

# EMPIRICAL ANALYSIS OF MICROFINANCE AND ECONOMIC GROWTH IN YEMEN

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**Abstract** *Recently, interest in microfinance has increased, as the concept of financing has been developed to help small enterprises that do not have access to bank funds. Thus, supporting small projects contributes to economic transformation by providing job opportunities and alleviating poverty. So Data is collected from the social fund for development reports for the total financing loans provided by 11 microfinance programs through the Small and Micro Enterprise Development Unit, which is responsible for ensuring the continuity of providing financial and non-financial services to owners of small and micro-enterprises, where Economic growth data is collected from the World Bank. The study aimed to examine the impact of microfinance, represented by gross portfolio loans, and economic growth, by GDP. Secondary annual data of 21 years, from 2000 to 2020, is analysed using SPSS, correlation coefficient, and regression. The results revealed a statistically significant and positive relationship between GDP and gross portfolio loans of microfinance providers in Yemen and shows the significant impact of portfolio loans, representing microfinance, on GDP. Therefore, we recommend that the government improve small businesses' work environment and support microfinance enterprises to promote economic growth.*

**Keywords** *Microfinance, GDP, Correlation, Regression, Yemen*

## INTRODUCTION

Microfinance is an essential element of sustainable economic development and a tool for poverty alleviation, unemployment, job creation, and meeting the needs of the poor for various financial services. Therefore, the Yemeni government has paid great attention to reducing unemployment, combating poverty, and caring for the poor, needy, and people with limited income. This includes improving their living and social conditions, and improving their lives to a better level, providing job opportunities for young people and those who are able through: expanding microcredit programmes, establishing microfinance banks, encouraging banks to lend to small investors, and establishing institutions and programmes to finance small and micro projects through the Social Fund for Development, where loans are channelled through non-governmental organisations, lending institutions, financial institutions, and other institutions, including banks. The fund provides these entities, for example, with financing loans and building the capacities of institutions and lending programmes.

The Small and Micro Enterprises Development Unit provides financial and non-financial services. The overall goal focuses on helping the poor to increase their income by running small businesses. However, this unit does not provide its services

directly to the owners of these businesses, but supports other organisations to deliver this support to them (SFD).

## MICROFINANCE OVERVIEW IN YEMEN

To understand the Microfinance Act in Yemen, one should know that the microfinance industry in Yemen started in 1997 by the Social Fund for Development, which established 5 microfinance programmes in rural areas. It was a successful example in that period, but it was based on a specific activity, such as raising livestock and agricultural inputs for crops. Yemen is one of the first countries in the region to have a law on microfinance banks, Law No. 15, which defines a microfinance bank as any financial institution approved by the Central Bank of Yemen to carry out activities in the field of microfinance, intended to provide banking services to families and small farmers. Moreover, small and micro-enterprises in urban and rural areas help create equal opportunities and improve the living conditions of community members. All of these institutions, without exception, will contribute to reducing unemployment and poverty in the country (YMN).

In Yemen, about 18 financing institutions are represented in financing units, programmes, and banks, while the Yemeni

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government and international institutions and foreign governments contribute to the financing. According to the microfinance programme's penny portfolio indicators, until the end of June 2020, the number of borrowers has reached 88,729, as it helped improve the situation of small and micro-entrepreneurs. So, microfinance provides micro-loans to impoverished households, who are unable to get these loans, to aid them in developing their micro-enterprises. Occasionally, it is feasible to receive microfinance services or provide a variety of financial services, making it the most effective method of alleviating and combating poverty. Additionally, it assists in obtaining data from women and men who have completed their educational stages. The objective is for these families to be financially self-sufficient (SFD).

## STUDY VARIABLES

The variable used for this study is portfolio loans, representing the microfinance of 11 funds providing small loans, and GDP growth, represented by GDP current US dollars.

## OBJECTIVES OF STUDY

- To understand the relationship between microfinance and GDP.
- To determine the impact of microfinance loans on GDP.

## HYPOTHESIS OF STUDY

- There is a correlation between microfinance and GDP.
- There is a significant impact of microfinance on GDP.

## RESEARCH METHODOLOGY

The study is quantitative, using 21 years' annual data, from 2000 to 2020, which is collected from World Bank data for GDP and from Social Fund for Development for portfolio loans. Correlation and simple regression have been used to find the relationship between variables and to determine the impact of portfolio loans on GDP.

## REVIEW OF LITERATURE

Sharma and Puri (2013) examined the relationship between gross domestic product (GDP) and micro-loans to self-help groups (SHG). Correlation and regression analysis of their annual data were used to gain insight into the relationship

between the selected variables. Correlation is extremely strong in this case; the correlation coefficient between variables is 0.96. There is a statistically significant effect of micro-loans on GDP.

