

The Impact of Microfinance on Poverty Alleviation and Employment Creation

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Abstract

The purpose of this study was to examine the impact of microfinance on poverty alleviation with mediating and moderating role of human capital and financial inclusion. The data was collected using the questionnaire. The questionnaires were distributed to four banks in Dhaka Bangladesh namely as; Grameen bank, UCB bank, NRBC bank and BRAC bank. For the analysis software known as Smart PLS4 version was used. The results show a significant and positive relationship between microfinance and poverty alleviation which means that microfinance is a key factor in reducing the poverty in the society. Microfinance also depicts a positive and significant association with human capital and human capital shows a positive and significant relationship with poverty alleviation. A skilled and educated human can play a significant role in decreasing down the poverty by different means. The results demonstrates that human capital mediates the relationship between the microfinance and poverty alleviation. The financial inclusion also moderates the association among the human capital and poverty alleviation in such a way that it strengthens the association. The limitations and future work suggestions have also been discussed in the study.

Keywords: Microfinance, Human Capital, Job Creation, Financial Inclusion and Poverty Alleviation.

Introduction

Poverty is described as the condition in which individuals or people are deficient of financial means to fulfil their living standard, persists to be a key challenge between countries of Africa (Tita & Aziakpono, 2017). The definition of Poverty, according to The World Bank, is living on below US \$1.9 a day. Correspondingly, those submerged in poverty are frequently categorized by minimal earnings in addition to levels of consumption, besides, every so often, deprived of clean water, balanced diet, suitable housing, appropriate medical facilities, along with improved education facilities among others (Tita & Aziakpono, 2017). Microfinance offers financial services to deprived and low-income breadwinners who mostly are deprived of access to proper financial and banking services. These facilities embrace savings, credit, insurance as well as other key financial products (Ki-moon, 2008). Microfinance correspondingly focuses higher levels of income, fertility, prosperity, education, besides social well-being. It has been long supposed as a solution for eradication of poverty, urging development and growth in the rural area. Nevertheless, numerous researches have

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disapproved microfinances as well as of the opinion that it does more damage than good to the economy (Seenivasan, 2015). Further analysis specified that the commercialization of microfinance has altered its mission from its initial targeted groups of the under privileged, to wealthy as well as less under privileged customers (Hulme & Arun, 2011). Through such apprehensions between researchers relating to microfinance, numerous investigations have been done, examining the influence of microfinance on the economic and social standing of the poor (Lorenzetti et al., 2017).

Microfinance has appeared as a vital instrument of policy development besides eradication of poverty to the degree that (Littlefield et al., 2003) claim that it is essential to accomplishing the Millennium Development Goals. The fundamental supposition is that approach to a lot of finance will lessen poverty. Nonetheless, the proving evidence is ambiguous and argumentative, partially because the problems of measurement and reliability. Consequently, the efficiency of microfinance on the poor is till now open to discussion. Evaluating the researches on micro-credit in Bangladesh (Roodman & Morduch, 2014) deduce that there is a dearth of supporting evidence that microfinance mends customers' livings in significant ways. The current literature discloses numerous findings looking for to assess the effect of microfinance plans; nevertheless, the consequences are not consistent. There is a rising distress between scholars that the aims of microfinance are not achieved (Stewart et al., 2010).

It is established that microfinance was appeared as poverty lessening instrument, therefore extensively accepted in equally the developing as well as developed countries (Verner & Žiaková, 2015). It has produced significant effect on the well-being of customers, enhance the capacity of under privileged people to upgrade their living standards, numerous other have specified that under privileged individuals have seized the benefit of improved income to expand their extent of consumption, well-being as well as make properties (Leatherman et al., 2012). Nevertheless, owing to its distinct characteristics and significant focus on the lessening of miserable poverty, Hence, frequently fascinated in the emerging economies (Ali et al., 2014). Nonetheless, this sector began its motion from the beginning of 21st century, when the microfinance regulatory act 2001 was introduced. It directs to help the under privileged with the providing of services and therefore accommodate increased poverty (Setboonsarng et al., 2006).

Bangladesh was the catalyst from which new age of microfinance expanded globally. Numerous researches in Bangladesh, consequently analyzing the impact on level of poverty, particularly in country side areas. Imai & Azam, (2012) examined the influence of funds from MFI on decreasing miserable poverty. The influences of general microfinance loans besides loans for useful goals on food consumption, salary as well as females' BMI were evaluated. The wide-ranging inferences of MFI loans on utilization of food as well as salary were significant, Moreover, the rationale behind this was that it is a noteworthy factor in forecasting. Elective valuation policies confirm a significant impact of MFI loans on development of food consumption and reducing miserable poverty effects in Bangladesh. Miserable Poverty is a worldwide problem, has been extensively examined by the scholars, and continued to be the pivotal goal for those who make policies since very elongated time (Javed et al., 2015). Malfunctioning of the organizations in reduction of poverty, reported for a change in the mindset, linked to growth, in addition drives to the advent of microfinance

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(Abrar, 2016). It concentrated on the poor faction of the society, which is connected to the informal sector by means of provision of credit. Fundamentally, microfinance is the supplying of small credits besides further services which includes insurance as well as savings to diminish poverty. Normally, the services are offered to small-scale businesses as well as freelance people having low-earning (Iqbal et al., 2015). It has its special domain which offers under privileged people to access loan, that has been conventionally denied from various other prescribed loan resources (Schreiner, 2001).

