

## A Comparative Study of Impact of Access to the Financial Services of Human Development Index in Rural and Urban Households of Nanded District

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### Abstract:

The financial inclusion is the inclusion of underserved population of the society to the financial services. The financially excluded population was considered to make them financially inclusive and to provide them the access to the financial services. The Human development Index is the composite function of health, education and socio economic development of the human being. The impact of access to the financial services on the human development index is studied in the present research work. The comparative study of rural and urban households regarding the access of financial services and its impact on Human development index value in Nanded district is studied. It is observed that the access to the financial services has significant impact on the Human development index value in Nanded district.

Keywords: access to financial services, financial inclusion and human development index.

### Introduction

"All our programmes should be helpful for the poor; we have to empower them through financial inclusion<sup>1</sup>" Twitted by Hon'ble Prime Minister Shri Narendra Modi.

"The financial inclusion had received a big boost with the opening of 17 crore bank accounts through the Pradhan Mantri Jan Dhan Yojana and Rs. 20,000 crore deposited in the Jan Dhan accounts reflected the 'Richness of India's poor<sup>2</sup>' addressed by Hon'ble Prime Minister Shri Narendra Modi.

It is rightly said by Dr. Raghuram Rajan, Ex. Governor, RBI that the poverty reduction is speedily achieved through the requirement of widespread development. Therefore different development measures have been delivered by Reserve Bank of India. One of the development measures is Financial Inclusion through which the poverty reduction is possible. The financial inclusion is the addition of weaker sections , low income groups and underserved parts of the

nation to the Financial sector by the way of providing financial access to the financial instruments<sup>3</sup>.

### 1.2 Meaning of Financial Inclusion

The Financial Inclusion is the insertion of financial services to the underserved and weaker section of the society. It is the process of ensuring financial access to the unbanked population of the nation. The financial inclusion is the progression of financial system, financial instrument and overall financial system.

The financial inclusion is the inclusive financing. It includes the conversion of unbanked citizen to the banked customer having the access, usage and welfare related to the financial services. It is the release of financial services to the low income segments of the nation eradicating the financial exclusion where as the financial exclusion includes the extent of underserved, unbanked, weaker section and below poverty line group of the society.

### 1.3 Meaning of Human Development Index

According to Human Development Reports of United Nations Development Programme<sup>5</sup>, Human development is about expanding the richness of human life, rather than simply the richness of the economy in which human beings live. The human development is concerned about the socio economic development and life pattern of human beings.

### 1.4 Impact of Financial Inclusion On Human Development Index

The human development is influenced by the financial inclusion. The financial inclusion provides the access, usage and availability of financial services to human beings. The financial services such as credit services, banking services are useful for people. The financial requirements of human beings can be fulfilled through the financial inclusion. The small businessmen, entrepreneurs and poor people can be benefited by the financial inclusion. It is seen that the country with higher index of financial inclusion, is a developed country and human development index is more. The human development is more in country with higher index of financial inclusion. Whereas the country with smaller index of financial inclusion, is a under developed country and human development index is low. The human development is less in country with smaller index of financial inclusion. It means that greater the extent of the financial inclusion, greater will be the human development. Smaller the extent of the financial inclusion, lesser will be the human development. **Objectives of Research study:** To compare the impact of Access to the Financial Services on HDI in rural and urban households of Nanded district.

**Hypothesis of Research Study** Null hypothesis ( $H_{01}$ ): There is no difference

between the impact of Access to the Financial Services on HDI in rural and urban households of Nanded district.

### 1.5 Review of Literature

According to Global Partnership for Financial Inclusion<sup>6</sup> (2012), The indicators or dimensions- **Usage** indicator is related to Formally banked adults, Adults with credit at regulated institutions, Adults with Insurance, Cashless transactions, Mobile transactional use, High frequency of account use, Saving propensity, Remittances, Formally banked enterprises. **Access** indicator relates to Points of Service, E-money accounts, Interoperability of Points of Service. **Quantity** indicator relates to Financial Knowledge, Financial behavior, Disclosure demands; Dispute Resolution, Cost of Usage and Credit Barriers. The extent of the G20 dimension or indicators is inclusive sufficient to offer a holistic measurement, new indicators may be applied in future. It is suggested to reassess the indicators yearly.

According to World Bank<sup>7</sup> (2015), The indicators or dimensions- **Usage** indicator is related to the ways of using financial services for example promptness and period of the usage of financial service, average saving balance, number of transactions per account, number of Internet payments. The Usage, Access and Quantity indicator measures the extent of financial inclusion hence suggested to measure the financial inclusion.

