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Measuring Financial Inclusion in Jammu & Kashmir State: An Empirical Study

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Abstract: *Finance is important for mobilising any economy. Governments across the world strive to provide access to finance to the commons. In India Financial Inclusion has become a key term lately and a plethora of initiatives like No Frill accounts, Overdraft limit, Kisaan Credit card, appointing Business Correspondents, Direct Benefit Transfer etc have been taken to include the poor under the umbrella of mainstream development by providing access to finance. Measuring the impact to these services is also important to know how initiatives under financial inclusion are helping the people and to understand the outreach and impact of these initiatives. Researchers across the world have developed many indexes to measure financial inclusion. These indexes mainly focus on factors like access to financial services, penetration of the financial services and the utilization of the services. The present paper aims to study the determinants of financial inclusion and to measure the Financial Inclusion across districts of Jammu & Kashmir state and comparing the level of financial inclusion among 22 districts of the state. For measuring financial inclusion geographical and demographical aspects have been taken into consideration keeping in view the wide geographical spread and difficult terrain of the state. Many indexes fail to take into consideration the contribution of Business correspondents in delivery of banking services. The present index has also considered the availability of business correspondent services as one of the factors of Financial Inclusion. This is a maiden attempt to compute financial inclusion in J&K state.*
Key Words: *Financial Inclusion; Financial Inclusion Index; Business Correspondents*

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I. Introduction

Providing universal access to banking services and improving the forms of credit delivery, especially for the weaker sections of the population is the basic agenda of RBI's Financial Inclusion plan. Since last decade many initiatives have been taken by Government of India and RBI to improve the access of banking services for the people. Since India has a wide geographical spread, hence providing access to the banking service is not an easy task. To supplement this aim Business Correspondents have been appointed by the banks in the areas where brick and mortar branches are not opened yet. Business correspondents provide cash in cash out services to the people in the absence of a branch and an ATM. The RBI has also formed State Level Banking Committee (SLBC) in every state to keep a check on the financial inclusion progress in the state. The lead bank of the state is responsible for formulating and achieving annual plans. KYC requirements for opening a bank account have been relaxed and PMJDY have been introduced to boost the aim to complete Financial Inclusiveness in the country. Many other initiatives have been undertaken by RBI to support the cause.

Jammu and Kashmir state is of political and Geographical importance to the country. Its geographical location and difficult terrain makes it difficult to provide access to the banking services. The state is divided into 3 regions Jammu, Kashmir and Ladakh. All the three regions are different from each other on geographical grounds. The JKSLBC Jammu & Kashmir State Level Banking committee has appointed SBI bank as lead bank for Jammu region and Jammu & Kashmir bank as lead bank for Kashmir and Ladakh region.There are 2027 bank branches in the state which caters to 1.25 crore population. 2405 ATM's have also been installed in the state. A total of 1436 Business correspondent have also been appointed by the banks (jkslbc) to provide banking services to the people where brick and mortar branches are not opened yet. Financial literacy camps are also organised by the banks in the rural areas to spread awareness about the different financial services provided and to inculcate the habit of savings among the people.

II. Literature Review

Honohan (2004) computed financial inclusion using both demand and supply side variables. In 2004 the author studied access to financial services across 160 countries and found less evidence to prove causal relationship between access to financial services and poverty reduction. Main variables used by the author were payments, transforming risk, savings mobilization and monitoring of user of funds. Beck, Kunt and Peria (2007)