Literature Review

Poverty, a “noticeable lack in well-being” (Boonperm et al., 2009), is a universal worry. According to the World Bank, over 1.29 billion human beings are earning less than \$1.25 each day, indicating around 22% of the total population of under developing countries. Though, the poverty rate reduced to half from the years 1990 to 2010, one billion persons were breathed in extreme poverty by the termination of 2015 (Christiaensen & Beegle, 2019). The worldwide rate of poverty decreased from 10.1% in 2015 to 9.2% in 2017. In 2017, nearly 700 million people lived beneath the poverty line stated by World Bank i.e., of \$1.90 each day, in addition, owing to increased poverty, 24.1% of the world survived on below \$3.20 per day as well as 43.6% below \$5.5 per day (Boudet et al., 2021). The World Bank (2018), revealed that approximately 50% of such persons resides solely in five countries; Nigeria, India, Democratic Republic of Congo, Bangladesh besides Ethiopia. They have the greatest figure of people living in miserable poverty. The extremely under privileged are living with no aid, observing financial growth as well as richness exceed those as the global economy manages them.

Microfinance acts as an important instrument in reducing poverty as it generates job opportunities, generation of income, as well as result in communal well-being between the under privileged factions of society (Elias et al., 2015). Rejeb and Miled (2015) stated that an economy having increased MFIs' credit portfolio per capita inclines to have decreased Poverty Head Count Ratio and increased degree of per capita, verifying the part of microfinance in decrease of poverty at the macro level and that deprived economies must concentrate further on the equalizing impact of microfinance. El-Nasharty (2022), evaluated the influence of provisions of microfinance on reduction of poverty in few emerging and some industrialized economies across various regions and measured the influence of time and regions on the functioning of the microfinance sector. The research findings disclose a noteworthy influence of the three microfinance pointers accompanied by few control variables on miserable poverty reduction.

Sri Lanka is an emerging economy; its poverty ought to be recognized as a grave problem for the economic development. Poverty is a location bound feature in Sri Lanka, that is observed in the increased rates of miserable poverty in numerous part sowing to discrepancies in physical and natural distribution of resources along with geographical hardships. Microfinance has been detected as an important instrument for eliminating poverty in various Asian economies subsequently after 1990s. Sri Lanka as well began quite a lot of microfinance programs to lessen poverty. Despite the accessibility of microfinance in the country, there is a dearth of literature and few researches have been conducted; consequently, inadequate information on the theoretical and empirical effects of the

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numerous microfinance fundamentals on poverty reduction is accessible. Kumari (2022), conducted research with the aim to provide solution to this scarcity of information. Data were collected through questionnaire and sample size comprised of 497 creditors of the Samurdhi MFP. She unveiled that microcredit was the very important part of microfinance for lessening miserable poverty in Sri Lanka. Insurance Services besides Non-financial Services, similarly had a significant effect on miserable poverty elimination. Social intermediation services and micro savings do not impact noteworthy on miserable poverty reduction in Sri Lanka.

In Pakistan, microfinance is important to alleviate poverty as well. Inclusive finance is commonly taken into consideration, because it generates inclusive growth, lessening miserable poverty. Khan et al., (2020) employed a model to examine the methods of the inclusive financial institutions and the miserable poverty lessening activities to obtain the responses. Substantial positive influence of Microfinance institutions productive loans has been established. Furthermore, they observed that credits for productive goals were considerably helpful in reducing miserable poverty by Microfinance banks relative to Microfinance institutions. Though, in metropolitan zones, easy reach to Microfinance institutions has greater effect on reduction of poverty relatively to those having the access to credit from Microfinance institutions for prolific reasons. This drives to delve in to prospects of service delivery which offer a further opportunity to observe the employment of loans to increase the opportunities. Consequently, the findings, presented by probit model, showed that reach to Microfinance institutions was relatively sounder and safer in big cities, and creditors therefore got more credit. Resultantly, it is recommended that for reducing miserable poverty, there is a severe requirement to expand and concentrate the MFI in backward areas, in addition to encourage group loaning practice and upsurge the figure of both female and male savers. For this reason, it is decided that the aim of offering sustainable financial services indirectly infers that Microfinance institutions offer services to the under privileged, which is beneficial for them. Elimination of funding as well as absenteeism of interest rate limitations could make conditions of the market even worse for the under privileged as the marketer may work in their benefit. The influential drive is, thus, required from economic, national as well as social influences for the growing backing for microfinance. Scholars analyzing the effect of microfinance in Asia, Africa, Latin America, as well as Caribbean clarify the significant effect of MF on lives of poor; increasing household salary as well as consumption, empowerment of women, in addition to education of children (Vaessen et al., 2014). It is one of the key players in reduction of poverty. It correspondingly works as offers wide variety of installment administrations, services, credits, cash, as well as guide to under privileged and low-income families besides their tiny ventures. Additionally, seeing their massive commitment to the extent of generation of occupation, income for the public specialist, the United Nations professed Microfinance as possibly the efficient tool to reduce miserable poverty (Duasa & Saad, 2010). It has been recognized as an instrument for evolution of economy and assuagement of poverty (Wilkes, 2005).