According to Noelia Cámara and David Tuesta<sup>8</sup> (2014), the degree of financial inclusion is measured by 3 dimensions: usage, barriers and access to financial inclusion. *Weights* given to the dimensions are measured by employing a two-stage Principal Component Analysis. Composite index gives a widespread test of the degree of financial inclusion.

According to Financial Inclusion Data Working Group (FIDWG)<sup>9</sup>, The Core Set of Financial inclusion Indicators provides 2

basic dimensions of financial inclusion: *access* and *usage* of financial services. The *quality* dimension is a more complex topic both conceptually and in terms of measurement, typically requiring demand-side surveys and the use of qualitative indicators.

According to Mandira Sarma<sup>10</sup> (2008), **the dimension I: Banking penetration** banking should be penetrated among all households (served & underserved). The number of citizens holding a bank account is a gauge of the banking penetration of the system. If 100% households have bank accounts, value

of this measure is 1. Researcher may use number of bank accounts as a proportion of the total population as an indicator of this dimension. **The dimension II: Availability of banking services:** It should be easily available to its users. It is measured by the number of bank branches (per 1000 population) and/or by the number of ATM per 1000 people, or the number of bank employees per customer. **The dimension III Usage:** Only having bank account is not enough, the customer should access the account or use the account frequently

## 1.6

### Research Design

Table No. 1.1 Research Design

Sr.No.	Parameter	Description
1	Type of Research	Ex Post Facto Descriptive Research
2	Nature of Research	Quantitative
3	Research Instrument	Structured questionnaire and observation
4	Dependent Variable	All essential parameters of HDI
5	Independent Variables	All essential parameters of financial inclusion
6	Control over Variables	No Control- Ex Post Facto
7	Survey Period	January to September 2016
8	Type of Products	Products of Financial Inclusion
9	Methods of Data Collection	Sample Survey Method through Interrogation
10	Universe	Users of Financial Inclusion Services in Nanded district.
11	Population	Users of Financial Inclusion in rural & urban parts of Nanded district.
12	Sampling Frame	Rural and Urban Users of Financial Inclusion Equally in Nanded district.
13	Sample Elements	Users (Households) of Financial Inclusion Services in Nanded district (Especially past financially excluded households who have been served the financial inclusion services at present) i.e. unbanked respondents turning into banked respondents.
14	Sample Size Determination	Using Mean & Proportionate Sampling Formula
15	Calculated Sample Size	400 respondents (200 rural and 200 urban)
16	Net Responses	380 respondents (190 rural and 190 urban)
17	Response Rate	90% rural & 90% urban respondents.
18	Rejection Rate	10% rural & 10% urban respondents.
19	Sampling Method	Proportionate Stratified Sampling followed by Multilevel Non Probability Convenient Sampling
20	Sources of Data Collection	Primary and Secondary sources.
21	Primary Sources	Structured questionnaire and observation.

22	Secondary sources	Journals, Articles, Books, Magazines
23	Measurement Scales	Nominal, ordinal and interval scale
24	Questions Types	Dichotomous, open ended, closed ended & ranking.
25	Rating Scales Used	Five Point Likert Scale.
26	Data Interpretation	Through graphs, descriptive statistics and inferential statistics
27	Statistical Tools	t test, chi square, ANOVA, descriptive statistical tools and parametric and non parametric statistical tests.
28	Statistical Software Package	Ms Excel 2010 and SPSS 20.

### 1.7 Impact of Access to the Financial (Banking) Services on HDI

The impact of access to the financial (banking) services on HDI could be studied through the following parameters of research questions asked in likert scale as from strongly disagree, disagree, neutral, agree and strongly agree. These parameters are given as 1.1) Bank location is convenient & approachable, 1.2) Bank branch's location is convenient & approachable, 1.3) You have easy access to the useful information, 1.4) ATM is easily accessible by location and operation, 1.5) Bank employees are easily accessible, 1.6) Bank Manager/ Officer is easily accessible, 1.7) Banking services are served fast and easily, 1.8) Banking services are served easily to the specially abled customers, 1.9) There is no barrier to open the account, 1.10) There is no barrier to operate the account, 1.11) Financial services are affordable, 1.12) Bank timings are convenient and accessible, 1.13) You have access to more than one bank and 1.14) Generally, You are satisfied with the access to the financial services. The parameters are divided into before and after the financial inclusion in rural and urban households of Nanded district. The researcher studied all these parameters for the condition- before the financial inclusion and for the condition- after the financial inclusion.

