite change in economic empowerment of highly educated women, as women highly educated may face some barriers to attain their goals (may be no job satisfaction, family issues, no. of children, dependent persons responsibility in family, spouse/in-laws permission etc.). The marginal effect of EDU of highly empowered women is (-0.04468), moderately empowered are (0.00101) and least empowered are (0.032253), negative, positive, and positive, respectively. Which means when women's years of schooling increase, they are about 4.47 percentage points less likely to be in the highly empowered, 0.10 percentage points more likely in moderately empowered, and 2.25 percentage points more likely to be in least categories of women economic empowerment.

Our results are supported by (Reshi et al., 2022; Tokal et al., 2023), revealed that education is not just enough but education with opportunities and access to resources with confidence were more important as women having education with limited access to resources, having family issues related to their taking care of the family hindered women to take part in economic activities. These studies revealed that most of women having education were traced as economically least empowered as compared to women having lesser level of education.

The coefficient value of variable financial knowledge FI is positive, which indicates that with financial knowledge (education) women can make good financial decisions and can predict the future plans regarding, investment, saving and expenditures and plan a household budget as well. Marginal effect of FI of highly empowered women is (0.0093), moderately empowered women are (-0.0025) and least empowered women are (-0.0578) holding the sign of positive, negative and negative, respectively. Which means when women's financial knowledge increases, they are about 0.93 percentage points more likely to be in the highly empowered, -0.2 percentage points less likely in moderately empowered, and -5.78 percentage points less likely to be in least categories of women economic empowerment.

Married life in year (ML) is statistically non-significantly associated with women economic empowerment. The remaining two variables viz., job status (JOBS), earning members (MEARN) came out to be statistically non-significant which means there are no impacts of such variables on women's economic empowerment.

Conclusion

The study was based on impact of financial inclusion on women's economic empowerment. There were sample of 150 women collected from three districts of Punjab, including Multan, Muzaffargarh and D.G. Khan. The ordered logit model was used to estimate the results. Account Ownership has positive impact on women's economic empowerment. The Asset Ownership has also positive and significant impact on women's economic empowerment. Saving also positively affect the women's economic empowerment. Poverty negatively affects the women's economic empowerment. Investment has positive link with financial inclusion and its affect is significant on women's economic empowerment.

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