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Unpacking Satisfaction Factors in Prime Minister's Youth Business Loan (PMYBL) Scheme: A Beneficiary Impact Analysis

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Abstract

Microcredit is a program that has gained widespread attention due to its potential to enhance the socioeconomic wellbeing of individuals. However, assessing the impact of microcredit on wellbeing requires the consideration of various welfare indicators and measurements. This study focuses on evaluating the impact of the Prime Minister's Youth Business Loan (PMYBL) scheme on the socioeconomic wellbeing of the borrowers in Islamabad and Rawalpindi, Pakistan. For this purpose, it employs a questionnaire to collect responses from 120 microcredit beneficiaries using random sampling technique. Descriptive statistics and non-parametric tests are used for data analysis. The findings indicate that the PMYBL scheme has significantly increased the income of poor households and consequently improved their living standards. Moreover, the beneficiaries remain satisfied with the loan facilities provided by the scheme. The results support the notion that microcredit has a positive impact on wellbeing, as increased income leads to improvements in education, access to better health facilities, and the betterment of overall living standards. In addition, increased income enables households to enhance their consumption patterns, increase savings, and acquire assets. Overall, the study concludes that the PMYBL scheme has a significant impact on the socioeconomic conditions of the borrowers. Indeed, microcredit investments in enterprises have the potential to improve socioeconomic conditions and enable the poor to become entrepreneurs. This study adds to the existing literature on the positive effects of microcredit on the wellbeing of borrowers and provides insights into the potential of such programs for poverty reduction.

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Introduction

The terms microcredit and microfinance are often used interchangeably which causes confusion for scholars and practitioners alike. It is important to distinguish between these two concepts, as microfinance encompasses a broader range of services beyond microcredit, including savings, insurance, training, and deposits. Microcredit, on the other hand, specifically refers to the provision of small loans and other financial services to individuals in poverty. The aim is to facilitate income generation and break the cycle of poverty. The alleviation of poverty and the improvement of living standards have been on the government agendas across the globe. Microcredit is considered one of the major tools that help to alleviate poverty and upgrade living standards. Indeed, microcredit schemes have enabled poor households to access easy loans for developing their entrepreneurial skills and breaking free from the vicious cycle of poverty (Hassan & Ibrahim, 2015).

While, the idea of using credit to alleviate poverty is not new, microfinance introduces modern methods of providing credit, such as social collateral and mobilization of savings. Since its inception in 1970, microfinance has been characterized by the inclusion of women, an important feature that has been credited with promoting gender equality and women empowerment. Armendariz and Morduch (2007) credit Grameen Bank as the pioneer of microcredit for their focus on lending to the very poor.

Microcredit institutions serve as an important financial resource for individuals living in poverty who lack collateral and are, therefore, unable to access conventional commercial economic reources. The origins of microfinance can be traced back to the 1970s, when the Grameen Bank of Bangladesh (founded by the microfinance pioneer Dr. Muhammad Yunus) began to shape the modern microfinance industry. Dr. Muhammad Yunus (2009) initiated a research project in the village of Jobra, where he observed that the lack of financial resources and inappropriate policies prevented individuals from utilizing their skills. In response, Grameen Bank was established to provide low-interest loans without collateral to the impoverished members of the society, with the aim of creating self-

employment opportunities and eradicating the exploitation of women by local money traders. The bank's pioneering work regarding the implementation of the microcredit business model led to the award of the Nobel Prize to Dr. Muhammad Yunus and his foundation in 2006. The Grameen model has since been adopted and practiced throughout the world.

A multitude of microcredit institutions, both governmental and non-governmental, as well as banks and rural support programs, operate in Pakistan with the goal of empowering impoverished individuals through small-scale financing. In the fiscal year 2013-14, the Government of Pakistan (GOP) introduced the Prime Minister's Youth Program which includes the Prime Minister's Youth Business Loan (PMYBL) scheme. This government-sponsored program provides credit in a way similar to that of other microfinance institutions. The GOP recognizes the critical role that youth and small businesses play in the economic development of the country. Launched in 2013, the PMYBL scheme aims to provide loans to educated but unemployed individuals, so they may establish their own businesses. The maximum loan amount offered through this program is 2 million Pakistani rupees, with a markup rate of 6%. The central vision and purpose of the PM's loan scheme is to facilitate the growth of entrepreneurship and small businesses, ultimately promoting economic development and social welfare. Its main objectives are stated below.

- To reduce youth unemployment rate.
- To engage youth in economic activity through entrepreneurship.
- To reduce the gender gap in labor force.
- To reduce poverty

This scheme is beneficial for both the borrowers and the lenders with a recovery rate of 99%.

Following are the hypothesis of this study used to check the impact of microcredit on socioeconomic wellbeing of the participants:

H_0^1: Microcredit has an insignificant impact on social welfare.

H_1^1: Microcredit has a significant impact on social welfare.

H_0^2: Microcredit has an insignificant impact on economic wellbeing.

H_1^2: Microcredit has a significant impact on economic wellbeing.

H_0^3: Loan facilities have an insignificant impact on borrowers' satisfaction levels.

H_1^3: Loan facilities have a significant impact on borrowers' satisfaction levels.