Rajper et al., (2018) examined the effect of credits provided to the clients of Khushali Bank in Sukkur, Pakistan. They analyzed the impact of the revenue generation on decreasing the extent of poverty. The research established that microfinance is a main player in reducing poverty. Furthermore, MFIs can effortlessly recover their functioning and play an important part in the poverty reduction of clients in Sindh. India demonstrates that a large segment of

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the marginalized and poor of their economy are excluded financially. They don't get in to the numerous services provided by various institutions, and access to services is not standardized all over the economy. This demands the birth of an efficient mechanism for executing financial inclusion. Prathap et al., (2018) analyzed the effect of MF programs on the revenue, the influence of SHG/Micro Finance Institutions credit on the recipients; their living conditions, and its influence on offering improved prospects of employment. The research showed that 82% of borrowers were become capable to start their own ventures. The descriptive statistics presented a significant effect on the income that has amplified, as well as improved opportunities of job creation had been generated, with a complete enhancement in standards of living.

Sustainable development has turn out to be a central goal for any economy; consequently, authorities are needed to discover aspects that progress economic status of individuals' as well as improve an economic growth of country's (Abdullah et al., 2021). Alleviation of poverty, as a component of sustainable development, has constantly persisted a key agenda for the Malaysian government, therefore, causing in the devising of various policies to improve economic performance of poor households and their wellbeing. Most of Microfinance Financial Institutions specified their key goal, for providing microfinance to people who are poor, is to help them, to grow micro-business and another income-creating ventures, as they are incapable to access recognized financial institutes (Rahman & Ley, 2020). Microfinance offer an extensive variety of services to help under privileged clients who desire to establish their small enterprises. (Tanima et al., 2020). The microfinance institute also provide numerous non-financial services to match capacity and needs of poor with specific features distinctive of microfinance. As per the World Bank, there are usual features that can be classified with services of microfinance: small transactions, loans for entrepreneurial growth, group base lending approaches, targeting under privileged societies, aiming females, an easy application procedure for credits, and low-interest rates (Helms, 2006).

With the quick increase of MFPs, there has been an abundance of research in the later past, as it has been observed as the significant instruments formulated to fight miserable poverty at the lower most level for people across globe (Shamim, 2019). The experimental study on the effect of MF on assuagement of poverty has yielded varied outcomes. Many the earlier scholars have narrated that MFPs performed a positive role in decreasing miserable poverty in the whole wide world (Sinha et al., 2019). They observed that offering MF to the under privileged had a significant effect on their conditions of living, social and economic encouragement besides business performance. Nevertheless, additional researches stated that they couldn't access the extreme poor, moreover miserable poverty hadn't been decreased by MF. There are numerous serious opinions regarding microfinance and its efficiency on the poor. Few researches (Bateman & Chang, 2009) expressed the negative effect of microfinance, comprising: amplified levels of poverty owing to high credits consumption, increased microcredits interest rates (MCs), dependency mindset of borrowers, and creation of hurdles to maintainable local economic growth.

Human capital encompasses numerous skills, education, as well as quality of health, besides experience that may together increase the economic worth of human body (Subramaniam & Youndt, 2005). An important aspect of literature has emphasized that there is a robust link

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among poverty and human capital. Formation of human capital encourages economic gains like equality in income distribution, improve productivity as well as decrease rate of unemployment (Silva & Sumarto, 2014). Through empirical observation, Becker (1995) expressed that there is a link among poverty and human capital. As per the scholar, sustainable growth has been promoted by human capital in Taiwan, Japan, Hong Kong in addition to South Korea, even with the insufficiency of natural capitals in these nations. Consequently, the official figures proved that government spending on education, in the last decade, in OPEC countries is below 12%, while several developments observed in Saudi Arabia and Iran (UNESCO, 2018). Human capital development (HCD) is vital for reducing miserable poverty. Guaranteeing noteworthy decrease in miserable poverty is currently a primary goal of each single economy, both advanced as well as emerging.

Reduction of poverty is observed as realizing economic development by development of HC, which permits persons to help as well as get advantage from development of economy. Consequently, various other factors that encourage development of HC have been recognized in the research, and these encompass investment in HC, generation of jobs, structural renovation, entrepreneurship, social safety besides institutes (Cumming et al., 2019). Nevertheless, the most distinguished is investments in HC by life time understanding (World Bank, 2015). The 'Commission on Growth and Development' (CGD, 2008) perceived that HC, by health and education, is an idea that encourages fairness of opportunities in addition to safety in the market as well as job conversion, which is a critical element of any effective approach of growth. It upholds that investment in HC will create chances for growth, containing openings, unexpected at the time of the investment. HC recovers economic development as its impacts on total factor of productivity. Beside from its part in increasing general factors of productivity, the elements of HC (health and education) were observed to have a significant impact on generation of equal chances for all people in a country (Larionova & Varlamova, 2015).

Even though, several researches have analyzed the consequences of HC on poverty. Attanasio et al., (2017) observed the association among human capital growth as well as poverty in Peru and Ethiopia. For instance, Davoudi and Shahpari (2014) explored the connection among human capital as well as income disparity in the country of Iran. Ozughalu and Ogwumike (2018) studied in Nigeria, the linkage among a deprivation and child poverty. The scholarly work is full by numerous studies of its several elements. Therefore, empirical, and theoretical researches are present in poverty and human capital (WHO, 2002); inequality human and capital (Blanden & Machin, 2004), connection among poverty and entrepreneurship as well as its consequences (Cumming et al., 2019).