measured financial inclusion across 99 countries taking into consideration geographic and demographic penetration. The authors considered variables such as bank branches per 1000 sq km, bank branches per 100000 people, ATM per 1000 sq km and ATM per 100000 people for computing the index. C-GAP (2009) in their survey considered savings, payments, credit and delivery variables in measuring financial access. Results highlighted population served per branch was lower in urban areas than in rural areas. Sarma (2008) developed Index of Financial Inclusion (IFI) using penetration, availability and usage variables and computed IFI for 49 countries. The results reveal that most of the countries with high index of financial inclusion are high income countries. Many countries having low index of financial inclusion belonged to high or upper middle income groups. With some exception general trend reflect that countries with high IFI also had high income levels. Arora (2010) measured financial access across countries of the world which included dimensions of Human Development Index. The author in the index also included non-banking financial institutions and considered outreach, ease and cost variables to compute the index. Kunt and Klapper (2012) made a Global Findex Database which had savings, borrowings, payments and insurance data of 148 countries. The results showed only 50% of adult population having savings account with formal institutions of finance. Authors highlighted various barriers to financial access such as cost of the services, physical distance to the banking institution, lack of documentation required for opening an account. CRISIL (2013) calculated an index of financial inclusion with the help of branch penetration, credit penetration and deposit penetration variables. Rahman (2013) calculated IFI in Malaysia using variables like convenient accessibility, take up rate, responsible usage and satisfaction level. The index highlighted the use of index in highlighting the progress of policy initiatives. Gupte, Vekataramani and Gupta (2012) computed Financial Inclusion index (FII) across states of India and compared the values with IFI by Sarma. The authors used Ease and Cost of services in addition to Penetration, Availability and Usage variables. Ambarakhane, Singh and Venkataramani (2016) measured financial inclusion of 21 Indian states using demand, supply, infrastructure and drag dimensions. Supply side dimension has 7 variables, supply side dimension has 26 variables, infrastructure dimension has 5 variables and drag dimension has 3 variables. The authors have compared the index values with CRISIL Inclusix and Rajan Committee report. The results indicate no Indian state under high fii category. Only 2 states under high middle category and 4 states under lower middle category, rest all the states came under low category. Kainth (2011) developed an index of financial inclusion using indicators like banking penetration, availability of banking services and usage of banking system. The author has measured financial inclusion across districts of Punjab. The results are classified into 4 categories namely very high financial inclusion, high financial inclusion, medium financial inclusion and low financial inclusion. More realistic indicators have been used in the index

III. Methodology

The present study tries to compute financial inclusion across districts of Jammu & Kashmir state. 3 variables of financial inclusion: Penetration of banking services, Availability of financial services and usage of financial services have been taken into consideration. This study also takes into consideration the contribution of business correspondents in delivery of banking services. Business correspondents are appointed by the banks to provide cash in cash out services in rural areas where other measures of banking service delivery like ATM or Brick and Mortar branches are not available. The penetration of banking services and availability of banking services is considered on geographical and demographic front.

An index should be able to measure all the aspects. The present index takes into consideration the geographical as well as demographic penetration of the variables. The variables which define the penetration and availability dimensions are Branch penetration, ATM penetration and presence of Business Correspondents. Many authors use number of bank accounts per 1000 adults as an indicator for banking penetration. In this case we have not considered this variable as the total number of bank accounts in the state are exceeding more than the population of the state. This indicates multiple accounts per person. Total number of active savings bank accounts is 114 % of the total population of the state. Our index is inspired by mandira sarma (2008) and Gursharan Kainth (2011) index of financial inclusion.

- Penetration of Banking Services (p_i)

Penetration of banking services is measured by 3 indicators:

a. Demographic Branch penetration i.e number of bank branches per 1,00,000 people[2]
b. Demographic ATM penetration i.e number of ATM's per 1,00,000 people
c. Demographic Business correspondents penetration i.e number of Business Correspondents appointed per 1,00,000 people

- Availability of Banking Services (a_i)

Availability of banking services is measured by 3 indicators:

a. Geographic Branch penetration i.e number of bank branches per 1000 sq.km
b. Geographic ATM penetration i.e number of ATM's per 1000 sq.km

c. Geographic Business Correspondent penetration i.e number of Business Correspondents appointed per 1000 sq.km

- Usage of Banking Services (u_i)

a. Usage of banking services is defined as volume of deposits + credit as percentage of GDP

The dimension index difor the i_{th} dimension is computed by the following formula

$$di = \frac{Ai - mi}{Mi - mi} \qquad (1)$$

Where,

A_i= Actual value of dimension i

M_i=Maximum value of dimension i

m_i=Minimum value of dimension i

This formula will ensure the value of dimension lies between 0 to 1. Higher value of the dimension indicates higher achievement of a particular district in that dimension. Since a dimension has multiple variables hence final value of dimension will be sum of results of the value of each sub dimension or variables defining that dimension

