HOUSING DEBT, FINANCIAL INCLUSION, AND ECONOMIC GROWTH OF INDIA: IS IT ALARMING FOR INDIA?

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ABSTRACT

The process of economic growth must strive to include participation from all sections. In India, inclusive growth has always been a priority. The agenda of inclusive growth is reflected in the kind of policies and regulations that the policymaking and regulating institutions have been developing over the past decade. From Agricultural Economy to developing economy, India has come a long way in implementing financial sector reforms especially related to financial inclusion. The motive is economic growth. The present study was done to find the causal relationship between India’s financial inclusion and economic growth and household debt and economic growth using indicators for financial inclusion, household debt, and economic growth. The relationship was checked using the linear regression technique. The results indicated that only three out of ninety-six indicators of financial inclusion affected economic growth but. Household debt and economic growth have a negative relationship. The results have serious policy implications in India as India is moving towards financial inclusion.

Contribution/ Originality: The paper contributes the first logical analysis in financial inclusion arena and works as a background check for the government’s financial inclusion programme.

1. INTRODUCTION

In a recent article published by Economic Time, the household debt in India has doubled since the 2017-18 financial year. The figures are alarming. Credit cards and personal loans have contributed the most to rising debt. In class B and class C cities, the reason for this growth in debt is the aspiration for a lifestyle that is not affordable. Hence household debt from both banking and non-banking organizations is rising. The report from the RBI also quotes that the ratio of household debt to GDP is increasing at a higher pace than any other peer nation. The other reasons attributed to this included the rising sales of credit cards, banks being more focused on consumer lending and slower growth in credits to corporates.

1.1. Indian Scenario

India was an agricultural country where the main source of income was agriculture for long. Though in the present days it is the speedily growing economy there are still a large number of farmers who depend upon agriculture for their livelihood. This restricts the economic growth of their family as well as of the country. If we
talk about workers in other sectors, they also engage in their old culture and workplace practices. They don't want to change themselves and their way of doing work.

There are many factors that affect them that restrict them from change like unavailability of funds, high-interest rates, illiteracy, unawareness, trust, etc. The thing which comes first to mind is finance. Earlier there was not any formal source of getting funds. Hence, the lender's last resort were moneylenders, Zamiddars and Sahukars (Kenton, 2019). Formal sources were available but people were not aware of their benefits and were not literate enough to go through the formalities and documentation required.

To fulfill this gap of fund requirements, the RBI worked on financial inclusion. Whether it is developed, developing or underdeveloped nation, every nation is working on financial inclusion of those who are excluded to date.

Many researchers have worked on exploring the connection between financial development and economic growth as it is well understood now that only focusing on financial development is not adequate. Every country should strive for the financial development of the person standing last in the line and make it accessible and affordable for everyone and this will lead to the holistic growth of the economy of the country and the path to this is financial inclusion. In this research work, researchers have examined the relationship between financial inclusion and economic growth.

1.2. Household Debt

Consumer debt and mortgage loans in combination create household debt. In other words, it can be defined as the total debt of all the people in the household. The lower the value of household debt, the higher the economic development of a nation. The total burden of this debt can be quantified in terms of the burden of interest it generates a vis-à-vis income of the borrower.

A news article published in January 2019, quoted that India, among the emerging nations, has one of the highest Debt to GDP ratios. Adding to the fuel will be bailout packages provided to poorly run banks run by the state. Public Debt and finances are weakened by government borrowings which is in turn required for more spending by the government. Common household debts and the firm debt have also contributed towards the increased burden of the Indian economy. To reduce the debt component, these households and firms decrease their investment as well as spending which ultimately slows down economic growth. The government spends to boost the economy and bring it back on track. This spending needs money which is obtained by the government by more borrowing which ultimately increases public debt.

1.3. Financial Inclusion

Financial inclusion refers to the accessibility and equality of opportunities to financial products and services for everyone. The essence of this relates to every aspect of finance and financial products. As per the definition given by Reserve Bank of India, it is “the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream institutional players”.

Asian Development Bank (2000) explains financial inclusion by way of “the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor and low-income households and their microenterprises”. Siclair (2001) defined financial exclusion as “the inability to access necessary financial services in an appropriate form”. Chant Link and Associates, Australia (2004) defined financial exclusion as “the lack of access by certain consumers to appropriate low-cost, fair and safe financial products and services from mainstream providers. Financial exclusion becomes a concern in the community when it applies to lower-income consumers and/or those in financial hardship”.

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The UK’s House of Commons’ Treasury Committee (2004) defined financial inclusion as “The ability of individuals to access appropriate financial products and services”.

The Scottish Government (2005) defined it as: “access for individuals to appropriate financial products and services. This includes having the capacity, skills, knowledge, and understanding to make the best use of those products and services. Financial exclusion, by contrast, is the converse of this.”

The United Nations (2006) defined inclusion as “a financial sector that provides ‘access’: to credit for all ‘bankable’ people and firms; to insurance for all insurable people and firms; and to savings and payments services for everyone.” Rangarajan (2008) in their report, defined financial inclusion as “the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost”. The World Bank Report (2008) defined financial inclusion as “broad access to financial services implies an absence of price and non-price barriers in the use of financial services; it is difficult to define and measure because access has many dimensions”.

1.4. Columns of Financial Inclusion

- Financial learning.
- Branch entrée.
- Product availability.
- Risk management.

![Figure-1. Pillars of financial inclusion.](image)

1.5. Measuring Financial Inclusion

There are certain indicators that help measure the extent of financial inclusion for a nation including those listed below:

- Accounts at financial institutions.
- The extent of use of mobile money account services.
- The use of digital payment system for making or receiving any kind of payment.
- The extent of use of an account to receive direct salary payments and receive any payment from the government.
- Payment of online purchases or bills via online methods.
- Mobile banking and internet banking use for paying or receiving money.
- Higher use of debit or credit card for making payments.
- Number of dormant accounts.
- Domestic and international remittances through a financial institution account or online banking account or exclusively in cash.
- Savings at a financial institution.
- Informal savings.
- Saving for any reasons like personal use or use at old age, borrowing from financial institutions.
- Higher use of credit cards.
- Borrowings from friends or family members or any other source.
- Unsettled housing loans.

1.6. Economic Growth

Economic growth is a measure of the financial soundness of a nation. It is measured as the “increase in the market value of goods and services at any point in time”. It is also expressed in terms of growth or an increase in the “Real GDP” of a nation.

The economic growth of a nation gets affected by many factors and it doesn’t occur in isolation. Any event which occurs in one part of the country affects other parts of the country as well. The economic growth of a nation gets affected by macro-economic factors.