Financial Inclusion embraces all the schemes that make it simple, chiefly for poor to access in addition to afford formal financial services. In recent times financial inclusion is observed as a dynamic instrument that is utilized for achieving equality in alleviation of poverty, income as well as creating jobs in both developed and emerging economies. As financial inclusion come into sight, it has been encouraging social inclusion via trouble-free availability, access, as well as expending services of formal financial institutions by the "newly banked" (Omar & Inaba, 2020). To eliminate poverty, financial inclusion is one of the solutions (Bateman et al., 2019). A chief component to finish social exclusion is financial inclusion, that offers a chance to people to help from financial services as well as add to the procedures of social and

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economic development (Mubiru, 2012). Baidoo et al., (2020) similarly specified that financial inclusion is vital in enhancing the well-being of people and decreases poverty.

An inclusive economy is essential for the poor people of the world caught up in the informal sector as it assists daily payments (United Nations, 2013). It likewise allows the poor to effortlessly obtain loans which can be invested in any venture that can produce revenue for them. People who are involved in the financial sector would be capable to overcome risks via investments they have made because of their savings (United Nations, 2013). This correspondingly allows poor to borrow and save, aiding them to get assets, invest in instruction and establish ventures that would make them improve their living standards (Sakyi et al., 2021). Certainly, financial inclusion is helpful to under privileged people, women, and young people.

Present literature has studied the effect of financial inclusion on decrease of poverty. For example, Umaru and Chibuzo (2018) have stated that financial inclusion decreases poverty in Nigeria. Like affirmations has been made by certain researchers (Le et al., 2019). Nevertheless, the financial inclusion program has not up till now produced the predictable result in the meantime the numerous financial products are not designed for the marginalized and poor. Daryl and Amolo (2018) testified that financial services, in the world, have observed few significant growths but there is no obvious proof that it is refining the poor's lives. Tita and Aziakpono (2017) additionally discovered that the current rate of financial inclusiveness besides economic growth merely impacts few individuals that are rich, as the poverty rate has fell only slightly from 52.75% in 1981 to 46.85% in 2011.

Scholars have analyzed the association among poverty reduction and financial inclusiveness and in emerging economies. Such as, Mohammed et al., (2017) claimed that financial inclusion is envisioned to benefit only low-income people like the poor. He additionally suggested that in theory, financial inclusion is said to help various welfare activities for the poor; experiential evidences comparatively showing significant benefit. The researchers examined the factors and the association among financial inclusion and poverty reduction in 35 countries. The results of the research proved that the utilization of savings, bank accounts, withdrawal as well as access to credit radically decrease poverty.

Umaru and Chibuzo (2018) analyzed the association that is present among poverty reduction and financial inclusion bearing in mind the moderating impact of microfinance in Nigeria. By applying simple random sampling technique, a questionnaire was employed to gather the data from 384 clients of microfinance banks from the three districts in Kebbi, Nigeria. The outcome deduces a vital positive impact of financial inclusion on reduction of poverty. Financial inclusion has been recognized as a source to realize 7 out of the 17 Sustainable Development Goals (SDGs) [Removing life-threatening poverty (SDG 1), decreasing hunger, and encouraging security of food (SDG 2), realizing good health as well as well-being (SDG 3), imparting quality education (SDG 4), encouraging gender equality (SDG 5), encouraging shared economic development (SDG 8), encouraging invention besides sustainable industrialization (SDG 9)]. (World Bank, 2018a). Unexpectedly, very little research or no research has been carried out on the mediating role of human capital on the relationship of reducing poverty and the microfinance. Undertaken research intends to assist to the scholarly work by studying the impact of microfinance on poverty alleviation with effect of human capital as a mediator among microfinance and poverty reduction and moderating role

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of financial inclusion between human capital and poverty alleviation.

Based on above discussed literature and evidence-based studies, following hypothesis are formulated;

H1: There is a positive and significant impact of microfinance on poverty alleviation

H2: There is a positive and significant impact of microfinance on human capital.

H3: There is a positive and significant impact of human capital on poverty alleviation.

H4: Human capital mediates the relationship between the microfinance and poverty alleviation.

H5: Financial inclusion moderates the relationship between the human capital and poverty alleviation in such a way that it strengthens the association.

Research Methodology

Conceptual Framework

To examine the influence of microfinance on poverty alleviation, a conceptual framework is constructed in figure 1, presenting microfinance as a dependent variable, poverty alleviation as an independent variable with mediating variable such as human capital and financial inclusion as a moderator. The arrows from microfinance towards poverty alleviation and human capital, and from human capital towards the poverty alleviation shows the direct relationship among variables. Whereas, the arrows serving as the role of mediator and moderator such as the financial inclusion between microfinance and poverty alleviation and the financial inclusion as a moderator are depicting the indirect relationship.