$$\mathbf{D_{iI}}=(d_{i1}+d_{i2}+d_{i3}+\ldots..+d_{in})/n \qquad (2)$$

The index of financial inclusion will be computed by the following equation

$$\text{IFI} = 1 - \sqrt{\frac{(1-p_i)^2+(1-a_i)^2+(1-u_i)^2}{3}} \qquad (3)$$

Where,

p_i is penetration dimension

a_i is access dimension

u_i is utilization dimension

On the basisof the index values 4 categories have been created

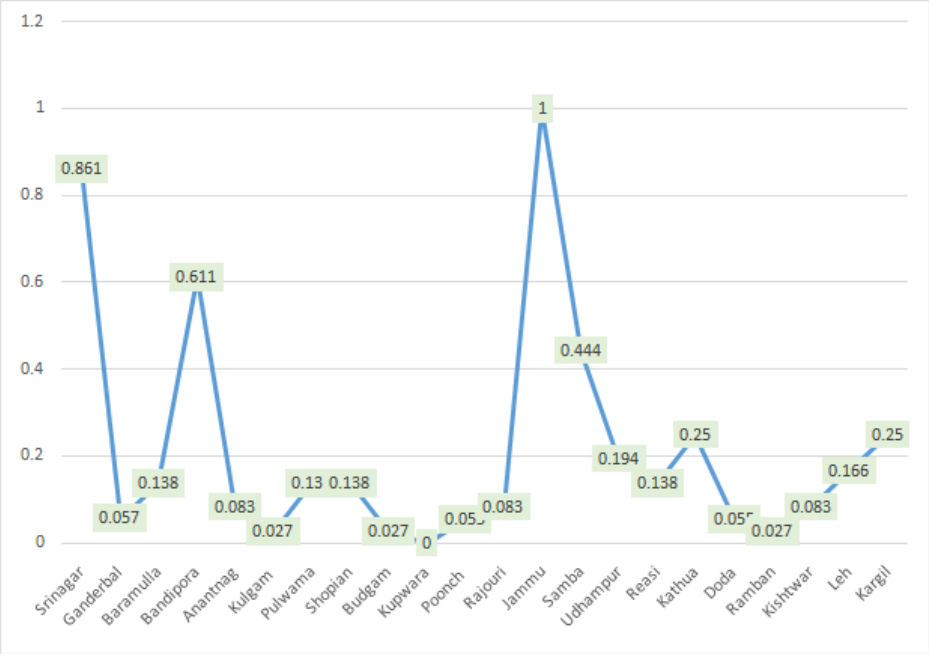
1. $0.66 < \text{IFI} \leq 1.00$- Very High Financial Inclusion
2. $0.50 \leq \text{IFI} < 0.66$- High Financial Inclusion
3. $0.30 \leq \text{IFI} < 0.50$- Medium Financial Inclusion
4. $0.00 \leq \text{IFI} < 0.30$- Low Financial Inclusion

3.1 Penetration Index

District	Bank Branch/1Lakh population	ATM's/1lakh Population	BC/1lakh Population	Penetration Index
Srinagar	16.97	2.58	2.58	.31
Ganderbal	14.12	11.76	11.76	.30
Baramulla	15.47	16.46	16.46	.41
Bandipora	10.96	10.7	10.7	.19
Anantnag	12.42	8.99	8.99	.22
Kulgam	12.72	15.78	15.78	.33
Pulwama	14.65	14.3	14.3	.37
Shopian	13.52	18.4	18.4	.42
Budgam	13.4	11.27	11.27	.28
Kupwara	9.99	12.75	12.75	.21
Poonch	9.64	7.13	7.13	.13
Rajouri	13.38	12.92	12.92	.31
Jammu	28.3	10.91	10.91	.71
Samba	27.59	12.85	12.85	.62
Udhampur	19.1	10.99	10.99	.40
Reasi	16.52	14.3	14.3	.43
Kathua	13.95	13.78	13.78	.35
Doda	13.66	16.58	16.58	.38
Ramban	11.27	10.57	10.57	.23
Kishtwar	11.7	12.13	12.13	.27
Leh	32.21	11.23	11.23	.84
Kargil	17.75	9.94	9.94	.39

The penetration index measures presence of banking service per one lakh population in a particular district. This index signifies the demographic penetration of banking services. The results indicated higher penetration in Leh district because of the limited population of the district. The winter capital of the state, Jammu has the penetration index .71, being winter capital of the state and high population banks have opened more branches in jammu followed by district samba with index value .62, samba district is closest to jammu and an industrial hub which attracts banks to open more outlets in the region. Population in the district is