Other factors affecting the economic growth of a country include:

1. Supply factors.
2. Demand factors.
3. Efficiency factors.

The human resources of a country have an important role in the development of a country. A well-skilled and qualified human resource leads to the economic growth of his own family as well as of his country. When people have enough financial resources with knowledge and importance of markets (financial markets), they will automatically come close to financial markets and financial products which empowers them and makes them a part of the growth of the country. Human resources, a determinant of economic growth, affect the economic growth of a country in two ways. One, by contribution to GDP and the other, by investing in financial products and getting extra income or benefits or support which helps in increasing their quality of life.

Denison (1962) affirmed that “economic growth is the increase of real GDP or GDP per capita, an increase of national product that is measured in constant prices”. In India, the real GDP is used as a measure of economic growth.

1.7. Relationship between Household Debt and Financial Inclusion

Even the non-agriculture household debt is high but lower than agriculture households. The major reason for taking agriculture credit was the capital expenditure for agriculture purposes.

The households, though, still feel that the policy requirements related to the opening bank account and credit paperwork are a major obstacle to access to credit. Banks and other financial institutions are still conventional about the banking business. Alter et al. (2018) in their working paper talked about the relationship between debt, inclusion and economic growth. They found that extended debt harms household consumption and strengthens the chances of the banking crisis which disrupts the financial system. On the other hand, extended household debt leads to a fictitious picture in the mind of investors regarding the booming economy. Adding to it, a factor like financial inclusion dismiss this impact and further leads to an equilibrium between stability and inclusion which in turn has a negative impact on growth. Recently Herispon (2019) for his work in Indonesia found a significant relationship
between debt behavior, household consumption, and inclusion. Ravalo also found a similar relationship in his work for the Philippines.

The effect of financial inclusion can also be expressed in terms of financial exclusion. In a study, Gloukovitzoff has explained that over-indebtedness can be considered as the facets of financial exclusion as both are associated with banking glitches. Both have similar recursions of the scarcity of such services. As discussed earlier, the changing lifestyle of people has exposed them to over-indebtedness. Also, steps towards a cashless economy through changing technological patterns are also responsible for over-indebtedness and act as a catalyst for social exclusion. Due to technological developments in the financial sector, now there more access to credit but the wrong use of it.

1.8. Relationship between Financial Inclusion and Economic Growth

Financial inclusion is a key factor in economic growth (Dixit and Ghosh, 2013) and there is a positive relationship between the two as per the recent research (Sharma, 2016). It is also related to the HDI of a nation.

There is a positive association between financial inclusion and NSDP but negative with poverty (Anand and Chhikara, 2013). The positive impact of financial inclusion was found in the poor households on their income (Swamy, 2013). Contrary to this Garg and Agarwal (2014); Singh and Mishra (2014) found that government initiatives for financial inclusion are not yielding the expected results in India.

In the case of Malaysia, Ang and McKibbin (2005) found positive relationship of financial inclusion with economic growth; and for Nigeria, Swanne (2015) with their study established a positive correlation of rural inclusion with economic growth and for Nigeria only, Okoye et al. (2017) and Valickova et al. (2013) established a positive relationship of economic growth and financial inclusion. Sarma and Pais (2008) also found a positive relationship between socioeconomic variables and infrastructure-related variables with inclusion.

Vilma and Lina (2014) also found a positive relationship between financial inclusion and economic growth for EU nations. Park and Mercado (2015) for Asian economies also found an influence of inclusion on per capita income, rule of law, and demographic structure significantly. But earlier in 2001, a study for low-income countries by Jallal and Kirkpatrick (2001) indicated that financial development leads to reduction. Tuesta et al. (2015) for Argentina found income level and age as barriers to exclusion. Recently for emerging economies, it has been established that digital technologies have a positive impact on inclusion, Ozili (2018) and Femi-lawal (2017). Williams et al. (2017) have also established a positive relationship between economic growth and poverty reduction for developing economies and Kim et al. (2018) for OIC countries.

1.9. Relationship between Household Debt and Economic Growth

Post the nationalization of banks, financial inclusion was emphasized every time whenever policy changes were made. The real momentum in this area came in the year 2005 wherein it was made part of the policy statement by RBI. Financial inclusion is not only a financial indicator but also a social indicator and the fact is accepted worldwide. It is considered one of the pillars of the long-lasting growth of the economy.

The informal data sources now prove that through inclusion more than 62% of adults in hinterland now have a bank account which initially was only 40%. Financial inclusion has led to the penetration of branch, deposit, credit, and insurance in the deeper areas of the nation. The "Financial Access Survey 2017" conducted by the IMF has ranked India as indicated that the adult’s loan accounts per 1000 adults have risen from 142.48 to 170.77 till 2017.

But there is another side of the picture too. Half of the bank accounts opened remained dormant for a long time. The Eastern, Central, and North-Eastern regions of India accounted for a total of 64% indebtedness from the farmer’s side. A higher level of financial inclusion and economic growth of a nation has a positive, long term relationship. There is support from literature as well on this (Levine, 1998; Beck and Levine, 2004).
The relationship between a higher level of debt and economic growth is more mysterious in nature (Arcand et al., 2015) and Sahay et al. (2015b). When there is more credit extension, the income group which gets more benefit is the higher one. It would be incorrect to say that low-income group families do not get affected but it is high-income group nations that get more benefits. Hence there is a difference in access to finance, there lies a difference in the ratios related to household debt and eventually underestimation of the true debt burden. Financial inclusion is a double-edged sword.

1.10. Objectives of the Study

To understand the relationship between financial inclusion and economic growth of India.
To understand the relationship between household debt and economic growth of India.

2. RESEARCH METHODOLOGY

The study was empirical in nature. The population of the study was of all the nations listed in the World Bank database. The research was done for India only. The timeframe for the study was from 2011 to 2017 for the financial inclusion and GDP relationship. The data for household debt as a percentage of nominal GDP was taken from 2008 for finding the relationship between GDP and household debt. The selected time frame was due to the availability of data. The dependent variable, economic growth, was measured through growth in Real GDP. The independent variable, financial inclusion, was measured through several indicators of financial inclusion as per the https://globalfindex.worldbank.org/. The secondary data is taken from https://globalfindex.worldbank.org/ and https://data.gov.in/catalog/india-and-major-sectors-economy-share-each-sector-gdp-and-growth-rate-gdp-and-other and tradingeconomics.com. Linear regression analysis was done to find cause and effect relationships between dependent and independent variables.

3. RESULTS AND DISCUSSION

a) Linear Regression was applied to determine the extent of the linear relationship between GDP(dependent) and other dependent variables of Financial Inclusion.