**Before verifying these hypotheses, researcher calculated the value of Cronbachs' alpha<sup>30</sup> (internal consistency among the items of the instrument) for reliability of collected data through questionnaire for all diversified products as**

**Table No. 1.2 Reliability Analysis**

Sr. No	Title	Before	After	No. of Items
1.1 to 1.14	Impact of Access to the Financial (Banking) Services on HDI	0.982	0.943	14

Source: Field Survey and SPSS output

Since the values of Cronbach's Alpha is greater than the accepted value (0.70), hence the instrument is reliable and can be used with other statistical procedures for further investigation.

**Table No. 1.3 Impact of Access to the Financial (Banking) Services on HDI**

Sr.No.	Type	Before						After					
		SD	D	N	A	SA	total	SD	D	N	A	SA	total
1.1	R	56	76	26	17	5	180	14	26	20	73	47	180
	%	15.6	21.1	7.2	4.7	1.4	50	3.9	7.2	5.6	20.3	13.1	50
	U	45	69	34	23	9	180	10	19	22	79	50	180
	%	12.5	19.2	9.4	6.4	2.5	50	2.8	5.3	6.1	21.9	13.9	50
1.2	R	58	79	23	18	2	180	16	29	21	71	43	180
	%	16.1	21.9	6.4	5	0.6	50	4.4	8.1	5.8	19.7	11.9	50

	U	42	74	28	25	11	180	8	18	23	76	55	180
	%	11.7	20.6	7.8	6.9	3.1	50	2.2	5	6.4	21.1	15.3	50
<b>1.3</b>	<b>R</b>	<b>61</b>	<b>81</b>	<b>21</b>	<b>12</b>	<b>5</b>	<b>180</b>	<b>13</b>	<b>31</b>	<b>24</b>	<b>72</b>	<b>40</b>	<b>180</b>
	%	16	22	5.8	3.3	1.4	50	3.6	8.6	6.7	20	11	50
	U	46	69	31	22	12	180	11	19	26	78	46	180
	%	12.8	19.2	8.6	6.1	3.3	50	3.1	5.3	7.2	21.7	12.8	50
<b>1.4</b>	<b>R</b>	<b>64</b>	<b>82</b>	<b>23</b>	<b>8</b>	<b>3</b>	<b>180</b>	<b>15</b>	<b>29</b>	<b>22</b>	<b>74</b>	<b>40</b>	<b>180</b>
	%	17.8	22.8	6.4	2.2	0.8	50	4.2	8.1	6.1	20.6	11.1	50
	U	48	69	30	25	8	180	13	22	27	70	48	180
	%	13.3	19.2	8.3	6.9	2.2	50	3.6	6.1	7.5	19.4	13.3	50
<b>1.5</b>	<b>R</b>	<b>55</b>	<b>86</b>	<b>26</b>	<b>12</b>	<b>1</b>	<b>180</b>	<b>15</b>	<b>27</b>	<b>24</b>	<b>68</b>	<b>46</b>	<b>180</b>
	%	15.3	23.9	7.2	3.3	0.3	50	4.2	7.5	6.7	18.9	12.8	50
	U	47	72	34	21	6	180	8	18	25	83	46	180
	%	13.1	20	9.4	5.8	1.7	50	2.2	5	6.9	23.1	12.8	50
<b>1.6</b>	<b>R</b>	<b>62</b>	<b>79</b>	<b>28</b>	<b>9</b>	<b>2</b>	<b>180</b>	<b>17</b>	<b>27</b>	<b>26</b>	<b>69</b>	<b>41</b>	<b>180</b>
	%	17.2	21.9	7.8	2.5	0.6	50	4.7	7.5	7.2	19.2	11.4	50
	U	45	79	30	21	5	180	5	17	27	78	53	180
	%	12.5	21.9	8.3	5.8	1.4	50	1.4	4.7	7.5	21.7	14.7	50
<b>1.7</b>	<b>R</b>	<b>57</b>	<b>79</b>	<b>25</b>	<b>16</b>	<b>3</b>	<b>180</b>	<b>17</b>	<b>28</b>	<b>22</b>	<b>73</b>	<b>40</b>	<b>180</b>
	%	15.8	21.9	6.9	4.4	0.8	50	4.7	7.8	6.1	20.3	11.1	50
	U	47	73	31	22	7	180	7	18	29	77	49	180
	%	13.1	20.3	8.6	6.1	1.9	50	1.9	5	8.1	21.4	13.6	50
<b>1.8</b>	<b>R</b>	<b>54</b>	<b>77</b>	<b>27</b>	<b>16</b>	<b>6</b>	<b>180</b>	<b>16</b>	<b>26</b>	<b>25</b>	<b>73</b>	<b>40</b>	<b>180</b>
	%	15	21.4	7.5	4.4	1.7	50	4.4	7.2	6.9	20.3	11.1	50
	U	45	78	34	19	4	180	4	18	26	80	52	180
	%	12.5	21.7	9.4	5.3	1.1	50	1.1	5	7.2	22.2	14.4	50
<b>1.9</b>	<b>R</b>	<b>62</b>	<b>77</b>	<b>22</b>	<b>14</b>	<b>5</b>	<b>180</b>	<b>14</b>	<b>31</b>	<b>20</b>	<b>68</b>	<b>47</b>	<b>180</b>
	%	17.2	21.4	6.1	3.9	1.4	50	3.9	8.6	5.6	18.9	13.1	50
	U	48	68	34	21	9	180	8	19	21	76	5	180
	%	13.3	18.9	9.4	5.8	2.5	50	2.2	5.3	5.8	21.1	15.6	50
<b>1.10</b>	<b>R</b>	<b>60</b>	<b>81</b>	<b>19</b>	<b>16</b>	<b>4</b>	<b>180</b>	<b>10</b>	<b>27</b>	<b>24</b>	<b>72</b>	<b>47</b>	<b>180</b>
	%	16.7	22.5	5.3	4.4	1.1	50	2.8	7.5	6.7	20	13.1	50
	U	47	71	34	24	4	180	7	17	24	78	54	180
	%	13.1	19.7	9.4	6.7	1.1	50	1.9	4.7	6.7	21.7	15	50
<b>1.11</b>	<b>R</b>	<b>61</b>	<b>83</b>	<b>22</b>	<b>12</b>	<b>2</b>	<b>180</b>	<b>14</b>	<b>26</b>	<b>22</b>	<b>70</b>	<b>48</b>	<b>180</b>
	%	16.9	23.1	6.1	3.3	0.6	50	3.9	7.2	6.1	19.4	13.3	50
	U	50	71	32	18	9	180	9	16	27	76	52	180
	%	13.9	19.7	8.9	5	2.5	50	2.5	4.4	7.5	21.1	14.4	50
<b>1.12</b>	<b>R</b>	<b>63</b>	<b>79</b>	<b>23</b>	<b>14</b>	<b>1</b>	<b>180</b>	<b>15</b>	<b>29</b>	<b>25</b>	<b>67</b>	<b>44</b>	<b>180</b>
	%	17.5	21.9	6.4	3.9	0.3	50	4.2	8.1	6.9	18.6	12.2	50
	U	48	71	31	24	6	180	11	16	28	75	50	180
	%	13.3	19.7	8.6	6.7	1.7	50	3.1	4.4	7.8	20.8	13.9	50