Dipak and Jayanti (2013) conducted a study on economic impact of microfinance in Nepal. Micro-credit was designed to organise impoverished people's little savings to build deposits that may be accessible to the unreachable and unbankable poor, particularly women. According to the study's findings, microfinance is an excellent strategy for improving the economic conditions of respondents and their family members. It has assisted in generating additional cash for their family and for personal purposes. The additional income enables the respondents' family to purchase nutritious food, have access to contemporary health care services, and pay to send their children to school.

Ayodele and Arogundade (2014), in their paper, looked into the impact of microfinance on economic growth in Nigeria. In Nigeria, the primary role of microfinance institutions has been emphasised, which is poverty alleviation and microfinance. Assets, deposits, loans, advances, and microfinance banks were used as proxies for Nigerian microfinance institution operations, while GDP was used as a proxy for economic growth. The results of multiple regressions using secondary data and the ordinary least square method show that the asset base and deposit liabilities have no effect on economic growth. Simultaneously, public loans and advances have a significant impact on Nigeria's economic growth.

Sultan and Masih (2016) aim to empirically validate the theoretical relationship between microfinance and economic growth in their study. It examines the degree to which microfinance, growth, and other macroeconomic variables are cointegrated. If there is a lead-lag relationship between microfinance and growth, their findings tend to indicate that microfinance has a sizeable impact on domestic growth (GDP), and microfinance also has a strong correlation with growth. This implies that microfinance and growth are inextricably linked.

Dhakal (2016) investigated the economic impact of microfinance services, which are primarily focused on the economic transition to aid in poverty alleviation by providing financial services to the disadvantaged. The primary goal of this research was to investigate the impact of microfinance services on rural farmers. The study gathered information about farmers' socioeconomic status. The study included 385 farmers from Nepal's Syangja area. The study discovered a considerable shift in farmers' income and expenditure after utilising microfinance services. Microfinance services had given skill-based training for income generation, as well as financing facilities, to encourage micro-scale businesses. Nonetheless, 36.4% of farmers fell below the

national poverty line. As a result, there was a need to create a livelihood programme to ameliorate the socio-economic status of farmers.

Cull et al. (2017) produced a research working paper on microfinance and economic development. Since the 1990s, the microfinance industry has expanded rapidly, paving the path for other social enterprise and social investment forms. However, current evidence indicates only minor average effect on customers, resulting in a backlash against microfinance. The assertions concerning microfinance were revisited in this research, noting the diversity of evidence on impacts and subsidies' crucial (but limited) role. The paper finished by discussing the progression of thought: microfinance as a narrowly defined entrepreneurial finance to microfinance as a widely defined household finance. Microfinance, in this vision, provides benefits through providing liquidity for a wide range of requirements, rather than merely by increasing business income.

Murad et al. (2017) studied the impact of microfinance institutions on a country's economic growth, using Nigeria as a case study. Given the cross-sectional and time-series character of the data, the study applies multiple regression analysis. The Central Bank of Nigeria's Statistical Bulletin and Annual Reports were used to obtain secondary data on all commercial banks. The data used in this model are secondary time-series data from 1992 to 2012. The study's findings indicate that microfinance loans positively impact Nigeria's short-run economic performance. Microfinance loans increased consumption per capita with an astonishing coefficient in the short-run, but these banks' loans have little long-term impact on economic growth. Microfinance investment, on the other hand, has a long-term impact on Nigeria's economic performance. Although microfinance loans are vital in the Nigerian growth process, other measures, such as increasing agricultural output and adopting proper steps to increase per capita income, are also important in enhancing the Nigerian economic growth.

Oli's (2018) study was to determine the effect of microfinance on the economic growth in Nepal. The dependent variables are GDP and per capita income. The following variables are independent: micro-enterprise credit, total assets, total loan, total deposit, and inflation. The study makes use of secondary data. Between 2012/13 and 2016/17, 120 observations were made using 24 microfinance institutions. The data is derived from the Economic Survey 2016/17 published by the Ministry of Finance and the Quarterly Economic Bulletin published by the Nepal Rastra Bank. The impact of microfinance institutions on Nepal's economic growth is estimated using multiple regression models. Economic growth is facilitated by the entire staff, total members, total assets, total loans, total deposits,

and broad money supply growth. As a result, the more microfinance staff and members there are, the greater the economic growth. Increased total assets and total loans facilitate economic growth. Similarly, the study discovers that increased total deposits correlate with increased economic growth. Similarly, the study discovers that expanding the money supply boosts growth. The findings, however, indicate that inflation and economic growth are inversely related in Nepal. In other words, increased inflation translates into slower economic growth.