The linear relationship was simple in nature. The data of dependent and independent variables were continuous in nature.

| Dependent Variable | Independent Variable | $R^2$ | F Value @ Significance level | Beta | T Value @ Significance level | Regression Equation |
|--------------------|----------------------|-------|-----------------------------|------|-----------------------------|---------------------|
| GDP                | Population of age 15 years or more had an Account | 0.928 | 12.881 0.173 | @ 0.963 | 3.589 @ 0.173 | GDP = 2.455 + 0.160 * Population of age 15 years or more had an Account |
| GDP                | Male of age 15 years or more had an Account | 0.868 | 6.573 0.237 | @ 0.932 | 2.564 @ 0.237 | GDP = 0.026 + 0.180 * Male of age 15 years or more had an Account |
| GDP                | Labor force of age 15 years or more had an Account | 0.858 | 6.031 0.246 | @ 0.926 | 2.456 @ 0.246 | GDP = 0.259 + 0.175 * Labor force of age 15 years or more had an Account |
| GDP                | Out of labor force population of age 15 years or more had an Account | 0.973 | 35.425 0.106 | @ 0.986 | 5.952 @ 0.106 | GDP = 4.427 + 0.148 * Out of labor force population of age 15 years or more had an Account |
| GDP | Equation | R² | t-value | p-value |
|-----|----------|----|---------|---------|
| GDP | Female of age 15 years or more had an Account | 0.962 | 25.215 @ 0.125 | 0.981 | 5.021 @ 0.125 | GDP = 4.507 + 0.143 * Female of age 15 years or more had an Account |
| GDP | Young adults of age 15-24 had an Account | 0.948 | 18.155 @ 0.147 | 0.974 | 4.261 @ 0.147 | GDP = 3.690 + 0.165 * Young adults of age 15-24 had an Account |
| GDP | Older adults of age 25 years or more had an Account | 0.914 | 10.666 @ 0.189 | 0.956 | 3.266 @ 0.189 | GDP = 1.966 + 0.160 * Older adults of age 25 years or more had an Account |
| GDP | Population of age 15 years or more having primary education or less had an Account | 0.983 | 58.457 @ 0.083 | 0.992 | 7.646 @ 0.083 | GDP = 3.237 + 0.165 * Population of age 15 years or more having primary education or less had an Account |
| GDP | Population of age 15 years or more having secondary education or more had an Account | 0.998 | 486.276 @ 0.029 | 0.999 | 22.052 @ 0.029 | GDP = -7.502 + 0.273 * Population of age 15 years or more having secondary education or more had an Account |
| GDP | 40% poorest of age 15 years or more having income had an Account | 0.959 | 23.364 @ 0.130 | 0.979 | 4.834 @ 0.130 | GDP = 4.272 + 0.145 * 40% poorest of age 15 years or more having income had an Account |
| GDP | 60% richest of age 15 years or more having income had an Account | 0.903 | 9.329 @ 0.201 | 0.95 | 3.054 @ 0.201 | GDP = 0.856 + 0.157 * 60% richest of age 15 years or more having income had an Account |
| GDP | Account ownership in rural population more than 15 years of age | 0.92 | 11.511 @ 0.182 | 0.959 | 3.393 @ 0.182 | GDP = 2.883 + 0.157 * Account ownership in rural population more than 15 years of age |
| GDP | Population of age 15 years or more had an account ownership | 0.928 | 12.881 @ 0.173 | 0.963 | 3.589 @ 0.173 | GDP = 2.455 + 0.160 * Population of age 15 years or more had an account ownership |
| GDP | Male of age 15 years or more had an Account | 0.887 | 7.875 @ 0.218 | 0.942 | 2.806 @ 0.218 | GDP = -0.030 + 0.182 * Male of age 15 years or more had an Account |
| GDP | Financial institution account, in labor force (% age 15+) | 0.877 | 7.152 @ 0.228 | 0.937 | 2.674 @ 0.228 | GDP = 0.196 + 0.177 * Financial institution account, in labor force (% age 15+) |
| GDP | Out of labor force population of age 15 years or more had an account | 0.973 | 35.425 @ 0.106 | 0.986 | 5.952 @ 0.106 | GDP = 4.327 + 0.148 * Out of labor force population of age 15 years or more had an account |
| GDP | Female of age 15 years or more had an account | 0.962 | 25.215 @ 0.125 | 0.981 | 5.021 @ 0.125 | GDP = 4.507 + 0.145 * Female of age 15 years or more had an account |
| GDP | Young adults of age 15-24 had an account | 0.948 | 18.155 @ 0.147 | 0.974 | 4.261 @ 0.147 | GDP = 3.690 + 0.165 * Young adults of age 15-24 had an account |
| GDP | Older adults of age 25 years or more had an account | 0.928 | 12.881 @ 0.173 | 0.963 | 3.589 @ 0.173 | GDP = 1.974 + 0.160 * Older adults of age 25 years or more had an account |
| GDP | Equation | Parameter | Coefficient | Standard Error | R² | Regression Equation |
|-----|----------|-----------|-------------|----------------|----|--------------------|
| GDP | $\text{GDP} = 3.273 + 0.165 \times \text{Population of age 15 years or more having primary education or less had an account}$ | 0.983 | 58.457 | 0.083 | 0.992 | $7.646 \times 0.083$ |
| GDP | $\text{GDP} = -7.502 + 0.273 \times \text{Financial institution account, secondary education or more (% age 15+)}$ | 0.998 | 486.276 | 0.029 | 0.992 | $22.052 \times 0.029$ |
| GDP | $\text{GDP} = 4.321 + 0.145 \times \text{Population of age 15 years or more having income owned account}$ | 0.967 | 29.601 | 0.116 | 0.984 | $7.646 \times 0.116$ |
| GDP | $\text{GDP} = 0.856 + 0.175 \times \text{Rural population of age 15 years or more have account}$ | 0.903 | 9.329 | 0.201 | 0.959 | $3.054 \times 0.201$ |
| GDP | $\text{GDP} = 2.883 + 0.157 \times \text{Population of age 15 years or more Saved at a financial institution}$ | 0.989 | 88.901 | 0.067 | 0.994 | $9.429 \times 0.067$ |
| GDP | $\text{GDP} = -11.170 + 1.211 \times \text{Male of age 15 years or more Saved at a financial institution}$ | 0.962 | 25.215 | 0.125 | 0.981 | $5.021 \times 0.125$ |
| GDP | $\text{GDP} = -8.376 + 1.025 \times \text{Labor force of age 15 years or more Saved at a financial institution}$ | 0.911 | 10.131 | 0.194 | 0.954 | $3.183 \times 0.194$ |
| GDP | $\text{GDP} = 2.129 + 0.901 \times \text{Saved at a financial institution out of labor force population more than 15 years of age}$ | 0.989 | 88.901 | 0.067 | 0.994 | $9.429 \times 0.067$ |
| GDP | $\text{GDP} = 3.215 + 0.726 \times \text{Female Of age 15 years or more Saved at a financial institution}$ | 0.975 | 38.526 | 0.102 | 0.987 | $6.207 \times 0.102$ |
| GDP | $\text{GDP} = -3.483 + 1.444 \times \text{Young adults of age 15-24 Saved at a financial institution}$ | 0.928 | 12.881 | 0.173 | 0.963 | $3.589 \times 0.173$ |
| GDP | $\text{GDP} = -2.286 + 0.808 \times \text{Older adults of age 25 years or more Saved at a financial institution}$ | 0.962 | 25.215 | 0.125 | 0.981 | $5.021 \times 0.125$ |
| Variable | Description | Coefficient | Standard Error | t-Value | P-value | Regression Equation |
|----------|-------------|-------------|----------------|---------|---------|-------------------|
| GDP      | Population of age 15 years or more having primary education or less Saved at a financial institution | 0.997 | 0.034 | 99.9 | 0.034 | \( GDP = -5.648 + 1.424 \times \) |
|          | Population of age 15 years or more secondary education or more Saved at a financial institution | 0.795 | 0.299 | 89.1 | 0.299 | \( GDP = -12.413 + 1.101 \times \) |
|          | 40% poorest of age 15 years or more having income Saved at a financial institution | 0.51 | 0.494 | 1.020 | 0.494 | \( GDP = 1.092 + 1.071 \times \) |
|          | 60% richest of age 15 years or more having income Saved at a financial institution | 0.825 | 0.274 | 2.174 | 0.274 | \( GDP = 1.607 + 0.527 \times \) |
|          | Rural population of age 15 years or more Saved at a financial institution | 0.979 | 0.092 | 6.890 | 0.092 | \( GDP = -3.057 + 1.036 \times \) |
|          | Population of age 15 years or more Saved using a savings club or a person outside the family | 0.233 | 0.679 | 0.552 | 0.679 | \( GDP = 7.662 + 0.567 \times \) |
|          | male of age 15 years or more Saved using a savings club or a person outside the family | 0.205 | 0.701 | 0.508 | 0.701 | \( GDP = 6.918 + 0.646 \times \) |
|          | Labour force of age 15 years or more Saved using a savings club or a person outside the family | 0.376 | 0.614 | 0.777 | 0.614 | \( GDP = 6.479 + 0.573 \times \) |
|          | Saved using a savings club or a person outside the family, out of labor force population above 15 years of age | 0.376 | 0.580 | 0.777 | 0.580 | \( GDP = 6.765 + 1.008 \times \) |
|          | female of age 15 years or more Saved using a savings club or a person outside the family | 0.376 | 0.580 | 0.777 | 0.580 | \( GDP = 7.624 + 0.575 \times \) |
| GDP | young adults of age 15–24 years Saved using a savings club or a person outside the family | 0.103 | 0.115 @ 0.792 | 0.321 | 0.339 @ 0.792 | GDP = 8.534 + 0.794 * young adults of age 15–24 years Saved using a savings club or a person outside the family |
| GDP | Older Adults of age 25 years or more Saved by using a savings club or a person outside the family | 0.376 | 0.604 @ 0.580 | 0.614 | 0.777 @ 0.580 | GDP = 6.097 + 0.668 * Older Adults of age 25 years or more Saved by using a savings club or a person outside the family |
| GDP | The population of age 15 years or more having primary education or less Saved using a savings club or a person outside the family | 0.205 | 0.259 @ 0.701 | 0.453 | 0.508 @ 0.701 | GDP = 7.565 + 0.646 * Population of age 15 years or more having primary education or less Saved using a savings club or a person outside the family |
| GDP | The population of age 15 years or more having secondary education or more Saved using a savings club or a person outside the family | 0.376 | 0.604 @ 0.580 | 0.614 | 0.777 @ 0.580 | GDP = 6.097 + 0.668 * Population of age 15 years or more having secondary education or more Saved using a savings club or a person outside the family |
| GDP | 40% poorest of age 15 years or more having income Saved using a savings club or a person outside the family | 0.962 | 25.215 @ 0.125 | 0.981 | 5.021 @ 0.125 | GDP = 3.367 + 2.423 * 40% poorest of age 15 years or more having income Saved using a savings club or a person outside the family |
| GDP | 60% richest people having an income of age 15 years or more Saved using a savings club or a person outside the family | 0.187 | 0.230 @ 0.715 | 0.433 | 0.480 @ 0.715 | GDP = 8.220 + 0.345 * 60% richest people having an income of age 15 years or more Saved using a savings club or a person outside the family |
| GDP | Rural population having age 15 years or more Saved by using a savings club or a person outside the family | 0.376 | 0.604 @ 0.580 | 0.614 | 0.777 @ 0.580 | GDP = 6.765 + 0.668 * Rural population having age 15 years or more Saved by using a savings club or a person outside the family |
| GDP | Population of age 15 years or more having debit card | 0.806 | 4.160 @ 0.290 | 0.898 | 2.040 @ 0.290 | GDP = 5.765 + 0.270 * Population of age 15 years or more having debit card |