There are many microcredit institutions (government and non-government), banks, and rural support programs working in Islamabad, Pakistan. The reason for selecting the areas under study is that no previous study has been conducted in these areas regarding the PMYBL scheme.

Literature Review

This comprehensive literature review examines numerous studies that investigated the impact of microcredit on socioeconomic wellbeing and loan satisfaction, shedding light on its role as a tool for poverty alleviation and socioeconomic development.

Javed et al. (2006) and Mahjabeen (2008) found compelling evidence supporting the positive impact of microfinance programs on economic welfare. Similarly, Noor et al. (2018) conducted a study in the Kurigram district, demonstrating the effectiveness of microcredit in improving the socioeconomic conditions of poor households. These studies collectively provide robust evidence that microcredit initiatives contribute significantly to poverty reduction and overall socioeconomic development. Moreover, various researchers have explored the impact of microcredit across diverse contexts, consistently yielding positive results. For instance, Patel et al. (2018) examined the relationship between microcredit and poverty reduction among women living below the poverty line in North Gujarat, India. The study revealed notable improvements in the standard of living, entrepreneurial skills, and access to health and education opportunities among the beneficiaries of microcredit. Similarly, Tammili et al. (2018) evaluated the effectiveness of the AIM program in Selangor, Malaysia showing that microfinance plays a crucial role in reducing poverty and fostering the growth of small businesses. Likewise, Zaidi (2017) investigated the impact of microcredit on the socioeconomic status of Akhuwat clients in Lahore, Pakistan. The study highlighted significant enhancements in consumption expenditure, education, income, assets, and access to medical facilities.

Weerasinghe and Dedunu (2017) conducted a study in Sri Lanka that revealed a significant relationship between microcredit factors (loans, micro saving, and advisory support) and the improved standard of living among poor households in Kurunegala district. In Bangladesh, Haque et al. (2022) focused on the ASA microcredit program and found that education plays a vital role in enhancing income, savings, and expenditure, thereby leading to increased living standards and reduced poverty levels in both urban and rural areas. Mahmood et al. (2016) conducted a study in Punjab, Pakistan examining the impact of microcredit from Khushali Bank on poverty reduction and the standard of living. The findings highlighted the positive influence of microcredit on the income and consumption level of impoverished households. Tahir et al. (2016) studied the effectiveness of microcredit in Mandi Baha Uddin, Pakistan, focusing on the case of PRSP. The study demonstrated that microcredit significantly contributed to income generation and poverty eradication, with education playing a direct role in this process.

Beyond Pakistan, Samer et al. (2015) analyzed the impact of microcredit on household income in Malaysia. The study revealed that household income improved significantly when women were the borrowers, underscoring the empowerment of women through microcredit initiatives.

Imai and Azam (2012) explored the impact of microcredit on poverty alleviation in Bangladesh. The study highlighted the positive influence of microcredit loans on food consumption which, in turn, contributed to an increase in income growth. Babajide (2012) investigated the relationship between microcredit and the development of microenterprises in Nigeria. The study revealed that while microfinance banks did not significantly boost microenterprises, microcredit did improve entrepreneurial education, firm age, location, size, and registration. Saleem et al. (2011) conducted a study in D.I. Khan, Pakistan to investigate the impact of microcredit on the standard of living, with a focus on access to better health facilities, financial positions, and education. Their findings demonstrated a strong positive relationship between microcredit and living standards. In another study, Teng et al. (2011) examined the impact of microfinance on household socioeconomic conditions in the Prek Norin Commune. The study highlighted that microcredit usage led to a remarkable improvement in women's status, education, and family wellbeing. Furthermore, it also

created more job opportunities for women, while reducing income inequality.

Based on the existing literature, it is evident that satisfaction with loan facilities plays a crucial role in achieving improved business performance. However, certain essential indicators, such as loan facility satisfaction and business performance, have not been explored by researchers adequately in the Pakistani context. Thus, there is a need for further research to comprehensively investigate these indicators.