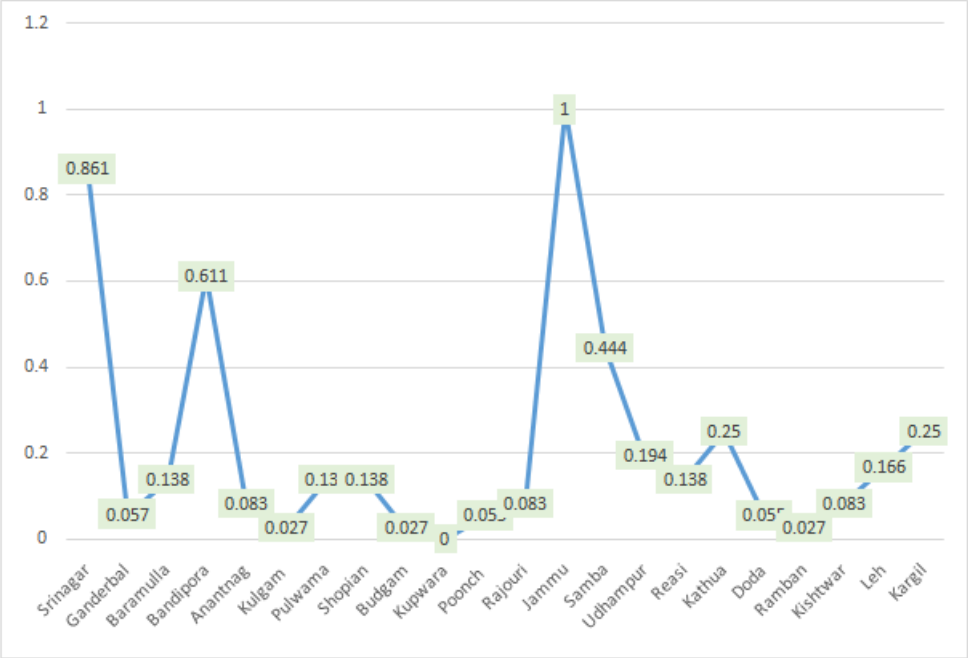
comparatively less than other districts resulting in higher penetration index value. Districts with low penetration index value like Poonch (.13), Bandipora (.19), Kupwara (.21) are the districts which are away from the twin capital cities and have a wide spread of population living in difficult terrains. Providing financial services in these terrains is a challenging task for commercial banks this might be the reason for less penetration in the said districts.



Penetration index across districts of j&k state

3.2 Availability Index

District	Bank Branch/1000 sq.km	ATM's/1000 sq.km	BC/1000 sq.km	Availability Index
Srinagar	94.25	197.03	14.36	.58
Ganderbal	162	142.85	135.1	1.0
Baramulla	34	25.28	36.18	.23
Bandipora	108	75.37	105.52	.78
Anantnag	33.63	35.89	24.34	.20
Kulgam	50.6	30.92	62.79	.36
Pulwama	59.37	56.5	57.93	.41
Shopian	58.74	50.58	79.95	.46
Budgam	73.66	75.12	61.99	.48
Kupwara	36.56	24.37	46.65	.26
Poonch	27.47	33.45	20.31	.17
Rajouri	32.69	31.55	31.55	.22
Jammu	139.81	209.23	53.92	.83
Samba	97.34	94.02	45.35	.52
Udhampur	23.29	22.85	13.4	.12
Reasi	30.25	33.74	26.17	.20
Kathua	32.44	34.32	32.06	.22
Doda	24.28	18.64	29.48	.17
Ramban	24.07	25.58	22.57	.16
Kishtwar	3.48	3.87	3.61	.02
Leh	.95	1.55	0.33	.00
Kargil	1.78	2.42	0.99	.00