| GDP | Ownership male of age 15 years or more having Debit card | 0.724 | 2.627 @ | 0.352 | 1.621 @ | 0.352 | GDP = 5.517 + 0.204 * Ownership male of age 15 years or more having Debit card |
| GDP | Labor force aged 15 years or more having debit card | 0.762 | 3.199 @ | 0.325 | 1.789 @ | 0.325 | GDP = 5.139 + 0.235 * Labor force aged 15 years or more having debit card |
| GDP | People aged 15 years or more having debit card among labor force | 0.878 | 7.218 @ | 0.227 | 2.687 @ | 0.227 | GDP = 6.110 + 0.372 * People aged 15 years or more having debit card among labor force |
| GDP | Females of age 15 years or more having debit card | 0.953 | 20.283 @ | 0.139 | 4.504 @ | 0.139 | GDP = 6.031 + 0.427 * Females of age 15 years or more having debit card |
| GDP | Youngsters of age 15-24 years having debit card | 0.796 | 3.895 @ | 0.299 | 1.974 @ | 0.299 | GDP = 5.373 + 0.320 * Youngsters of age 15-24 years having debit card |
| GDP | Older adults of age 25 years or more having debit card | 0.806 | 4.160 @ | 0.290 | 2.040 @ | 0.290 | GDP = 5.494 + 0.270 * Older adults of age 25 years or more having debit card |
| GDP | People with primary education or less of age 15 years or more having debit card | 0.948 | 18.155 @ | 0.147 | 4.261 @ | 0.147 | GDP = 4.845 + 0.660 * People with primary education or less of age 15 years or more having debit card |
| GDP | People with secondary education or more of age 15 years or more having debit card | 0.914 | 10.592 @ | 0.190 | 3.255 @ | 0.190 | GDP = 0.848 + 0.276 * People with secondary education or more of age 15 years or more having debit card |
| GDP | Poorest 40% people with some income and have debit card | 0.796 | 3.895 @ | 0.299 | 1.974 @ | 0.299 | GDP = 5.550 + 0.215 * Poorest 40% people with some income and have debit card |
| GDP | Richest 60% people with some income and have debit card | 0.787 | 3.698 @ | 0.305 | 1.923 @ | 0.305 | GDP = 5.648 + 0.282 * Richest 60% people with some income and have debit card |
| GDP | Rural people of age 15 years or more having debit card | 0.654 | 1.887 @ | 0.401 | 1.374 @ | 0.401 | GDP = 15.048 + (-0.515) * Rural people of age 15 years or more having debit card |
| GDP | People aged 15 years or more had borrowed from financial institution | 0.019 | 0.019 @ | 0.913 | -0.136 | -0.136 @ | 0.913 | GDP = 15.048 + (-0.515) * People aged 15 years or more had borrowed from financial institution |
| GDP | Male people of age 15 years or more had borrowed from financial institution | 0.376 | 0.604 @ | 0.580 | -0.777 @ | 0.580 | GDP = 44.860 + (-4.010) * Male people of age 15 years or more had borrowed from financial institution |
| GDP | Labor force of age 15 years or more had borrowed from financial institution | 0.858 | 6.031 @ | 0.246 | -2.456 @ | 0.246 | GDP = 39.403 + (-3.895) * Labor force of age 15 years or more had borrowed from financial institution |
| GDP       | People among the labor force of age 15 years or more had borrowed from financial institution | 0.142 | 0.166 @ 0.754 | 0.377 | 0.407 @ 0.754 | GDP = 4.870 + 1.233 * People among the labor force of age 15 years or more had borrowed from financial institution |
|-----------|------------------------------------------------------------------------------------------------|-------|----------------|-------|----------------|--------------------------------------------------------------------------------|
| GDP       | Females of age 15 years or more had borrowed from financial institution                        | 0.376 | 0.604 @ 0.580 | -0.614 | 0.777 @ 0.580 | GDP = 22.805 + (-2.005) * Females of age 15 years or more had borrowed from financial institution |
| GDP       | Young adults of age 15-24 years had borrowed from financial institution                          | 0.981 | 52.692 @ 0.087 | 0.991 | 7.259 @ 0.087 | GDP = -16.615 + 6.475 * Young adults of age 15-24 years had borrowed from financial institution |
| GDP       | Older adults of age 25 years or more had borrowed from financial institution                     | 0.376 | 0.604 @ 0.580 | -0.614 | 0.777 @ 0.580 | GDP = 26.815 + (-2.005) * Older adults of age 25 years or more had borrowed from financial institution |
| GDP       | People with primary education or less of or less aged 15 years or more had borrowed from financial institution | 0.376 | 0.604 @ 0.580 | -0.614 | 0.777 @ 0.580 | GDP = 24.810 + (-2.005) * People with primary education or less of or less aged 15 years or more had borrowed from financial institution |
| GDP       | People with secondary education or more of age 15 years or more had borrowed from the financial institution |       |                |       |                |                                                                                       |
| GDP       | Poorest 40% people of age 15 years or more with some income and had borrowed from financial institution | 0.019 | 0.019 @ 0.913 | -0.136 | -0.138 @ 0.913 | GDP = 14.533 + (-0.515) * Poorest 40% people of age 15 years or more with some income and had borrowed from financial institution |
| GDP       | Richest 60% people aged 15 years or more with some income and had borrowed from financial institution | 0.376 | 0.604 @ 0.580 | -0.614 | 0.777 @ 0.580 | GDP = 40.850 + (-4.010) * Richest 60% people aged 15 years or more with some income and had borrowed from financial institution |
| GDP       | Rural people of 15 years or more had borrowed from financial institution                          | 0.376 | 0.604 @ 0.580 | -0.614 | 0.777 @ 0.580 | GDP = 40.850 + (-4.010) * Rural people of 15 years or more had borrowed from financial institution |
| GDP       | People of age 15 years or more had borrowed from the financial institution                       | 0.444 | 0.800 @ 0.535 | 0.667 | 0.894 @ 0.535 | GDP = 1.591 + 0.348 * People of age 15 years or more had borrowed from financial institution |
| GDP | Family or friends | Coefficient | GDP | Family or friends | Coefficient |
|-----|-------------------|-------------|-----|-------------------|-------------|
| GDP | Males of 15 years or more had borrowed from family or friends | 0.376 | GDP | Males of 15 years or more had borrowed from family or friends | 0.777 |
| GDP | Labor force of age 15 years or more had borrowed from family or friends | 0.428 | GDP | Labor force of age 15 years or more had borrowed from family or friends | 0.865 |
| GDP | People among labor force of age 15 years or more had borrowed from family or friends | 0.281 | GDP | People among labor force of age 15 years or more had borrowed from family or friends | 0.626 |
| GDP | Females of age 15 years or more had borrowed from family or friends | 0.376 | GDP | Females of age 15 years or more had borrowed from family or friends | 0.777 |
| GDP | Youngsters of age 15-24 years had borrowed from family or friends | 0.457 | GDP | Youngsters of age 15-24 years had borrowed from family or friends | 0.918 |
| GDP | Older adults of age 25 years or more had borrowed from family or friends | 0.376 | GDP | Older adults of age 25 years or more had borrowed from family or friends | 0.777 |
| GDP | People with primary education or less of age 15 years or more had borrowed from family or friends | 0.269 | GDP | People with primary education or less of age 15 years or more had borrowed from family or friends | 0.607 |
| GDP | People with secondary education or more of age 15 years or more had borrowed from family or friends | 0.552 | GDP | People with secondary education or more of age 15 years or more had borrowed from family or friends | 1.111 |
| GDP | Poorest 40% people of age 15 years or more with some income and had borrowed from family or friends | 0.518 | GDP | Poorest 40% people of age 15 years or more with some income and had borrowed from family or friends | 1.038 |
| GDP | Richest 60% people of age 15 years or more with some income and had borrowed from family or friends | 0.376 | GDP | Richest 60% people of age 15 years or more with some income and had borrowed from family or friends | 0.777 |
| GDP | Rural people of age 15 years or more had borrowed from family or friends | 0.254 | GDP | Rural people of age 15 years or more had borrowed from family or friends | 0.583 |
GDP | People of age 15 years or more and have credit card | 0.019 | 0.019 @ 0.913 | 0.136 @ 0.913 | GDP = 9.898 + 0.515 * People of age 15 years or more and have credit card
---|---|---|---|---|---
GDP | Males of age 15 years or more having credit card | 0 | 0.00 @ 0.986 | 0.022 @ 0.986 | GDP = 11.301 + 0.033 * Males of age 15 years or more having credit card
GDP | Labor force of age 15 years or more having credit card | 0.003 | 0.003 @ 0.966 | -0.053 @ 0.966 | GDP = 11.881 + (-0.131) * Labor force of age 15 years or more having credit card
GDP | People of age 15 years or more among labor force having credit card | 0.376 | 0.604 @ 0.580 | 0.614 @ 0.580 | GDP = 6.765 + 2.005 * People of age 15 years or more among labor force having credit card
GDP | Females of age 15 years or more having credit card | 0.376 | 0.604 @ 0.580 | 0.614 @ 0.580 | GDP = 4.760 + 4.010 * Females of age 15 years or more having credit card
GDP | Youngsters of age 15-24 years having credit card | 0.142 | 0.166 @ 0.754 | -0.377 @ 0.754 | GDP = 13.498 + (-1.533) * Youngsters of age 15-24 years having credit card
GDP | Older adults of age 25 years or more having credit card | 0.376 | 0.604 @ 0.580 | 0.614 @ 0.580 | GDP = 4.760 + 2.005 * Older adults of age 25 years or more having credit card
GDP | People with primary education or less of age 15 years or more having credit card | 0.981 | 52.692 @ 0.087 | 0.991 @ 0.087 | GDP = 2.810 + 6.475 * People with primary education or less of age 15 years or more having credit card
GDP | People with secondary education or more of age 15 years or more having credit card | 0.435 | 0.770 @ 0.542 | -0.66 @ 0.542 | GDP = 20.133 + (-1.029) * People with secondary education or more of age 15 years or more having credit card
GDP | Poorest 40% people of age 15 years or more with some income and have credit card | 0.019 | 0.019 @ 0.913 | 0.136 @ 0.913 | GDP = 10.413 + 0.515 * Poorest 40% people of age 15 years or more with some income and have credit card
GDP | Richest 60% people of age 15 years or more with some income and have credit card | 0.103 | 0.115 @ 0.792 | 0.321 @ 0.792 | GDP = 8.534 + 0.794 * Richest 60% people of age 15 years or more with some income and have credit card
GDP | Rural people of age 15 years or more having credit card | 0.019 | 0.019 @ 0.913 | 0.136 @ 0.913 | GDP = 10.413 + 0.515 * Rural people of age 15 years or more having credit card