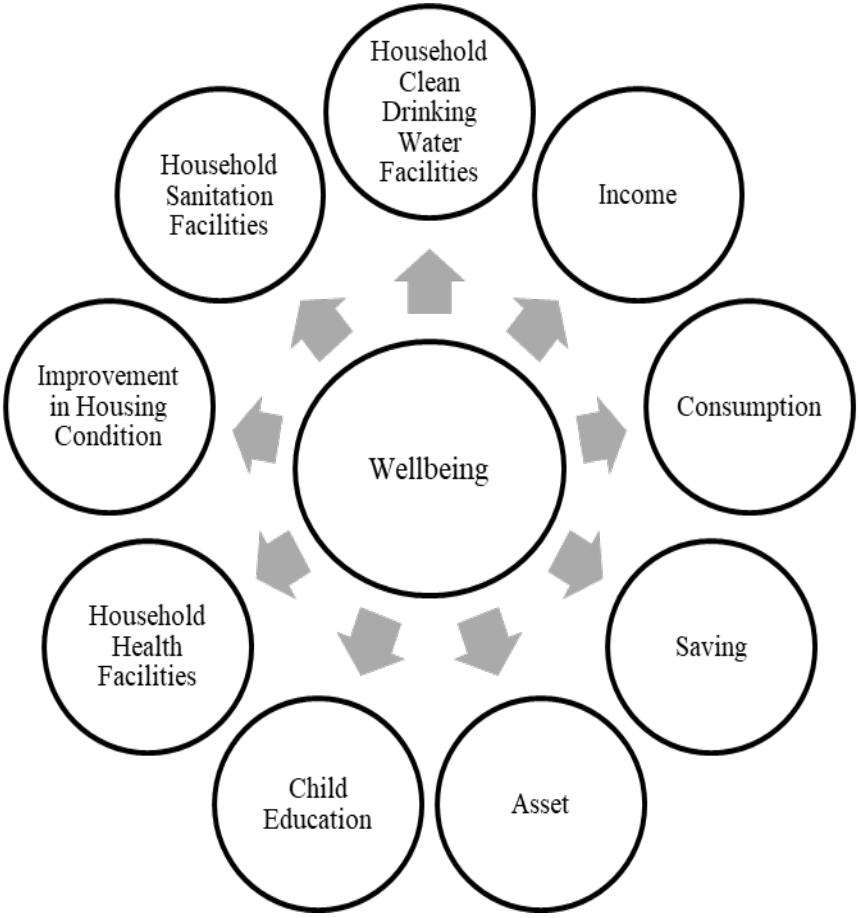
Dwivedi and Dwivedi (2022) stated that the supply of microcredit economically empowered women, enhanced their socioeconomic standing in the society and within their families, and resulted in a favorable change in their personalities. Al-Shami (2021) found that microcredit encouraged female entrepreneurship and increased revenue generation, thus resulting in higher household income and spending. On the contrary, no impact was identified on female borrowers decisions and mobility in several Arabian nations.

Furthermore, despite numerous studies evaluating the impact of microcredit on socioeconomic wellbeing in Pakistan, none have specifically examined the impact of the PMYBL scheme in the Islamabad and Rawalpindi regions. This study aims to address this gap by employing a social wellbeing index, economic wellbeing index, and loan facility satisfaction index, which were not utilized in previous studies. Such a detailed investigation would provide valuable insights into the effectiveness of microcredit initiatives in these regions.

Theoretical Framework

The framework used in this study consists of two parts, as shown in Figure 1. The first part namely economic outcome covers household income, household consumption, and household assets and savings. The second part namely social outcome covers the health status of the family, education status of children, improvement in household condition, clean drinking water facilities, and sanitation facilities.