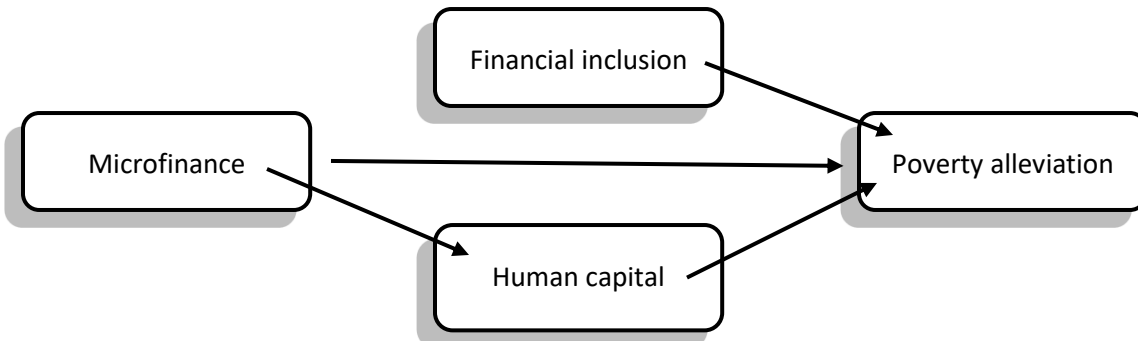


Figure 1 Conceptual Framework

Measuring Instruments

For measuring the variables questionnaire based four scales were adopted for microfinance, poverty alleviation, human capital, and financial inclusion. The instrument was structured to collect two forms of information such as the demographics and the item based likert scale for measuring the variables. The demographic section consists of gender, age, education, income, and savings.

Microfinance

The five-item scales for microfinance have been developed by (KiflieHayleeyesus, 2016) was

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adapted for the study. It is a five-point likert scale ranging from strongly disagree (1) to strongly agree (2). The questions were related to fair and affordable interest rate, increase in the income and savings because of microfinance services, schedule for loan repayment was convenient and last one is about the financial status.

Poverty alleviation

A seven-item based scales for poverty alleviation developed by (KiflieHayleeyesus, 2016) was adapted for the study. It is a five-point likert scale ranging from strongly disagree (1) to strongly agree (2). The questions include three sections such as increased education, self-employment, and better health care services.

Human Capital

The human capital scale compiled by Snell and Dean (1992) was adopted. It was a five-point scoring system, with the scores ranging from strongly disagree (1) to strongly agree (7). The questions of the scale were related to highly skilled, good in profession, creative and bright, professional, ideas and knowledge developer.

Financial Inclusion

The questionnaire scale about the financial inclusion was taken from the findex world bank (world bank, 2017). The scale is based on four-point scoring system ranging from yes (1) to refused (4). The questions were related to having bank account, using mobile phone and making transactions with money from the bank account and receiving money from money transfer services.

Data Collection and Procedure

With the help of convenient sampling technique, primary data were collected through a likert scale questionnaire. Initially 360, questionnaires were distributed to four kinds of banks through the google forms such as Grameen bank, UCB bank, NRBC bank and BRAC bank in Dhaka Bangladesh. Some of the questionnaires were self-administered while others were provided to the field employers of the bank in order to filled them by the respondents. Out of 360 questionnaires, 326 valid and complete questionnaires were received for further analysis scoring 90% of response rate. The descriptive statistics and pairwise correlation was figured out using IBM SPSS. The confirmatory factor analysis test was used to check out the reliability and validity of the study variables and the structural association among the independent and dependent variables. To examine our hypothesis, the SEM Structural Equation Modelling test was conducted in the software namely as Smart PLS version 4.

In CFA, there are five test that provides information about the reliability and validity of the data of our scales before proceeding for further analysis (Hair Jr et al., 2014). The CFA test was conducted using Smart PLS version 4. For examining discriminate validity criteria such as Fornell-Larcker criterion (Fornell & Larcker, 1981) and Heterotrait-Monotrait Ratio (HTMT) (Henseler et al., 2015) was used. After finding out the construct and reliability of the data, the next step is to examine the relationship between the variables and for that bootstrapping test was conducted in Smart PLS version 4. The bootstrapping tells us about the path coefficients which includes beta value, t statistics and the p value (Hair Jr et al., 2014).

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The moderation analysis informs either the financial inclusion weakens or strengthens the relationship among the human capital and poverty alleviation.

Data Analysis and Results

The measurement model is involved in evaluating and eliminating the factors of outer loading which are <0.60 (Gefen & Straub, 2005). In the measurement model, for examining the reliability analysis, convergent validity and internal consistency of the study, the composite reliability, AVE and cronbach’s alpha test is applied. The table 1 illustrates the CFA with values of outer loadings, cronbach’s alpha, average variance extracted and composite reliability. As we can see, all the values meet up the threshold level such as for outer loading it is 0.6, for AVE it is 0.5 (Ringle et al., 2020), for composite reliability the threshold level is 0.7 (Ringle et al., 2020), and for cronbach’s alpha its 0.7 respectively. Hence, it is concluded that the study establishes composite reliability, convergent validity, and internal consistency.