The $R^2$ values representing the correlation between dependent and independent variables can be seen in Table 1 above. The $R^2$ values indicate how much of the total variation in the dependent variable was explained by the independent variable. From the results, only a few variables, Population of age 15 years or more Saved using a
savings club or a person outside the family; male of age 15 years or more Saved using a savings club or a person outside the family; Labour force of age 15 years or more Saved using a savings club or a person outside the family; Saved using a savings club or a person outside the family, out of labor force population above 15 years of age; female of age 15 years or more Saved using a savings club or a person outside the family; young adults of age 15 - 24 years Saved using a savings club or a person outside the family; Older Adults of age 25 years or more Saved by using a savings club or a person outside the family; Population of age 15 years or more having primary education or less Saved using a savings club or a person outside the family; Population of age 15 years or more having secondary education or more Saved using a savings club or a person outside the family; 60% richest people having income of age 15 years or more Saved using a savings club or a person outside the family; People aged 15 years or more had borrowed from financial institution; Male people of age 15 years or more had borrowed from financial institution; People among the labor force of age 15 years or more had borrowed from financial institution; Older adults of age 25 years or more had borrowed from financial institution; People with primary education or less of or less aged 15 years or more had borrowed from financial institution; Poorest 40% people of age 15 years or more with some income and had borrowed from financial institution; Richest 60% people aged 15 years or more with some income and had borrowed from financial institution; Rural people of 15 years or more had borrowed from financial institution; People of age 15 years or more had borrowed from family or friends; Males of 15 years or more had borrowed from family or friends; Labor force of age 15 years or more had borrowed from family or friends; People among labor force of age 15 years or more had borrowed from family or friends; Females of age 15 years or more had borrowed from family or friends; Youngsters of age 15-24 years had borrowed from family or friends; Older adults of age 25 years or more had borrowed from family or friends; People with primary education or less of age 15 years or more had borrowed from family or friends; Richest 60% people of age 15 years or more with some income and had borrowed from family or friends; Rural people of age 15 years or more had borrowed from family or friends; People of age 15 years or more had borrowed from family or friends; People with secondary education or more of age 15 years or more had borrowed from family or friends; Richest 60% people of age 15 years or more with some income and have credit card; Rural people of age 15 years or more having credit card, were having less than 50% $R^2$ value.