Figure 1
Sources of Wellbeing

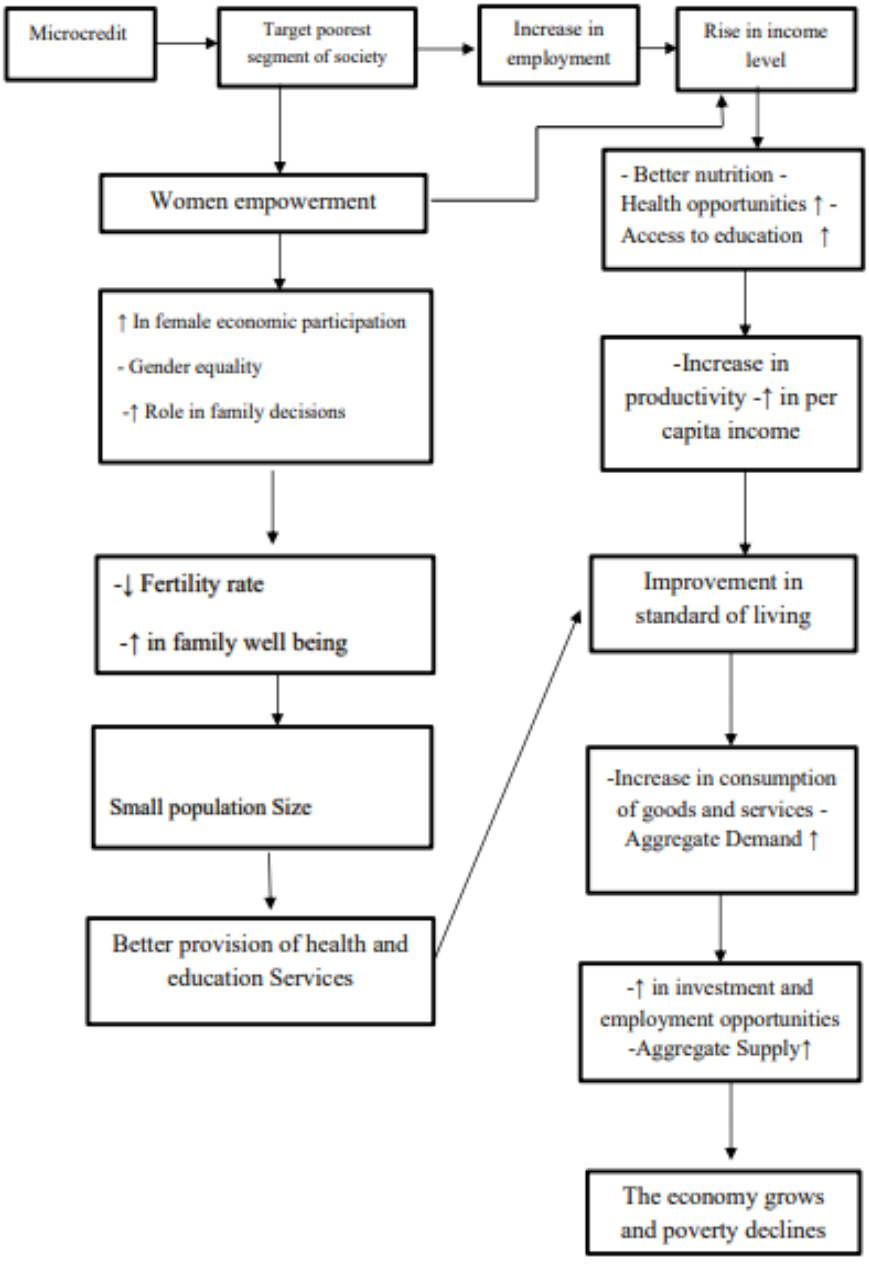


Note. Source: Author own work, compiled from different studies.

Credit is vital for uplifting the welfare of the poor, as it facilitates consumption smoothing and investment in human capital. Microcredit clients save more, spend wisely, and redirect their spending after loan repayment (Khandker et al., 1995; Stewart et al., 2010). Access to financial services helps the impoverished to increase their income, build assets, and also reduces their vulnerability to crises. It also leads to improved health, nutrition, and educational opportunities (Beck & Demirgüç-Kunt, 2008).

Figure 2

Link of Microcredit in Improving Wellbeing



Microcredit enables low-income individuals to establish or expand businesses, invest in productivity-enhancing assets, and purchase bulk inputs, resulting in increased production, productivity, and reduced costs (Littlefield et al., 2003; Nghiem et al., 2012; Ellis et al., 2010). These investments lead to economic gains for clients. Savings facilities also empower low-income earners to accumulate their savings, enhance their ability to access social services, and reduce their vulnerability to income and consumption shocks (Khan & Rahaman, 2007; Robinson, 2001; Littlefield et al., 2003). Microcredit with a focus on education and accompanied by social services, such as nutrition and healthcare, contributes toward improving households' human capital and influences financial management, spending, and saving behavior, thus affecting economic and social wellbeing (Imai et al., 2010; van Rooyen et al., 2012).

Figure 2 illustrates that microcredit targets the poorest segments of the society, leading to increased employment opportunities and income levels. It significantly impacts women's economic participation, promoting gender equality, and increasing their role in family decision-making. The rise in income levels also improves access to healthcare and education, while increased production contributes to higher per capita income. This boost in aggregate demand and supply stimulates economic growth and helps to alleviate poverty, highlighting the positive impact of microcredit on socioeconomic development.

Data

This study employed a questionnaire as the primary data collection instrument. The questionnaire consisted of four sections. The first section gathered personal information about the borrowers, including their age, gender, marital status, education level, family size, type, and residence location. The second section focused on credit details, such as loan purpose, amount, duration, interest rate, repayment terms, and borrower satisfaction. The responses were measured using a 5-point Likert scale.

The third section presented detailed data on borrowers' income and assets before and after borrowing the microfinance loan. The data targeting their income was collected from various sources, such as government and private jobs, labor, business income, pension, remittances, as well as crops and livestock income. It also included information on monthly household

expenditures to assess the loan's impact on borrowers' financial status and spending patterns.

The last section of the questionnaire delved into the utilization of microfinance loans by the borrowers. It covered their business activities, reasons for business expansion, and the socioeconomic status of their households, including family status, child education, health, and water quality, before and after obtaining the microfinance loan. This section provided valuable insights into how borrowers utilized their microfinance loans to improve their economic and social wellbeing.

Survey Description and Sample Criterion

To ensure the validity and reliability of the questionnaire, three rounds of pilot surveys were conducted. The first round involved distributing questionnaires to acquaintances for feedback regarding their content and format. In the second round, teachers provided further input on the question clarity and relevance. The final round incorporated revisions based on the feedback from the previous rounds. Data was then collected from the clients availing the PMYBL scheme in Islamabad and Rawalpindi.

For analysis, primary data were collected from 120 borrowers in the cities of Islamabad and Rawalpindi. Data regarding the clients was obtained for the years 2014-2017 from the National Bank of Pakistan (NBP). In 2018, data was collected randomly using the simple random sampling technique, resulting in a sample size of 150. However, only 120 clients were interviewed on account of some of them refusing to be interviewed or being unavailable for the interview during the survey period.