Ochogor's (2020) study investigated the performance of microfinance institutions (MFIs) and their impact on economic development in Nigeria. The results showed that there is a positive correlation between the human development index and microfinance loans. According to the study, microfinance institutions in Nigeria contribute to economic growth and social capital formation.

Barguelli and Bettayeb (2020) investigated the impact of microfinance on economic development. They analysed data from the MIX Market (Microfinance Information Exchange), which was acquired from the "Enda Tamweel" microfinance organisation between 1995 and 2017. According to the VAR calculation, microfinance has a negative and significant impact on the poverty per capita ratio and the GINI index. Granger's causation test reveals that microfinance contributes to economic development more efficiently through its social performance. On the other hand, financial performance prioritises operations that contribute to the long-term success of a microfinance institution.

Rima and Salma (2020) conducted a study of microfinance that assists in establishing small institutions by supporting small projects and is regarded as the beginning of growth. The most important is the economy, thereby beginning work to achieve economic development by providing jobs and working to eliminate unemployment and advance the wheel of development, particularly in developing countries. As a result, the study sought to ascertain the contribution of microfinance to economic development by investigating Sudan's experience in the microfinance industry, the Moroccan experience, and the Grameen Bank experience. They also investigated the realities of microfinance in Algeria and the major challenges faced. As a result, the study discovered that this experiment was successful in Sudan, Morocco, and Bangladesh, but faced significant challenges in Algeria.

Buer et al. (2021) addressed the topic, 'What is microfinance's overall and distributive impact?'. They found that microfinance increases output and capital, but decreases total factor productivity (TFP). Expanding microfinance has a negligible effect on per capita income because a drop in capital accumulation outweighs a rise in total aggregate

productivity money. However, the vast majority of the population benefits directly or indirectly from microfinance. The poor and marginal entrepreneurs benefit more from welfare gains, whereas higher interest rates in general equilibrium tend to favour the rich.

Klomp and Sseruyange (2021), in their study, focused on the aggregate impact of MFI activities in the aftermath of a natural disaster. They concluded that natural disasters have a negative impact on macroeconomic performance, primarily through their impact on the agricultural sector, based on the results of the OLS-FE model, using an unbalanced panel of over 80 developing and emerging economies. On the other hand, access to lending facilities from MFIs mitigates a large portion of this negative impact. Additionally, the degree to which MFIs can mitigate these effects varies significantly by organisational structure, profitability, legal status, age, and client base.

## ANALYSIS AND RESULT

### Descriptive Statistics

Descriptive statistics is a brief description of a large set of data or a set of methods used to facilitate the description of the main characteristics of the data. The descriptive statistics of the study variables are shown in Table 1, where the mean of GDP for the duration of the study is 23.91 and for gross portfolio loans is 3153.81. The standard deviation of GDP and gross portfolio loans are 9.83 and 3369.67, respectively.

**Table 1: Descriptive Statistics**

	Mean	Std. Deviation	N
GDP Current USD (In Billion)	23.9183	9.38300	21
Portfolio Loans (In Million)	3153.8114	3369.67701	21

Source: Data processing result.

To find the correlation coefficient between GDP and gross portfolio loans, Spearman’s rho is used. The results are shown in Table 2.

**Table 2: Correlations**

		Gross Portfolio Loans	
Spearman’s rho	GDP CURRENT USD	r	.771
		p	. < 0.001 vhs
		N	21

Source: Data processing result.

As illustrated in Table 2, Spearman’s rho shows that the correlation value is 0.771, and significant value is less than

0.01, indicating a strong positive relationship correlation between GDP and gross portfolio loans of microfinance providers in Yemen.

**Table 3: Coefficients<sup>a</sup>**

Model	Unstandardised Coefficients		Standardised Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	17.660	2.042		8.649	0.000
Portfolio Loans (In Million)	.002	.000	.713	4.428	0.000

Source: Data processing result

Based on Table 3, regression coefficients are used to predict GDP based on portfolio loans, where the standardised coefficient, beta, value is 0.71, and p-value is less than 0.01, proving the significant impact of portfolio loans on GDP, where the unstandardised coefficient B has a constant value of 17.66 and portfolio value of 0.002.

## CONCLUSION

Microfinance providers contribute to reducing unemployment and poverty in the country. Despite its diminutive nature when representing small and micro-loans, the study found that there is a strong positive relationship between portfolio loans and GDP, and there is a significant impact of portfolio loans on GDP, in Yemen.

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