Variables related to credit card ownership for different categories were found to contribute least towards the GDP of the nation. Similarly, variables related to borrowing in different categories, also explained the least variation in the GDP. Variables related to independent and institutional accounts and savings at financial institutions contributed the most variation in GDP.

The beta coefficients indicated the standardized values of regression coefficients. The beta value was used to compare the relative strength of various predictors within the model whereby one unit change in the independent variable will lead to beta times change in the dependent variable. The highest beta value in the above table was for the variables: Population of age 15 years or more having secondary education or more had an account; Population more than 15 years of age having secondary education or more had an account at financial institution; and, Population of age 15 years or more having primary education or less saved at a financial institution. This indicated that the GDP would be the most affected by these variables.

The strength of the relationship can be checked through the T value and its significance level which again was found to be significant for these variables only.

There were certain variables for which the beta value is negative: People aged 15 years or more had borrowed from financial institution; Male people of age 15 years or more had borrowed from financial institution; Labor force
of age 15 years or more had borrowed from financial institution; Females of age 15 years or more had borrowed from financial institution; Older adults of age 25 years or more had borrowed from financial institution; People with primary education or less of or less aged 15 years or more had borrowed from financial institution; Poorest 40% people of age 15 years or more with some income and had borrowed from financial institution; Richest 60% people aged 15 years or more with some income and had borrowed from financial institution; Rural people of 15 years or more had borrowed from financial institution; Labor force of age 15 years or more having credit card; Youngsters of age 15-24 years having credit card; People with secondary education or more of age 15 years or more having credit card.

