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DETERMINANTS OF FINANCIAL INCLUSION: EMPIRICAL EVIDENCE FROM PAKISTAN

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Abstract: *Financial inclusion links the people with the financial system of the country; so that they can use financial services and products to fulfill their basic needs. This research study mainly deals with determinants of financial inclusion in Pakistan. Time series annual data was taken from 2008-2018. Johnson co-integration analysis was employed. Econometric results indicated that access and availability are the strong determinants of financial inclusion in Pakistan.*

Keywords: Financial inclusion, Access, Usage, Availability, Pakistan,

JEL Classification*: C4, E2, G2, M2*

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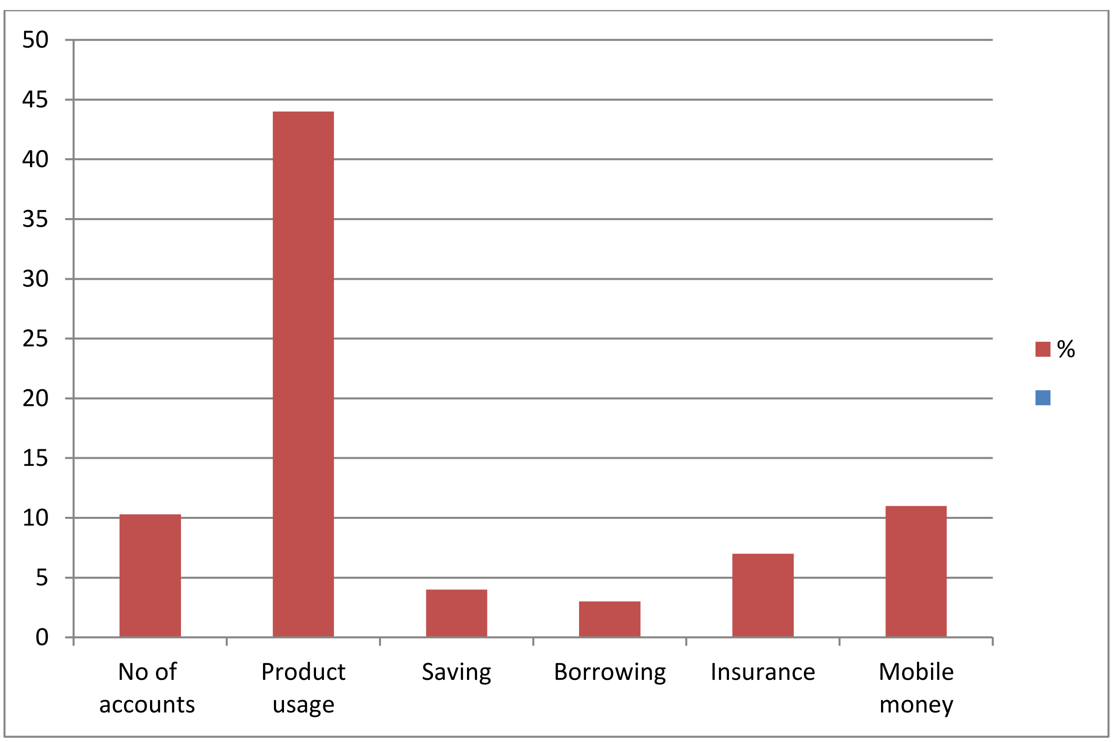
Introduction

Economy of any country depends on the financial system of that country, and financial system means the components which brings finance into the country as well as out from the country. The finance which flows towards the country is known as financial inclusion (FI). Financial inclusion is gaining much importance around the worldwide in the recent years because the demands of every country are increasing day by day with the limited resources and the organizations want to capture the market at international level. Thus the word financial inclusion refers to all the financial services that can be used to measure economic progress of the country (Beck, Kunt & Levine, 2007).