1.13	R	52	77	29	17	5	180	12	26	22	72	48	180
	%	14.4	21.4	8.1	4.7	1.4	50	3.3	7.2	6.1	20	13.3	50
	U	43	71	28	32	6	180	11	18	27	72	52	180
	%	11.9	19.7	7.8	8.9	1.7	50	3.1	5	7.5	20	14.4	50
1.14	R	57	75	26	18	4	180	15	23	17	71	54	180
	%	15.8	20.8	7.2	5	1.1	50	4.2	6.4	4.7	19.7	15	50
	U	45	72	27	29	7	180	9	21	26	71	53	180
	%	12.5	20	7.5	8.1	1.9	50	2.5	5.8	7.2	19.7	14.7	50

Source: Field Survey and SPSS output

(R: Rural U: Urban, SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree and SA: Strongly Agree)

From the above table, Impact of Access to the Financial Services on HDI is divided into 14 questions built as sub hypotheses and the these 14 items are compared among the rural and urban households to study the impact of financial inclusion on Human Development Index before and after the financial inclusion. The item wise comparison became lengthy and tedious, so it is grouped into different ranges indicating smallest and largest values as follows

**Table No. 1.4 Consolidation of Impact of Access to the Financial Services on HDI**

1.1 to 1.14		R	%	U	%
Before	SD	52 to 64	14.4 to 17.8	42 to 50	11.7 to 13.9
	D	75 to 86	20.8 to 23.9	68 to 79	18.9 to 21.9
	N	19 to 29	5.3 to 8.1	27 to 34	7.5 to 9.4
	A	8 to 18	2.2 to 5	18 to 32	5 to 8.9
	SA	1 to 6	0.3 to 1.7	4 to 12	1.1 to 3.3
	Total	180	50	180	50
After	SD	10 to 17	2.8 to 4.7	4 to 13	1.1 to 3.6
	D	23 to 31	6.4 to 8.6	16 to 22	4.4 to 6.1
	N	17 to 26	4.7 to 7.2	21 to 29	5.8 to 8.1
	A	67 to 74	18.6 to 20.6	70 to 83	19.4 to 23.1
	SA	40 to 54	11.1 to 15	46 to 55	12.7 to 15.3
	Total	180	50	180	50