This indicated that borrowed funds from a financial institution by the male, labor force, females, older adults, people with primary education, poorest 40% people, richest 60% people and rural people negatively affected the GDP of the nation. Credit card ownership in the labor force, young adults and people with secondary education negatively affected the GDP of the nation.

b) Linear Regression was applied to determine the extent of the linear relationship between GDP(dependent) and household debt

| Table-2. Regression summary. |
|-------------------------------|
| Dependent Variable | Independent Variable | $R^2$ | F Value @ Significance level | Beta | T Value @ Significance level | Regression Equation |
|--------------------|----------------------|-------|-------------------------------|------|-------------------------------|---------------------|
| Real GDP Growth    | Household debt as Percentage of GDP | .001  | .013@91.2%                  | ~.036 | -.114@91.2%                   | Real GDP Growth= 8.428+ (.091)* Household debt as Percentage of GDP |

From the above Table 2, it is clear that there is a poor relationship between GDP and Household debt. There is only .1 percent variation in GDP due to household debt. The beta value was only 1.036 which showed that 1 unit change in household debt leads to a 3.6 unit change in GDP in the opposite direction though this beta value was insignificant.

4. CONCLUSION

The research started with the objective of finding out the relationship between financial inclusion and economic growth of India. GDP was used as an indicator of economic growth and 96 variables were used as indicators of financial inclusion. Linear regression was applied to check the causal relationship between these variables.

A significant relationship was found for Population of age 15 years or more having secondary education or more had an Account; Population more than 15 years of age having secondary education or more had an account at Financial institution; and Population of age 15 years or more having primary education or less Saved at a financial institution.

The study done by Nwanne (2015) recommended increasing the intermediation of intermediaries like banks and microfinance institutions to increase the reach and use of formal financial products. Also, the government should assure the accessibility of financial products which will increase economic activities and lead to economic development and growth. This shows the importance of an account.

According to an article published in The Herald, banks accept deposit from whom have extra money and creates a large pool of fund and provide loans out of that pool of funds to who do not have enough money. These loans fuel economic activity by allowing businesses, agriculture, and trade to invest beyond their cash in hand. It also helps in increasing the role of the private sector by encouraging entrepreneurship. Therefore, saving at a financial institution plays a very significant role in the economic growth of any country.
According to the article titled *Financial inclusion in India: progress and prospects*, exclusion of a large number of people from formal banking are one of the biggest barriers to economic growth for the bottom of the pyramid. Therefore, financial inclusion is observed as a potential means of economic growth. The basic financial services are the provision of basic savings account and access to adequate credit at affordable costs to vulnerable groups.

Therefore, having an account helps in creating funds by savings and these savings will be used properly by a financial intermediary with which one has opened his/her account. Proper use of savings leads to economic development and results in the economic growth of that country.

Financial literacy, one of the pillars of financial inclusion, also affects the GDP of the country. Literacy and financial literacy are both important for understanding formal financial systems, financial products, and services. Therefore, people with secondary education or more having an account and saving significantly contribute towards the GDP of the country.

According to the results people with primary education or less saving in an account also significantly affected GDP. Generally, less educated people don’t prefer to deposit their savings in bank accounts but during the time frame of our study, these peoples had also deposited in their bank accounts. The reason behind these deposits is Jan Dhan Yojana in which accounts were opened with no minimum balance scheme.

If we see the regression equations,

i. \[ GDP = -7.502 + 0.273 \times \text{Population of age 15 years or more having secondary education or more had an Account.} \]

ii. \[ GDP = -7.502 + 0.273 \times \text{Population more than 15 years of age having secondary education or more had an account at Financial institution.} \]

iii. \[ GDP = -5.648 + 1.424 \times \text{Population of age 15 years or more having primary education or less Saved at a financial institution.} \]

We can observe the coefficient of the independent variable is largest for eq. (iii) This shows that this variable effects very significantly to GDP because most of the unbanked were less educated people and they got a bank account by the means of Jan Dhan Yojana and Jan Dhan Yojana was introduced in 2014, i.e. in-between time frame of our study.

According to an article published in Business Line, only access to financial products and services is not enough but regular usage of these financial products and services makes financial inclusion successful. For making financial inclusion a success story people should be literate enough to understand the use and importance of different products and can make choice out of these.

According to a study done by Dutta and Dutta (2015) in India, neither only branch density nor only literacy can lead to financial inclusion. The states/union territories within the top 20 percent in terms of financial inclusion with a given level of literacy, then increase in literacy percentage can lead to more financial inclusion in those state/union territories i.e. combination of awareness and access leads to proper financial inclusion.

Results also showed that the variables for borrowing from the financial institution by the male, female, in labor force, older adults, people with primary education or less, poorest 40% people, richest 60% people and rural people all had a significant negative relationship with India’s GDP. The variables for credit card ownership in the labor force, young adults and people with secondary education or more also had a significant negative relationship with India’s GDP.

There are many reasons for the negative effect of borrowing by these people. These are people who don’t have a regular source of income or have an insufficient source of income or both. That’s why the labor force, older adults, people with primary education or less, poorest 40% and rural people are not able to repay the loans taken by them and become NPA of financial institutions. Those who have a proper source of income such as the richest 60%, may not have adequate financial literacy to properly manage their money and debt or may have other motives.
Other reasons may be high unemployment, higher expenses than income, slow economy, high-interest rates, and the lack of due diligence, etc.

According to an article published in The Economic Times banks create problems by the lack of due diligence while providing loans to some people or business enterprises. We can see examples of loans provided to many big business houses without fulfilling requirements for providing loans.

India had announced a $33 billion recapitalization for banks in October 2017 which shows that loan amounts are not recovering.

Roy (2014) showed a trend that from 1997-98 to 2013-14 bad loans were increasing with a lag in the GDP growth rates. This showed how borrowing leads to bad loans in India and this negatively affects the GDP of the country.

Similarly, credit card holders affect the GDP negatively.

According to another article published in The Economic Times, the average Indian’s debt is increasing at a significant rate. The RBI data shows the outstanding amount on credit cardholders has increased from 27,000 crores in 2008 to 42,100 crores in May 2016. The outstanding annual interest is between 36 and 48 percent.

Another important finding of this research was the negative relationship between GDP and household debt though conceptually, there exists a positive relationship between debt and economic growth. But the results can be explained on the basis of an argument that yonder an edge debt level can be susceptible to the financial system as well as the individual (Harari, 2017; Raut, 2018) though the household debt in India is far lower than in other economies.

At the end of the 2018 financial year, the loans extended by financial institutions had increased by 72% as per the reports published by the RBI. Increased focus on consumer lending by banks, consumers themselves becoming less averse to credit and poor growth after demonetization are the reasons for increased household debt in India.

Recent studies have suggested that higher debt is associated with lower production (Jordà et al., 2016; Mian and Emil, 2017; Alter et al., 2018). This further increases the chances of an economic crisis. Rising debt is a matter of great concern globally. These results should be taken into consideration by policymakers of the nation for the formulation of policies regarding financial inclusion among the needy section of the society.

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REFERENCES
Alter, A., X.F. Alan and V. Nico, 2018. Understanding the macro-financial effects of household debt: A global perspective. IMF Working Papers. No. WP/18/76.