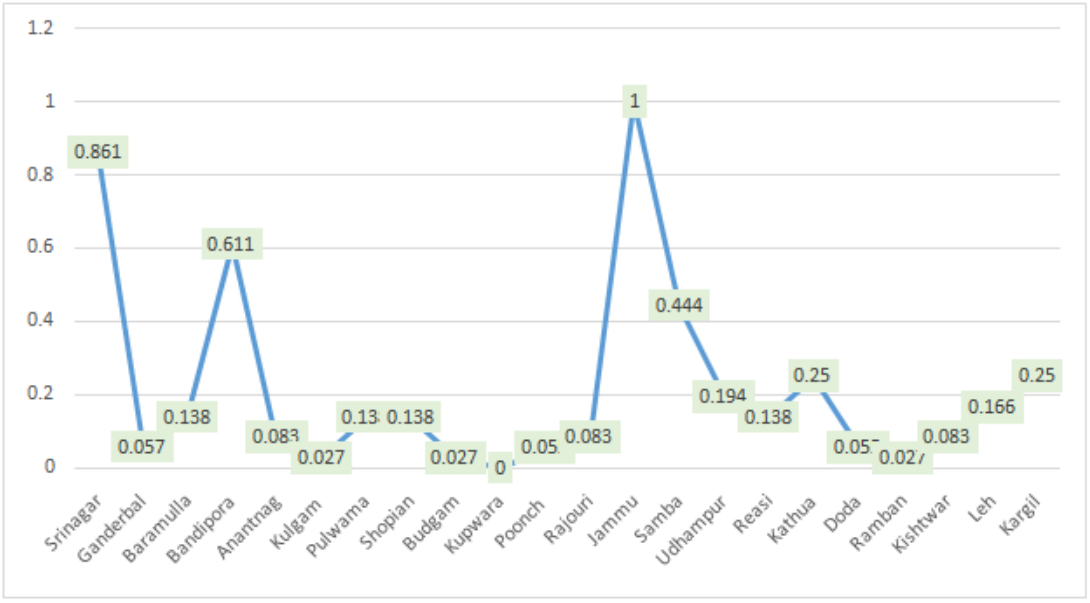
Availability index across districts of j&k state

The availability index signifies the availability of banking services per 1000 sq .km area. It measures the geographical penetration of the banking services. The results reveal highest index for Ganderbal district (1.00). It is due to the less geographical spread of the district followed by Jammu (.83). District Jammu is densely populated and a plane area district of the state which makes the availability of banking services easier. District Bandipora a remote district in Kashmir division shows high availability index of .78 due to strong presence of Business Correspondents in the area. Kishtwar district shows very low availability index of 0.02 due to non-availability of banking services throughout geographical spread of the district. Districts leh and kargil districts of the Ladakh division show almost negligible presence of the banking services due to the huge geographical spread of the districts. The geographical area of leh district alone is almost equal to that of 10 districts of Jammu region, moreover the population density is confined to some areas only, which makes it difficult to provide banking services through the area. Although more business correspondents can be appointed in the areas where population is less so that banking services can be made available in these areas.

3.3 Usage Index

District	Volume of Credit and deposit/GSDP	Usage Index
Srinagar	0.38	0.861
Ganderbal	0.09	0.057
Baramulla	0.11	0.138
Bandipora	0.06	0.611
Anantnag	0.09	0.083
Kulgam	0.07	0.027
Pulwama	0.11	0.138
Shopian	0.11	0.138
Budgam	0.07	0.027
Kupwara	0.06	0.000
Poonch	0.08	0.055
Rajouri	0.09	0.083
Jammu	0.42	1.000
Samba	0.22	0.444
Udhampur	0.13	0.194
Reasi	0.11	0.138
Kathua	0.15	0.250
Doda	0.08	0.055
Ramban	0.07	0.027
Kishtwar	0.09	0.083
Leh	0.33	0.166
Kargil	0.15	0.250