Description of the Variables

Table 1

List of Variables

Name of the Variable	Notation	Variable Description
Variable for Change in Economic Welfare		
Participation in microcredit leads to an increase in household income.	HHY	Asked the question regarding satisfaction with the increase in household income, with 1 representing strongly disagree, 2 disagree, 3
Participation in microcredit leads to an increase in household consumption.	HHC	
Participation in microcredit leads to an increase in the possession of	HHAS	

Name of the Variable	Notation	Variable Description
enterprise/livestock/agriculture related asset.		neutral, 4 agree and 5 strongly agree.
Participation in microcredit leads to an increase in savings.	HHS	
Variable for Change in Social Wellbeing		
Participation in microcredit provides access to better education facilities for children.	HHEC	Asked the question regarding satisfaction with the increase in education status of the children, with 1 representing strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.
Participation in microcredit provides access to better healthcare services.	HHHF	
Participation in microcredit leads to the use of better household facilities.	HHGF	
Participation in microcredit leads to improved access to clean drinking water at HH level.	HHWF	
Participation in microcredit leads to improved access to better sanitary condition at HH level.	HHSF	
Variables for Satisfaction from the Loan		
Satisfaction with the amount of loan received	AOL	It includes the borrowers' satisfaction level with the services provided by banks on a 5-point Likert scale, with 1 representing strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.
Satisfaction with the loan duration	DUL	
Satisfaction with the rate of interest	IR	
Satisfaction with the method of loan repayment	LRP	
Satisfaction with the terms and conditions offered by the microcredit institution	TCN	
Satisfaction with the numbers of guarantors required	NOG	
Satisfied with the no collateral demanded	NCD	
Confidently interact with the loan provider	CILP	
Satisfaction with the money available immediately	MAI	
Workers are friendly and cooperative	FC	
Utilization of credit is monitored properly	CMP	

Results and Discussion

Results Based on Descriptive Analysis

This section presents the descriptive statistics regarding the influence of microcredit on socioeconomic wellbeing. The findings, presented in Table 2, demonstrate the association between the changes in the social wellbeing of male and female borrowers, following their participation in the loan program. The variables 0 and 1 indicate the absence and presence of change in social wellbeing, respectively. In terms of gender, the results of this study indicate that 13.33% of male borrowers and 3.33% of female borrowers did not experience any changes in their social wellbeing. Conversely, 66.67% of male borrowers and 16.67% of female borrowers reported improvements in their social wellbeing. These findings are noteworthy, as they suggest that the majority of respondents experienced positive changes in their social wellbeing, following their receiving of microcredit.

Table 2

Social Wellbeing and Demographics Characteristics

Dummy for the change in social wellbeing				Dummy for the change in social wellbeing			
Gender	0	1	Total	Region	0	1	Total
Male	16 (13.33)	80 (66.67)	96 (80.00)	Islamabad	8 (6.67)	55 (45.83)	63 (52.50)
Female	4 (3.33)	20 (16.67)	24 (20.00)	Rawalpindi	12 (10)	45 (37.50)	57 (47.50)
Total	20 (16.67)	100 (83.33)	120 (100)	Total	20 (16.67)	100 (83.33)	120 (100)
Dummy for the change in social wellbeing				Dummy for the change in social wellbeing			
Age	0	1	Total	Marital status	0	1	Total
20-30	6 (5.00)	28 (23.33)	34 (28.33)	Single	3 (2.50)	21 (17.50)	24 (20.00)
31-40	10 (8.33)	48 (40.00)	58 (48.33)	Married	17 (14.17)	76 (63.33)	93 (77.50)
41-50	4 (3.33)	24 (20.00)	28 (23.33)	Widowed	0 (0.00)	3 (2.50)	3 (2.50)
Total	20 (16.67)	100 (83.33)	120 (100)	Total	20 (16.67)	100 (83.33)	120 (100)

Dummy for the change in social wellbeing				Dummy for the change in social wellbeing			
Family type	0	1	Total	Education	0	1	Total
Nuclear	9 (7.50)	37 (30.83)	46 (38.33)	Primary	1 (0.83)	5 (4.17)	6 (5.00)
Joint	8 (6.67)	51 (42.50)	59 (49.17)	Secondary	9 (7.50)	36 (30.00)	45 (37.50)
Extended	3 (2.50)	12 (10.00)	15 (12.50)	Tertiary	10 (8.33)	59 (49.17)	69 (57.50)
Total	20 (16.67)	100 (83.33)	120 (100)	Total	20 (16.67)	100 (83.33)	120 (100)

Note. values in parenthesis are percentages of the total sample.

This study investigated the impact of loan utilization on wellbeing among individuals of different age groups, marital status, regions, family structure, and education levels. The findings indicated that the percentage of respondents who reported an increase in wellbeing varied across age brackets, with 23.33% of those aged 20-30 years, 40% of those aged 31-40 years, and 20% of those aged 41-50 years reporting an increase. The results also revealed that marital status was associated with changes in wellbeing, with 2.5% of single and 14.17% of married respondents reporting no change. On the contrary, 17.50% of unmarried and 63.33% of married respondents reported a positive change in income. Moreover, the results showed that geography and family structure were also associated with changes in social wellbeing, with higher percentages of respondents from Islamabad and those living in joint families reported an increase in social welfare. Finally, education level was found to be a significant predictor of social wellbeing, with higher percentages of respondents with secondary and tertiary education reporting an increase in social welfare. These findings suggest that age, marital status, geography, family structure, and education level should be taken into account when assessing the impact of loan programs on wellbeing.