Anand, S. and K.S. Chhikara, 2013. A theoretical and quantitative analysis of financial inclusion and economic growth. Management and Labour Studies, 38(1-2): 103-133. Available at: https://doi.org/10.1177/0258042x13498009.

Ang, J.B. and W.J. McKibbin, 2005. Financial liberalization, financial sector development and growth: Evidence from Malaysia. Centre for Applied Macroeconomic Analysis (CAMA) Working Paper No. 5, Australian National University.

Arcand, J.L., E. Berkes and U. Panizza, 2015. Too much finance? Journal of Economic growth, 20(2): 105-148.

Asian Development Bank, 2000. Finance for the Poor – Micro Finance Development Strategy, Manila.

Beck, T. and R. Levine, 2004. Stock markets, banks, and growth: Panel evidence. Journal of Banking & Finance, 28(3): 423-442. Available at: https://doi.org/10.1016/s0378-4266(02)00408-9.

Denison, E.F., 1962. The sources of economic growth in the US and the alternatives before Us, Supplementary Paper No. 1, New York : Committee for Economic Development.

Dixit, R. and M. Ghosh, 2013. Financial inclusion for inclusive growth of India-A study of Indian states. International Journal of Business Management & Research, 3(1): 147-156.
Dutta, S. and P. Dutta, 2015. The effect of literacy and bank penetration on financial inclusion in India: A statistical analysis. Available from http://www.researchgate.net/publication/268267119_the_effect_of_literacy_and_bank_penetration_on_financial_inclusion_in_india_a_statistical_analysis/download.

Femi-lawal, F.B., 2017. Financial inclusion in the digital age, its role and impact on economic growth. Texila International Journal of Academic Research, 4(2): 2520-3088.

Garg, S. and P. Agarwal, 2014. Financial inclusion in India–a review of initiatives and achievements. IOSR Journal of Business and Management, 16(6): 52-61. Available at: https://doi.org/10.9790/487x-16615261.

Harari, D., 2017. Household debt: Statistics and impact on economy. Briefing Paper No. 7584. The House of Commons Library. Available from http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CPB-7584.

Herispon, H., 2019. The effect of bank behavior, financial literacy on financial inclusion and debt behavior in household consumption. Conference: International Conference on Social Sciences, Humanities, Economics and Law At: Padang, Indonesia.

Jalilian, H. and C. Kirkpatrick, 2001. Financial development and poverty reduction in developing countries. International Journal of Finance & Economics, 7(2): 97-108.

Jordà, Ó., M. Schularick and A.M. Taylor, 2016. The great mortgaging: Housing finance, crises and business cycles. Economic Policy, 31(85): 107-152. Available at: https://doi.org/10.1093/epolic/eiv017.

Kenton, W., 2019. Lender of last resort. Available from https://www.investopedia.com/terms/l/lenderoflastresort.asp.

Kim, D.-W., J.-S. Yu and M.K. Hassan, 2018. Financial inclusion and economic growth in OIC countries. Research in International Business and Finance, 45: 1-14. Available at: https://doi.org/10.1016/j.ribaf.2017.07.178.

Levine, R., 1998. The legal environment, banks, and long-run economic growth. Journal of Money, Credit and Banking, 30(3): 596-613. Available at: https://doi.org/10.2307/2601259.

Mian, A. and V. Emil, 2017. Household debt and business cycles worldwide. Quarterly Journal of Economic, 32(4): 1–63.

Nwanne, 2015. Relationship between financial inclusion and economic growth in Nigerian rural dwellers. International Journal of Small Business and Entrepreneurship Research, 3(7): 17-27.

Okoye, L.U., K.A. Adetiloye, O. Erin and N.J. Modebe, 2017. Financial inclusion as a strategy for enhanced economic growth and development. Journal of Internet Banking and Commerce, 22(S8): 1-12.

Ozili, P.K., 2018. Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, 18(4): 329-340. Available at: https://doi.org/10.1016/j.bir.2017.12.003.

Park, C.Y. and R. Mercado, 2015. Financial inclusion, poverty, and income inequality in developing Asia. Asian Development Bank Economics Working Paper Series, No. (426).

Rangarajan, C., 2008. Report of the Committee on Financial inclusion2008. pp: 1.

Raut, D.K., 2018. Macroeconomic dimensions of India’s household debt. Available from https://www.seacen.org/publications/RStudies/2018/RP102/2-IndiaHouseholddebt.pdf.

Roy, S.G., 2014. Determinants of non-performing assets in India-panel regression. Eurasian Journal of Economics and Finance, 2(3): 69-78. Available at: https://doi.org/10.15604/ejef.2014.02.03.005.

Sahay, R., C. Martin, N.D. Papa, B. Adollo, M. Srobona, K. Annette, M. Yen and R.Y. Scyed, 2015b. Women leaders in finance: Do they matter for bank stability? Forthcoming. Washington: International Monetary Fund.

Sarma, M. and J. Pais, 2008. Financial inclusion and development: A cross country analysis. Journal of International Development, 20(5): 613-766.

Scottish Government, 2005. Financial inclusion Action Plan’s. pp: 4.

Sharma, D., 2016. Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. Journal of Financial Economic Policy, 8(1): 13-36. Available at: https://doi.org/10.1108/jfep-01-2015-0004.

Siclair, S., 2001. Financial exclusion: An introductory survey. Centre for Research into Socially inclusive Service.
Singh, B.P. and A.K. Mishra, 2014. Nexus of financial development and economic growth in India: Revisiting Schumpeter. Indian Journal of Economics and Development, 10(3): 246-255. Available at: https://doi.org/10.5958/2322-0430.2014.00544.7.

Swamy, V., 2013. Financial inclusion, gender dimension, and economic impact on poor households. World Development, 56: 1-15.

Tuesta, D., G. Sorensen, A. Haring and N. Camara, 2015. Financial inclusion and its determinants: The case of Argentina. BBVA Research Working Paper No. 15/03.

United Nations, 2006. Building Inclusive Financial Sectors for Development. New York. pp: 1.

Valickova, P., T. Havranek and R. Horvath, 2013. Financial development and economic growth: A meta-analysis. Journal of Economic Surveys, 29(3): 506-526. Available at: https://doi.org/10.1111/joes.12068.

Vilma, D. and S. Lina, 2014. Investigation of relationship between financial and economic development in the EU countries. Procedia Economics and Finance, 14: 173-180. Available at: https://doi.org/10.1016/s2212-5671(14)00700-x.

Williams, H.T., A.J. Adegoke and A. Dare, 2017. Role of financial inclusion in economic growth and poverty reduction in a developing economy. International Journal of Research in Economics and Social Sciences, 7(5): 265-271.

World Bank Report, 2008. Finance for all? Policies and pitfalls in explaining access. World Bank.