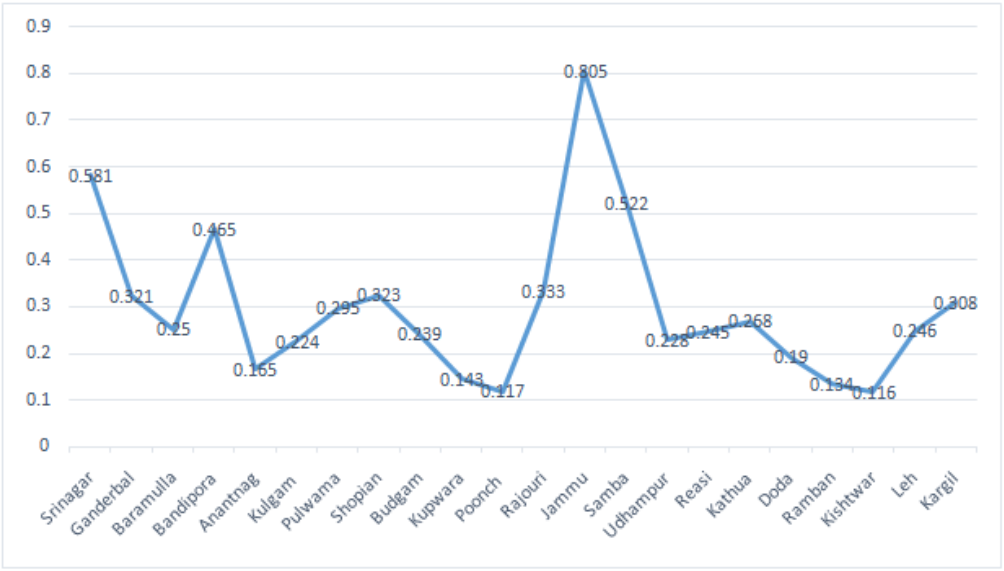
Usage index defines the actual usage of financial services. It is measures as ratio of volume of credit and deposit to the GSDP of the district. The results shows highest index values for both capital cities Jammu (1.00) and Srinagar (.861). It is followed by district Bandipora (.611) which is explained due to the presence of business community in the area. District samba has an index value of (.44) which can be due to presence of industries in the area. Districts like kupwara with rationale value (0.00) shows the lowest index value followed by rajouri (0.083), Kishtwar (0.083), Budgam (0.027) and Poonch (0.055). The low index values of these areas can be due to the geographical location of the areas.



Usage index across districts oh j&k state

3.4 Index of Financial Inclusion (IFI) for Jammu & Kashmir State

District	Penetration Index	Usage Index	Availability Index	IFI	Rank
Srinagar	.31	0.861	.58	0.581	2
Ganderbal	.30	0.057	1.0	0.321	7
Baramulla	.41	0.138	.23	0.25	11
Bandipora	.19	0.611	.78	0.465	4
Anantnag	.22	0.083	.20	0.165	18
Kulgam	.33	0.027	.36	0.224	16
Pulwama	.37	0.138	.41	0.295	9
Shopian	.42	0.138	.46	0.323	6
Budgam	.28	0.027	.48	0.239	14
Kupwara	.21	0.000	.26	0.143	19
Poonch	.13	0.055	.17	0.117	21
Rajouri	.31	0.083	.22	0.333	5
Jammu	.71	1.000	.83	0.805	1
Samba	.62	0.444	.52	0.522	3
Udhampur	.40	0.194	.12	0.228	15
Reasi	.43	0.138	.20	0.245	13
Kathua	.35	0.250	.22	0.268	10
Doda	.38	0.055	.17	0.19	17
Ramban	.23	0.027	.16	0.134	20
Kishtwar	.27	0.083	.02	0.116	22
Leh	.84	0.166	.00	0.246	12
Kargil	.39	0.250	.00	0.308	8