From1990s, the financial sectors of Pakistan made tremendous success in the profitability, diversity and other financial services. This success is the results of State Bank of Pakistan who supervised and provided leadership to financial inclusion by identifying and providing the different facilities. These facilities include online services specially credit information, safe and steady methods of payment from one place to another place, interbank transactions services, customers focused services, provision of financial education seminars and programs, and many borrowing and lending schemes according to the requirement. Pakistan was considered in top ten at international level in 2014 due to creation of financial inclusion environment and its microfinance services were considered best in 2008 at international level (Financial Inclusion Insights, 2014). Figure 1 shows the graphical presentation of adults using financial services

Figure 1: Graphical presentations of adults using financial services



Source: Financial Inclusion Insights, 2014

FI is the main factor for economic development for the policy makers, not only in Pakistan but for the whole world. In early approaches (Schumpeter approach) finance was the main force of growth and development of any economy because this approach states that the services of financial sectors not only provide the financial information but they also encourage, mobilize and motivate peoples for saving and investment which ultimately becomes the main source of economic development. And FI is the driven force for economic development. In all these activities banking sector is playing vital role to attract organizations and individuals to promote financial services for FI (Hamad & Sulong, 2018).

Financial markets are established to encourage the peoples and attract them by providing more beneficial and advantageous policies about the investment and saving. By increasing the saving and investment the increase in economic growth can be seen very easily (Aghion, Angeletos, Banerjee, Manova , 2004).

As financial markets play vital role in the financial services of the country, so from this position the importance for the economic development cannot be eliminated. Some policies rejected the positive relation between finance and development while many theories [Fri (1976), Hicks (1969) and Thakur (1978) accepted this fact that finance is the main force for economic development (Hamad & Sulong, 2018).

Objectives of Study

Following are the main objectives of the study:

- To give an overview of financial inclusion in Pakistan.
- To econometrically determine the determinants of financial inclusion in Pakistan.

Literature Review

Olaniyi, & Adeoye (2016) empirically investigated the determinants of financial inclusion in Africa by using dynamic panel data approach. Study took time series data from 2005-2014.Results indicated the positive and significant impact of internet access, broad money, per capita income and presence of Islamic banking on financial inclusion. While population, inflation, deposit interest rate was remained insignificant determinants.

Carbo & Molyneux, (2005), investigated the relationship between financial inclusion end economic growth. Their study was focused on 55 countries and the year was 2004. They checked the relation in short run, because according to them a year results can be applied to all the other years. They collected the data from World Bank indicators. They selected the topic in order to know current affairs of states with respect to economies. They also wanted to check the progress and position of financial inclusion in the countries made by country progress makers and policy makers. To check the relation, they developed index for financial inclusion and economic development. They developed the mathematical model to check the impact which is given below

IFI $\mathbf{IFI = \alpha 0 + \beta 1IP + \beta 2IU + \beta 3IA + \varepsilon}$

$IFI = \alpha 0 + \alpha 1IP + \alpha 2IU + \alpha 3IA$

Where as

IFI = index of financial inclusion

IP = index of penetration

1U = index of usage

IA = index of availability

In this study they used financial inclusion in three dimensions, first they describe availability variable that in availability it refers to that among these all countries how many countries are facilitated with financial services. Secondly, was the usage that all those countries which are facilitated in these countries what percent of individual and organizations are using these facilities? Thirdly was the penetration that how much focus is given by policy makers and government on the facilities and services. At the end they concluded their study by two-way results. According to them all those countries which are rich and benefited with all the facilities, showed positive relation with financial inclusion, while those countries which are rich but not benefited are lack of financial education showed negative relation. So it is not necessary that a country with financial services must be improve economic development but there are many other factors like financial education, level of income, saving habits etc. are also effect on economic development.

Balach R et al. (2016), selected 97 countries from 2004 to 2012, in this study they considered two variables to know the effect of financial inclusion on economic development and growth. The two variables were commercial bank branches and automatic teller machines, for each variable they selected 100,000 respondents to judge. In this study they found that financial inclusion has positive effect on both the variables. They concluded their results that all the countries in panel behave positively and financial inclusion boost up the growth in any country. So if the countries want to move towards the way of financial strength then they had to involve in financial inclusion.

Naceur, et al (2015) pointed out that structural factors, policy related factors and non-policy related factors are important determinants of financial inclusion. He explained that structural factors include cost of financial services which financial user will bear in terms of time and money. Policy related factors include to provide a suitable environment in which people can easily avail and enjoy financial services. It means financial services should available at nearest possible places and all the time. While non-policy factors include to provide easiness in inflow of foreign remittances.

Arestis et al. (2001), found negative relation between financial inclusion and economic development. As the inflation level and development level can vary from time to time, so it cannot be said that each and every economy will show positive relation to financial inclusion. The poor banking systems in some countries discourage credit provisions which effect financial system and economic growth by negative way.