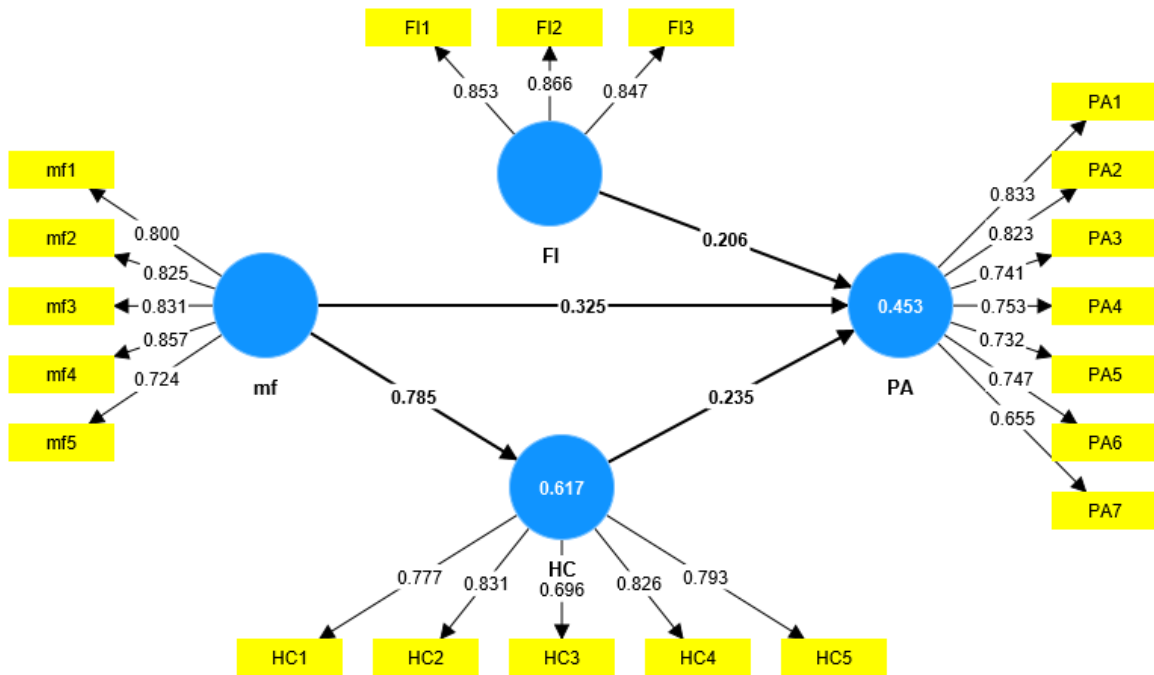


Figure 2 Confirmatory Factor Analysis.

Table 1: Factor Loadings and Convergent Validity

Construct	Items	Loadings	Alpha	Composite reliability	Average variance extracted
MF	MF1	0.800	0.867	0.904	0.654
	MF2	0.825			
	MF3	0.831			
	MF4	0.857			

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	MF5	0.724			
FI	FI1	0.853	0.817	0.891	0.732
	FI2	0.866			
	FI3	0.847			
HC	HC1	0.777	0.844	0.890	0.618
	HC2	0.831			
	HC3	0.696			
	HC4	0.826			
	HC5	0.793			
PA	PA1	0.833	0.875	0.903	0.600
	PA2	0.823			
	PA3	0.741			
	PA4	0.753			
	PA5	0.732			
	PA6	0.747			
	PA7	0.655			

Source: Smart PLS

Discriminant Validity

The discriminant validity test is used to examine the difference between the variables of the study. The data sets are to be differentiated and identified as unique from each other before further calculation or analysis. The Fornell and Larckers and HTMT tests are used for the discriminant validity test. In the table 2 below of fornell abd larcker’s test, the values are considered to be less than 0.85 which is considered a minimum threshold value for the validity of the discriminant test. While, the table 3 shows the HTMT ratio test in which all the inclining values are greater as compared to their non inclining values in the table.

Table 2: Fornell’s and Larckers criteria

Variable	1	2	3	4
FI	0.855			
HC	0.540	0.786		
PA	0.519	0.602	0.757	
MF	0.571	0.785	0.628	0.809

Source: Smart PLS

Table 3: HTMT ratio

Variable	1	2	3	4
FI				

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HC	0.644		
PA	0.605	0.696	
MF	0.677	0.916	0.715

Source: Smart PLS

Structural Model

The structural model comprises of path coefficients and bootstrapping analysis which allows the researcher to assess the significance of every co-efficient (Tenenhaus et al., 2005). The path analysis and bootstrapping test was conducted and shown in the figure 3 and figure 4. The value of R² between microfinance and poverty alleviation is 47.9 %, which demonstrates that variation in the independent variable cause a change of 47.9 % in the dependent variable of the study.