Results Based on Non-parametric Technique

In this study, two non-parametric techniques were employed to analyze the data, namely the Wilcoxon rank sum test and the Wilcoxon signed rank sum test. The Wilcoxon rank sum test is utilized to compare two independent samples, while the Wilcoxon signed rank sum test is used to compare two related samples. The Wilcoxon rank sum test is a powerful

tool that can detect differences in location or shape between two groups, regardless of the underlying distribution of the data. On the other hand, the Wilcoxon signed rank sum test is suitable for comparing paired data, such as pre- and post-treatment measurements. It can be used to determine whether there is a significant difference between the two measurements. Both tests are non-parametric in nature and do not require assumptions about the distribution of data, making them useful tools for analyzing data in a wide range of contexts.

Results Based on Wilcoxon Rank Sum Test

This section presents the results of the Wilcoxon rank sum (WRS) test which was used to examine the relationship between changes in economic wellbeing with respect to gender and region. Table 3 displays the overall comparison between change in economic wellbeing across gender and region. The results indicate that there is a significant difference between male and female borrowers, with male clients faring better than female clients. Further analysis reveals that there is no significant difference in the wellbeing of borrowers in the cities of Islamabad and Rawalpindi. This finding can be attributed to the fact that these two cities are twin cities and have similar earning patterns. The results of the WRS test provide valuable insights into the economic wellbeing of borrowers in different regions and can help policymakers to identify areas where interventions are needed to improve the economic wellbeing of disadvantaged groups.

Table 3

Overall Comparison of Change in Economic Wellbeing across Gender and Region

	Comparison between Change in economic wellbeing of male and female	Comparison between Change in economic wellbeing Rawalpindi and Islamabad
Kruskal Wallis test	4.023 (.045)	.183 (.669)
Wilcoxon rank sum test	-2.006 (.045) **	-.428 (.669)

Note. The significance level of the estimates is ***, **, and * which represent 1, 5, and 10% significance level, respectively.

Table 4 presents the results of the WRS test, comparing the changes in economic wellbeing of male and female borrowers after receiving credit.

The determinants of change in economic wellbeing remain mostly unchanged for both male and female borrowers, except for income, which is higher for male borrowers. Satisfaction levels related to household consumption, assets, and savings remain consistent, while household income (HHY) significantly increases for male borrowers. It also indicates that females typically do not serve as the main wage earners for their families, leading to lower income as compared to males.

Table 5 presents the results of the WRS test and the comparison between changes in economic wellbeing across family types. Satisfaction levels of borrowers from Islamabad and Rawalpindi after participating in the loan program are also compared. There is no significant difference found between the satisfaction levels of borrowers from both regions concerning the increase in household consumption (HHC), satisfaction with the increase in assets (HHAS), satisfaction with the increase in savings (HHS), and household income (HHY) after participating in the loan program. The similarity in results can be attributed to the comparable geographic and dynamic boundaries shared by both cities, leading to similar improvements in economic wellbeing for borrowers from these cities.

Table 4

Comparison between Economic Welfare across Gender, Region, and Type of Business

Hypotheses	Results			
	HHY	HHC	HHAS	HHS
H_0: There is no difference regarding improvement in the determinants of economic welfare of male and female borrowers after receiving the loan.	-2.254 (.024) **	-1.343 (.179)	-.702 (.482)	-1.509 (.131)
H_0: The determinants of change in the economic welfare of borrowers from Islamabad and Rawalpindi remain the same after loan utilization.	-.150 (.881)	-.159 (.873)	-1.062 (.288)	-.158 (.874)
H_o: There is no difference in the determinants of improvement in economic wellbeing of borrowers involved in household enterprise or educational services.	-.433 (.665)	-.270 (.787)	-1.669 (.095)*	-.700 (.484)
H_0: There is no change in the economic wellbeing of borrowers involved in household enterprise or livestock business.	-1.870 (.061)*	-.887 (.375)	-1.217 (.224)	-2.342 (.019)**

Hypotheses	Results			
	HHY	HHC	HHAS	HHS
H_0: There is no difference regarding improvement in the economic welfare of borrowers engaged in household enterprise or poultry business.	-1.942 (.052)**	-2.447 (.014) ***	-2.341 (.019)**	-2.122 (.034) **
H_0: There is no difference in the determinants of improvement in economic wellbeing of borrowers involved in educational services or livestock business.	2.030 (.042)**	-.457 (.647)	-.415 (.678)	-1.55 (.121)
H_0: There is no change in the economic wellbeing of borrowers involved in educational services and poultry business.	-2.212 (.027)**	-2.292 (.022)**	-1.373 (.170)	-1.809 (.070)*
H_0: There is no change in the economic wellbeing of borrowers engaged in livestock business and poultry raising business.	.273 (.489)	-1.786 (.074)*	-1.47 (.140)	-.700 (.484)

Table 5

Comparison between Changes in Economic Wellbeing across Family Type

Hypotheses	Results			
	HHY	HHC	HHAS	HHS
H_0: There is no change in the economic wellbeing of borrowers living in nuclear and joint families. H_1: There is a change in the economic wellbeing of borrowers living in nuclear and joint families.	-2.132 (.033)**	-1.057 (.290)	-1.323 (.186)	-2.375 (.018)**
H_0: There is no change in the economic wellbeing of borrowers living in nuclear and extended families. H_1: There is a change in the economic wellbeing of borrowers living in nuclear and extended families.	-.143 (.886)	-1.322 (.186)	-.921 (.357)	-.847 (.397)
H_0: There is no change in the economic wellbeing of borrowers living in joint and extended families. H_0: There is a change in the economic wellbeing of borrowers living in joint and extended families.	-1.439 (.150)	-2.108 (.035)**	-1.806 (.071)***	-2.180 (.029)**

Note. The significance level of the estimates are ***, **, and * representing 1, 5, and 10% significance level, respectively.