Research Methodology

There are a lot of determinants of financial inclusion but mainly access, availability and usage. Access indicates users' ability to approach financial products & services from providers. Availability shows the services which banks/financial supplier are providing. These services include Mobile money access, registered account on Mobile money banking, insurance, debit card loans, overdraft, passbook, etc. Usage a third important determinant is related to consistency, regularity and length of time used. It mainly concentrates on the depth and extent of financial services or

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product. This paper is considered number of registered account active usages as the usage. The study used secondary sources for collecting required information. Secondary data were taken from the websitewww.datafinder.com

Study considers the following model

FI = β0 + β1 access + β 2 availability + β 3 usage + ut

Hypothesis

H_1 Access significantly and positively determines the financial inclusion.

H_2 Availability significantly and positively determines the financial inclusion.

H_3 Usage significantly and positively determines the financial inclusion.

Data Analysis

Data was analyzed by using co-integration analysis. The jarque Bera test was used before all these statistical tests in order to check the normality of data. This test is commonly in practice to check the normality of time series data by considering Skewness and Kurtosis. This test was proposed by Jarque and Bera (1980).

The mathematical expression of JB test is given below

JB = n

Where as

- n= No of sample observation ,C= Kurtosis= Skewness

While testing numerically in SPSS, Skewness and Kurtosis are some of the easiest tests (Mardia, 1970) and as per rule of thumb, the data become normal when its Skewness and Kurtosis have values between -1 and+1 or closer to zero(Gaoet al.,2008).The Skewness gives a measure that how much observations are symmetric about the mean. So, in normal distribution the Skewness is zero. A distribution is considered positive if a distribution skewed to right and vice versa. The kurtosis gives a measure of thickness in the tails of probability density function. Kurtosis is 3 for a normal distribution.