Source: Field Survey and SPSS output

From the above table, it is observed that 52 to 64 (14.4% to 17.8%) and 42 to 50 (11.7% to 13.9%) rural and urban respondents strongly disagree that there is an impact of financial services before the financial inclusion respectively. Due to the introduction of financial inclusion policy, it is reduced to 10 to 17 (2.8% to 4.7%) and 4 to 13 (1.1% to 3.6%) rural and urban respondents strongly disagree the same after the financial inclusion. The 75 to 86 (20.8% to 23.9%) and 68 to 79 (18.9% to 21.9%) rural and urban respondents disagree that there is an impact of financial services before the financial inclusion respectively. Due to the introduction of financial inclusion policy, it is reduced to 23

to 31 (6.4% to 8.6%) and 16 to 22 (4.4% to 6.1%) rural and urban respondents disagree the same after the financial inclusion. The impact of neutral opinion before and after the financial inclusion is very negligible in rural and urban respondents.

The 8 to 18 (2.2% to 5%) and 18 to 32 (5% to 8.9%) rural and urban respondents agree that there is an impact of financial services before the financial inclusion respectively. Due to the introduction of financial inclusion policy, it is increased to 67 to 74 (18.6% to 20.6%) and 70 to 83 (19.4% to 23.1%) rural and urban respondents agree the same after the financial inclusion. The 1 to 6 (0.3% to 1.4%) and 4 to 12 (1.1% to 3.3%) rural and urban

respondents strongly agree that there is an impact of financial services before the financial inclusion respectively. Due to the introduction of financial inclusion policy, it is raised to rural and urban respondents strongly agree the same after the financial inclusion.

There are two variables i.e. nominal and interval for access to the financial services before the financial inclusion and the interval variable is dependent. Researcher wants to measure the strength of relationship between

Conclusion:

The conclusion of hypothesis is given in the following table as

**Table No. 1.5 Hypothesis 01.1-01.14 Decisions**

Sr. No.	Title	Before	After
		Financial Inclusion	
1.1	Bank location is convenient & approachable	Rejected	Accepted
1.2	Bank branch's location is convenient & approachable	Rejected	Rejected
1.3	You have easy access to the useful information.	Rejected	Accepted
1.4	ATM is easily accessible by location and operation.	Rejected	Accepted
1.5	Bank employees are easily accessible.	Rejected	Accepted
1.6	Bank Manager/ Officer is easily accessible.	Rejected	Rejected
1.7	Banking services are served fast and easily.	Rejected	Rejected
1.8	Banking services are served easily to the specially abled customers.	Accepted	Rejected
1.9	There is no barrier to open the account.	Rejected	Rejected
1.10	There is no barrier to operate the account.	Rejected	Accepted
1.11	Financial services are affordable.	Rejected	Accepted
1.12	Bank timings are convenient and accessible.	Rejected	Accepted
1.13	You have access to more than one bank.	Rejected	Accepted
1.14	Generally, You are satisfied with the access to the financial services.	Rejected	Accepted

### Suggestions:

The access to the financial services may be enhanced by increasing the number of bank branches and by promoting financial inclusion. The common suggestions made for improving financial inclusion and to strengthen the Human Development Index in Nanded district are

- The number of Females' Bank account should be enhanced so that financial inclusion can be made. For example Sukanya Shiksha Yojana a deposit scheme for girl child.
- The aadhar card should be linked to each bank account so that

the variables or a test of the statistical significance of differences between groups. Assuming that the interval scaled variable is normally distributed in the population and scedasticity is checked to know whether t test is applicable or F test (ANOVA) is applicable. If variances are equal, homo scedasticity is present and F test (ANOVA) is applicable. In other cases when hetero scedasticity is present, Welch statistic, Brown-Forsythe statistic and t-test are used.

the access ,usage and creditability can be known easily.

- The low cost solution has to be built for all banking solutions.
- The mobile banking facility should be used for Public to Government and Government to Public payments.
- The agriculture customers should be provided agriculture loan and by aadhar linkage of land records, the credit supply can be given to actual cultivators.
- Kisan credit card along with crop insurance should be given to farmers.

- The Business Correspondents (BCs) of banks may play vital role in providing access to the financial services in remote places so their role and responsibility should be flexible and they may work as bankers on the behalf of banks.
- A geographical information system (GIS) to map all banking access points.

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