The study measured the economic welfare of borrowers using various indicators, such as household income, assets, and savings. The null hypothesis assumed no difference in improvement among these factors between nuclear and joint families after taking the loan. However, the results revealed a significant difference in household income and assets for those living in joint families, leading to the rejection of the null hypothesis. Joint families were found to have a higher savings rate and increased wealth due to more earners in the family. On the other hand, no significant difference in household income, consumption, assets, and savings was observed between nuclear and extended families after loan utilization, indicating no improvement in social welfare. Moreover, the study compared improvement in economic welfare between joint and extended families, showing significant improvement in household consumption, assets, and savings for joint families, but no significant difference in household income. To conclude, microcredit's impact on economic welfare varies depending on the family type.

Results Based on Wilcoxon Signed Rank Sum Test

Table 6 shows the changes in social welfare for male and female borrowers before and after participating in microcredit scheme. The findings indicate that the microcredit program (PMYBL) positively impacted household welfare, leading to improvements for both genders.

Table 6

Overall Social Wellbeing Before and After Loan

Wilcoxon Signed Rank Test		
	Male	Female
Overall social wellbeing before and after loan	-5.209 (.000) ***	-2.236 (.025) **

Note. The significance level of the estimates are ***, **, and * representing 1, 5, and 10% significance level, respectively.

Table 7 shows the results of the Wilcoxon signed rank test, assessing changes in the determinants of social wellbeing across regions and gender before and after the implementation of PMYBL scheme. The findings indicate increased social welfare for households participating in the program, particularly for male clients, with significant improvements in education, health, and household conditions. Microcredit also has a

substantial impact on healthcare, as reported by Nanda (1999), although no difference was found in the improvement of water facilities for male participants.

Table 7

Comparison of Social Welfare across Gender and Regions

Hypotheses	Results				
	HHEF	HHHF	HHGF	HHWF	HHSF
H_0: There is no difference regarding improvement in the social welfare of male participants before and after participation in the microcredit program.	-4.422 (.000)***	-2.977 (.003)***	-7.004 (.000)***	-1.000 (.317)	-3.494 (.000)***
H_0: There is no difference regarding improvement in the social welfare of female participants before and after participation in the microcredit program.	-2.646 (.008)***	-1.414 (.157)	-2.714 (.007)***	-1.000 (.317)	-1.000 (.317)
Overall comparisons	-5.083 (.000)***	-3.258 (.001)***	-7.499 (.000)***	-1.414 (.157)	-3.626 (.000)***
H_0: Change in the determinants of social welfare for Islamabad before and after taking loan.	-3.578 (.000)***	-1.633 (.102)*	-5.514 (.000)***	-1.000 (.317)	-2.236 (.025)**
H_0: Change in the determinants of social welfare for Rawalpindi before and after taking loan.	-3.626 (.000)***	-2.814 (.005)***	-5.108 (.000)***	-1.000 (.317)	-2.919 (.004)***

Note. The significance level of the estimates are ***, **, and * representing 1, 5, and 10% significance level, respectively.

The results for female borrowers show a significant improvement in education and household facilities after participating in the microcredit program. However, no significant differences were found in household health, water, and sanitation facilities before and after participation. Similar findings were reported by Al-Mamun et al. (2011) regarding clean drinking water and health facilities. For Islamabad and Rawalpindi, statistically significant improvements in education, health, and sanitary conditions were reported after joining the PMYBL scheme, but no significant difference was

reported in water facilities. Table 8 compares social wellbeing before and after receiving a loan for various types of businesses. Borrowers engaged in household enterprises experienced improved household welfare after participating in the microcredit program. However, no significant difference was found in clean drinking water facilities. Educational services and household conditions showed improvement after joining the loan scheme. On the contrary, there was no significant difference in health facilities including clean drinking water and sanitation. The availability of microcredit led to an increase in microenterprises and positively impacted poultry and livestock businesses. Individuals engaged in livestock businesses experienced significant improvements in education, housing conditions, and sanitation facilities, consistent with the findings of Khan and Rahaman (2007). However, no significant difference was found in health and water amenities before and after joining the PMYBL scheme. People involved in poultry business witnessed improvements in household facilities and child education, but no significant difference in health, water, and sanitation facilities. Many prioritize enhancing entrepreneurial performance, leading to reduced spending on household activities.