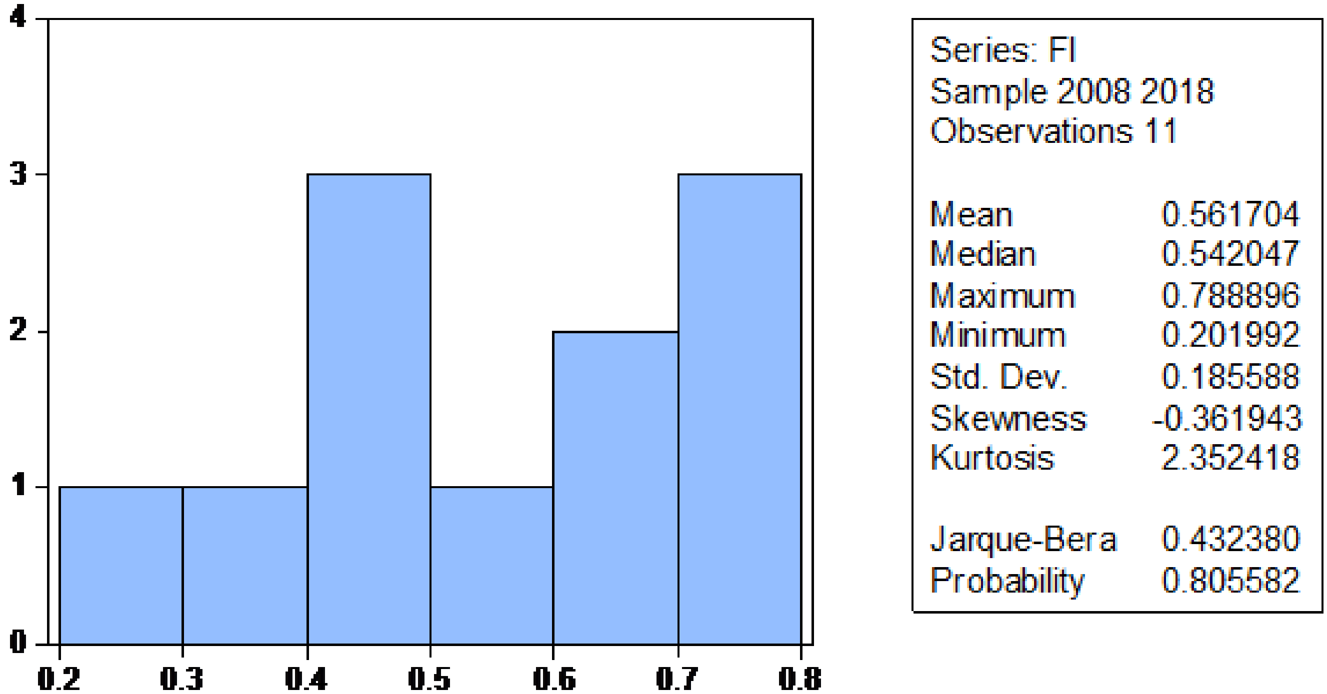


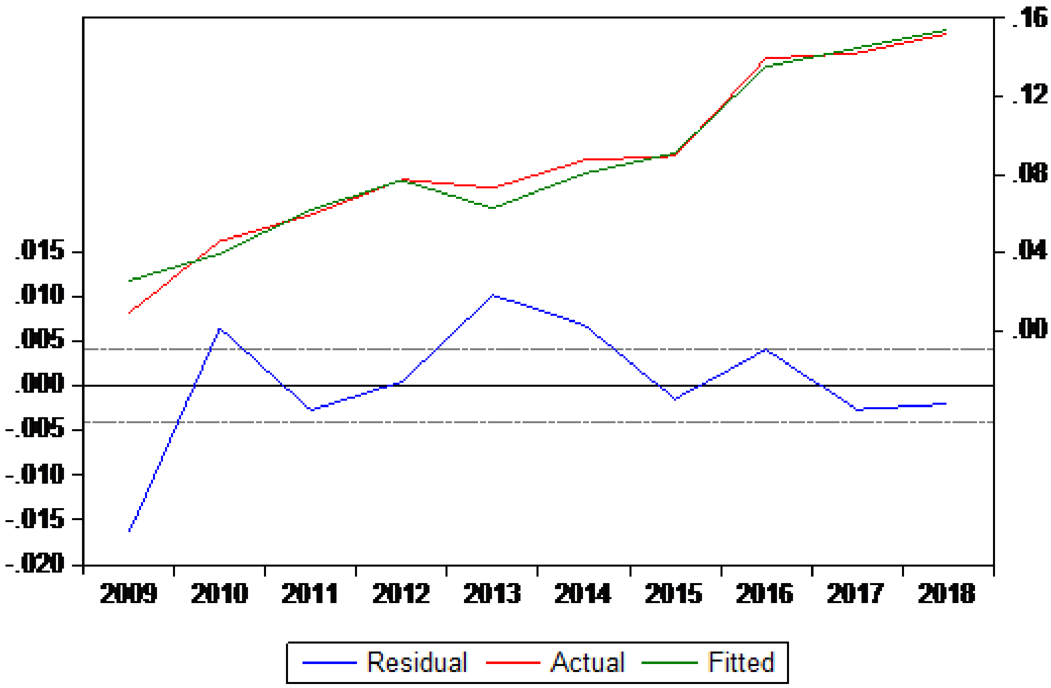
Table3: Johnson Co-integration Test (2008-2018)

Variables	Co-efficient	Std error	t-statistics	Probability
Access	**0.1263**	**0.0279**	**4.5246**	**0.0040**
Availability	**0.4056**	**0.0986**	**4.1134**	**0.0063**
Usage	**0.1226**	**0.1486**	**0.8250**	**0.4409**
C	**0.0801**	**0.0165**	**4.8289**	**0.0029**

Long run co-variance estimate (Bartlett kernel, Newey-west fixed bandwidth=3.00

R-square=0.9734, Adjusted R-Square=0.9601, D.W Stats=1.7402,

Long run variance=1.70E-05



The results of JC test indicated that access and availability are the most significant determinants and their impact is very strong on financial inclusion. Impact of usage is not significant. Values of R-square (97%) and adjusted R-square (96%) show that independent variables remained quite successful to explain variation in dependent variable. Value of Durbin Watson test statistic was also in acceptable range. This test was basically applied to check the presence of auto correlation. Its range is between 0and 4. Value near to 2 or 2 means no autocorrelation.

Conclusion

This study mainly deals with the determinants of financial inclusion in Pakistan. Availability, usage and access were the three determinants that were considered for study. Johnson co-integration test indicated that availability and access significantly and positively influence the financial inclusion in Pakistan. While impact of usage was not significant. Study recommends that government should spend more to ensure the availability of financial services and they should be in approach of a common man. To enhance usage awareness programs should be launched in both rural and urban areas. Private financial institutions can also perform more efficiently.

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