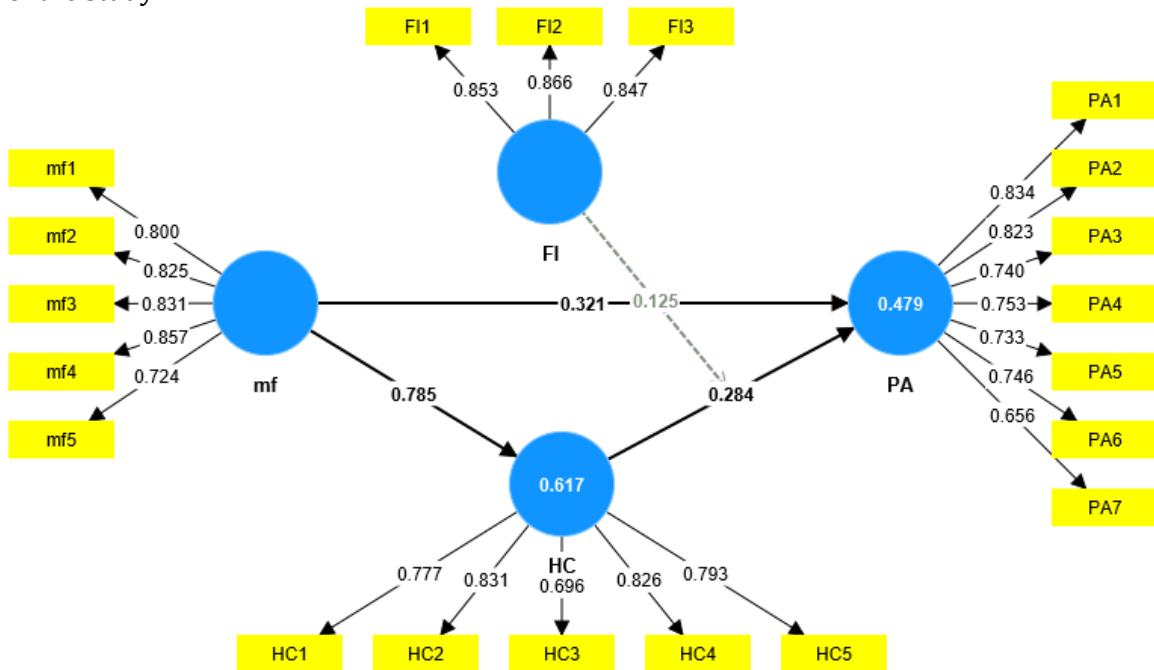


Figure 3: Structural Model (path hypothesis)

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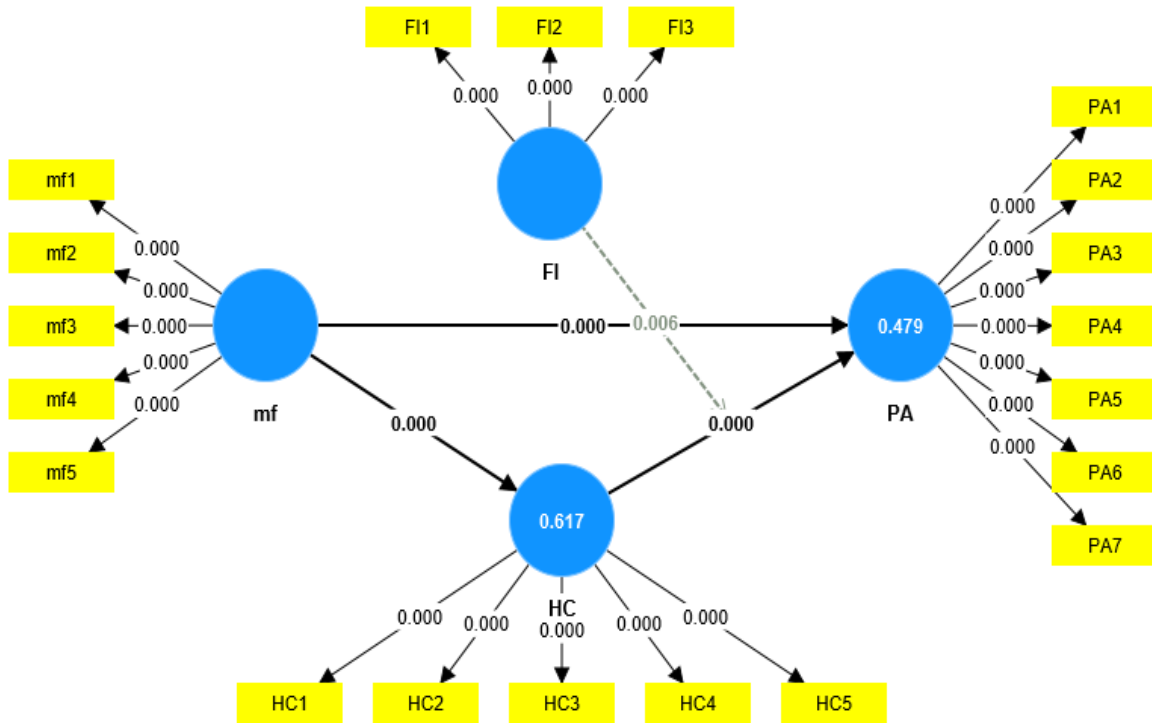


Figure 4: Structural Model (bootstrapping)

Mediation Analysis

The mediation analysis shows how stronger or weaker the association between independent variable and dependent variable is with respect to its direct effects. The results are mentioned in the table 4, which shows the relationship between microfinance and poverty alleviation having a beta and p value of ($\beta= 0.321, P< 0.001$). The result indicates that there is a positive and significant relationship between the microfinance and poverty alleviation. Microfinance also demonstrates a positive and significant relationship with human capital scoring a beta and p value of ($\beta= 0.785, P< 0.001$). Moreover, results depicts that there is a positive and significant association among the human capital and poverty alleviation having a beta and p value of ($\beta= 0.284, P< 0.001$). it can also be seen that human capital mediates the relationship of microfinance and poverty alleviation with a beta and p value of ($\beta= 0.223, P< 0.001$). Hence, it is concluded that H1, H2, H3, H4 are accepted.

Table 4: Mediation Analysis

H	Relation	OS	SM	S.D	T.S	P.V
H1	MF – PA	0.321	0.325	0.088	3.643	0.000
H2	MF – HC	0.785	0.786	0.032	24.781	0.000
H3	HC – PA	0.284	0.282	0.077	3.661	0.000

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H4	MF-HC-PA	0.223	0.222	0.063	3.564	0.000
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Source: Smart PLS

Moderation Analysis

The moderation analysis explains the variation between the independent variable and dependent variable due to the presence of a third variable known as moderator. The table 5 illustrates that there is a positive and significant relationship of moderator with the variables such as it strengthens the association among the human capital and poverty alleviation having a beta and p value of ($\beta = 0.125, P < 0.05$). The graph 5 below shows either the moderating effect strengthens or weakens the relationship. The positive relationship of human capital and poverty alleviation is stronger when financial inclusion is high, hence H5 is supported.