Table 8

Comparison of the Determinants of Social Welfare across Different Types of Businesses

Hypotheses	Results				
	HHEF	HHHF	HHGF	HHWF	HHSF
H_0: There is no difference regarding improvement in household business before and after participation in the microcredit program. H_1: There is a difference regarding improvement in household business before and after participation in the microcredit program.	-3.722 (.000)***	-2.653 (.008)***	-6.019 (.000)***	-1.000 (.317)	-2.810 (.005)***
H_0: There is no change in social wellbeing for those involved in educational services before and after receiving credit. H_1: There is a change in social wellbeing for those	-2.000 (.046)*	-1.000 (.317)	-2.121 (.034)**	.000 (1.000)	.000 (1.000)

Hypotheses	Results				
	HHEF	HHHF	HHGF	HHWF	HHSF
involved in educational services before and after receiving credit.					
H_0: There is no change in social wellbeing for those involved in livestock business before and after receiving credit. H_1: There is a change in social wellbeing for those involved in livestock business before and after receiving credit.	-2.236 (.025)**	-1.342 (.180)	-3.217 (.001)***	-1.000 (.317)	-1.890 (.059)*
H_0: There is no difference regarding improvement in poultry business before and after participation in the microcredit program. H_1: There is a difference regarding improvement in poultry business before and after participation in the microcredit program.	-1.633 (.102)*	-1.000 (.317)	-2.070 (.038)**	.000 (1.000)	-1.414 (.157)

Note. The significance level of the estimates are ***, **, and * representing 1, 5, and 10% significance level, respectively.

Table 9 shows the impact of education level on the determinants of social welfare. Those with primary education did not experience significant changes in health, education status, sanitation, and water facilities after utilizing the loan. However, there was a notable improvement in housing conditions. Borrowers with secondary and tertiary education saw significant improvements in child education status, household health, sanitation, and overall household wellbeing. Water facilities, however, showed no significant difference before and after the participation in the loan scheme. Education plays a crucial role in effective business management, enabling individuals to handle various business-related aspects and updates.

The results demonstrate that higher education levels significantly enhance labor productivity by equipping individuals with valuable skills and information, leading to increased income and consumption levels. The education level of microcredit borrowers also influences their ability to use

the credit effectively for business purposes and improve overall welfare. Educated individuals prioritize a higher standard of living, essential for sustainable development. The Wilcoxon signed rank test compared changes in welfare determinants across different geographic regions. Statistically significant differences were found between rural and urban areas regarding improvements in health, education, sanitation, and household facilities following participation in the microcredit program. However, no significant difference was found in access to clean drinking water before and after the program.

Table 9

Comparison of the Determinants of Social Welfare across Education and Areas

Hypotheses	Results				
	HHEF	HHHF	HHGF	HHWF	HHSF
H_0: There is no change in the social wellbeing of borrowers who have completed primary education. H_1: There is a change in the social wellbeing of borrowers who have completed primary education.	-1.414 (.157)	.000 (1.000)	-1.732 (.083)*	.000 (1.000)	.000 (1.000)
H_0: There is no change in the social wellbeing of borrowers who have completed secondary education. H_1: There is a change in the social wellbeing of borrowers who have completed secondary education.	-2.950 (.003)***	-1.890 (.059)*	-5.014 (.000)***	-1.000 (.317)	-2.333 (.020)**
H_0: There is no change in the social wellbeing of borrowers who have completed tertiary education. H_1: There is a change in the social wellbeing of	-4.001 (.000)***	-2.840 (.005)***	-5.417 (.000)***	-1.000 (.317)	-2.810 (.005)***

Hypotheses	Results				
	HHEF	HHHF	HHGF	HHWF	HHSF
borrowers who have completed tertiary education.					
H_0: There is no difference regarding improvement in the social welfare of rural areas before and after participation in the microcredit program.	-3.463 (.001)***	-1.897 (.058)*	-4.179 (.000)***	-1.000 (.317)	-2.333 (.020)**
H_1: There is a difference regarding improvement in the social welfare of rural areas before and after participation in the microcredit program.					
H_0: There is no difference regarding improvement in the social welfare of urban areas before and after participation in the microcredit program.	-3.900 (.000)***	-2.673 (.008)***	-6.246 (.000)***	-1.000 (.317)	-2.810 (.005)***
H_1: There is a difference regarding improvement in the social welfare of urban areas before and after participation in the microcredit program.					

The significance level of the estimates are ***, **, and * representing 1, 5, and 10% significance level, respectively.

Conclusion

The findings emphasize the significant role of gender and marital status in determining the wellbeing of microcredit borrowers. Male borrowers reported higher satisfaction level than female borrowers, while married borrowers tended to be more satisfied after utilizing the loan. Access to capital through microcredit programs was found to empower educated individuals to start and manage businesses effectively, resulting in increased income and improved living standards. The PMYBL scheme, in particular, was found to have a positive impact on the income and wellbeing of poor households, with high levels of borrower satisfaction. The study supports

the idea that microcredit investments contribute to socioeconomic advancement, enabling the poor to become successful entrepreneurs and thus improve their quality of life.

Future Recommendations

Based on the findings, several policy measures are recommended to enhance the impact of microcredit schemes on borrowers' socioeconomic conditions. These measures include providing interest-free loan schemes, increasing loan sizes to achieve a greater multiplier effect, targeting individuals with business and technical skills, offering regular business training, promoting income-generating activities, and creating a business-friendly environment.

Limitations

It is also important to acknowledge the study's limitations, such as a small sample size and a limited geographic focus. Further research with a larger and more diverse sample is needed to improve the generalizability of findings.

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