Table 5: Moderation Analysis

H	Relation	OS	SM	S.D	T.S	P.V
H5	FI*HC-PA	0.125	0.125	0.045	2.767	0.006

Source: Smart PLS

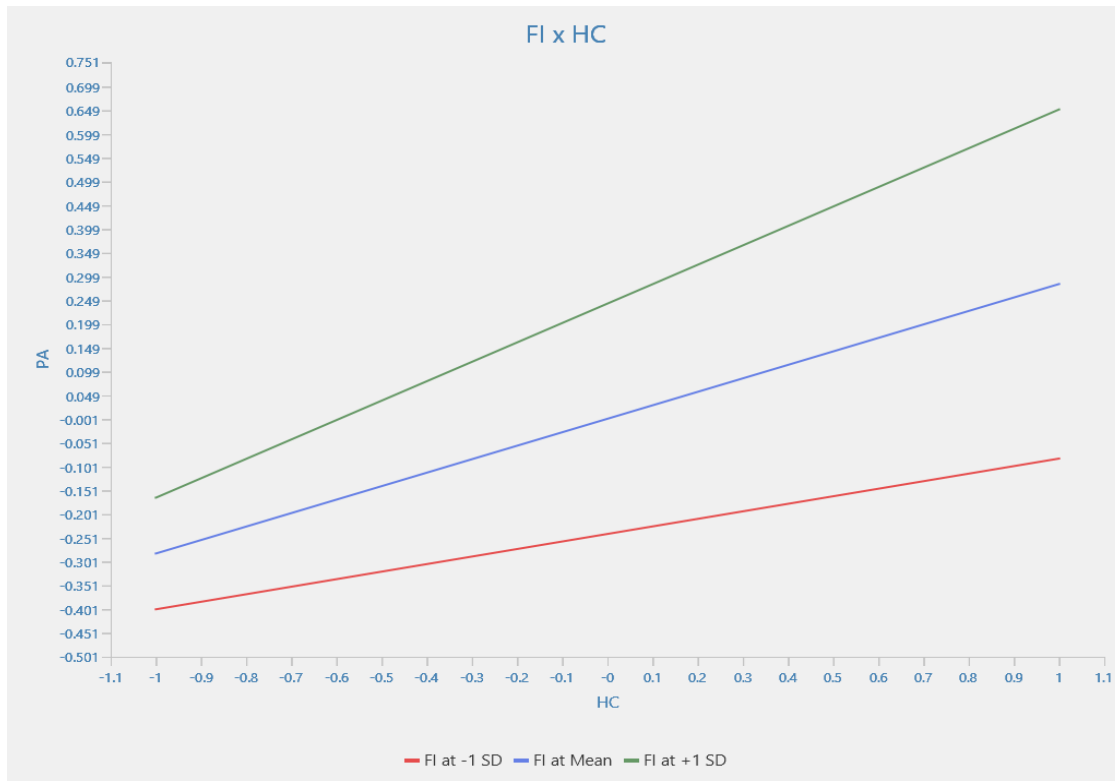


Figure 5 Moderating effect

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Discussion

The main purpose of the study was to examine the impact of microfinance on poverty alleviation with mediating role of human capital and moderating effect of financial inclusion. The results of the study indicate and confirmed that there is a positive and significant association between microfinance and poverty alleviation. The results are also supported with prior research work of (Elias et al., 2015), claims that microfinance plays a vital role in reducing poverty as it generates job opportunities, generation of income, as well as result in communal well-being between the under privileged factions of society. Microfinance also shows a positive and significant association with human capital which means that increase in microfinance services enhances human capital. Likewise, human capital shows a positive and significant impact on poverty alleviation. According to Cumming et al., (2019), the reduction in the poverty level is observed as realizing economic development by development of human capital. Moreover, human capital also mediates the association between microfinance and poverty alleviation. This significantly positive relationship confirms the previous discoveries (Attanasio et al., 2017). It means that human capital plays a crucial role in decreasing poverty of the economy. The results depict out that the financial inclusion also moderates the correlation among the variables such as increase in the financial inclusion helps in decreasing the poverty level by the enhanced and skilled human capital (Umaru and Chibuzo, 2018).

Implication of the study

The theoretical implication of this study suggests that microfinance can empower individuals by giving the access to financial and credit resources. Ultimately it will help in enhancing the income strategy activities and the poverty alleviation. Human capital as a mediator implies the individuals with good education and skills that will be helpful in utilizing microfinance effectively and breaking the chain of poverty.

The practical implication of the study refers towards the customized services such as it addresses needs and capacities of the customers, enhancing the importance of human capital in reducing the poverty which may include some training programs such as financial literacy and vocational training. The second practical implication refers to the regular monitoring and evaluating microfinance programs to gain its effectiveness. Lastly, the regulatory bodies and governments plays a crucial part in ensuring the operation and tasks of microfinance institutes.

Limitations

There are some limitations in the study. First, due to the time restrictions and population restrictions, only 360 sample size was taken and the study is focused on one city of Bangladesh that is Dhaka. For further research work, it is recommended to expand the data sample of the study and city as well. The study is focusing on bank, future work may focus on other microfinance institutions such as NGO's etc. Financial inclusion hasn't explored much as a moderator between the human capital and poverty alleviation. So, in future work it should be explore more to have a big picture with several different research study based on different economies and cities.

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