Financial inclusion across districts of j&k state

IV. Results and Discussions

Results highlight only 1 district namely Jammu (0.806) under very high financial inclusion category. 2 districts namely Srinagar (.581) and Samba (.522) in high financial inclusion bracket. 5 districts namely Ganderbal (.321), Bandipora (.465), shopian (.323), Rajouri (.323) and Kargil (.308) under Medium financial inclusion and 14 districts namely Baramulla (.250), Anantnag (.165), Kulgam (.224), Pulwama (.295), Budgam (.239), Kupwara (.143), Poonch (.117), Udhampur (.228), Reasi (.245), Kathua (.268), Doda (.190), Ramban (.134), Kishtwar (.116) and Leh (.246) under low financial inclusion. Since 14 out of 22 districts of the state.Districts which show high financial inclusion are the capital cities with high population density. Penetration of branches and ATM's are much higher than then other districts. Banks in order to earn more profits open branches in such areas where population density and commercialisation is high. This is the reason why we find banking penetration in the areas of high population density and industries much higher. Brick and mortar branches of commercial banks in Jammu are 433. Srinagar has a total of 210 branches. Rural districts such as Kargil has 25 branches andKishtwar has 27 branches. Number of ATM's in Jammu are 648 and 439 in Srinagr to provide banking services to people. Whean compared to rural districts there are only 34 ATM's in Kargil and 30 ATM's in Kishtwar. There are only 13 ATM's per 1 lakh population in Kishtwar and about 12 bank branches per 1 lakh population. Whereas in Jammu there are 42 ATM's per 1 lakh population and 28 bank branches per 1 lakh population. This comparison hence shows that the penetration of banking services in rural districts in quite low. Commercial banks tend to open branches in the areas where density of population is higher. Commercial banks get more business from these areas. On the other hand population in rural districts are not having access to adequate financial services. Merely opening up of bank accounts cannot be considered as financial inclusion until utilization of these accounts be increased, which can be done only if presence of banking outlets be increased. In rural areas business correspondents have been appointed by the banks to provide access to financial services which have their own limitations. Customer service points (CSP's) or BC's operate on ICT mode which requires strong internet connection and precise communication devices which sometimes hinders the process and internet connectivity is poor in rural areas moreover people are less aware of the benefits of availing banking services, in this regard more financial literacy camps should be organised to make people aware of the services available and to inculcate the habit of savings among people.

V. Limitations of the study

Many instruments to measuring financial inclusion are available which use different variables. Only a limited variables could be used for this due to unavailability of data. No agency in the state is keeping record of such data such as bank accounts per 1 lac people, this variable could not be used as there is no record to support this variable in the state. Gathering other data for the study is also a cumbersome process as most of the data is not available online and concerned offices have to be visited to gather such data. Another limitation is multiplicity of bank accounts. In urban areas people are holding multiple bank accounts whereas in rural areas many individuals may not be holding any bank account, Still number of active bank accounts in the state exceeds the population which hampers the actual result. District Wise GSDP is calculated approximately due to unavailability of exact figures.

VI. Implications of the study

This study is a maiden attempt to measure financial inclusion district wise in the state. Due to non-availability of data the study was not done before. As the study highlights the condition of availability of financial services across districts it can help policy makers to focus on districts in which people are deprived from the formal sources of finance and other financial services. The SLBC (state level banking committee) meets every quarter to discuss the progress in achieving financial inclusion and to set targets (Financial Inclusion Plan) for the next quarter. This study can be used as a benchmark to pave path for future policies and to focus on rural districts where access to baking services is comparatively less. People at large will be benefitted if the future policies framed will focus on the problems face by the people in rural areas and they may get better access to banking services which in turn will result in increased usage of the banking services.

References

[1]. Reserve Bank of India, (January 2014), "Report of the Technical Committee on Mobile Banking",RBI, Available at: http://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/TMB070214BF.pdf (accessed on 12 December 2014)
[2]. Rangarajan, C. (2008), "Report of the Committee on Financial Inclusion", Reserve Bank of India
[3]. http://www.jkslbc.com/slbcMeeting104.php
[4]. Honohan, P., 2004a. Financial development, growth and poverty: how close are the links? In: Goodhart, C. (Ed.), Financial Development and Economic Growth: Explaining the Links. Palgrave, London.
[5]. Honohan, P., 2004b. Data on microfinance and access: thinking about what is available and what is needed. Unpublished working paper. The World Bank.
[6]. Beck, T., Demirguc-Kunt, A., & Martinez Peria, M. S. (2007). Reaching out: Access to and use of banking services across countries. Journal of Financial Economics, 85(1), 234–266. https://doi.org/10.1016/j.jfineco.2006.07.002
[7]. CGAP (Consultative Group to Assist the Poor). 2009. Financial Access 2009: Measuring Access to Financial Services around the World. Washington, DC: CGAP
[8]. Arora, R. U. (2010), "Measuring Financial Access", Griffith University, Discussion Paper in Economics, Vol.7, pp.1-21
[9]. Demirguc-Kunt, A., and Klapper, L. (2012), Measuring financial inclusion, The global findex database, World Bank.
[10]. Crisil (June 2013), "A Report on Index to Measure India's Progress on Financial Inclusion." CRISIL, Available at: http://crisil.com/pdf/corporate/CRISIL-Inclusix.pdf (accessed on 28 October 2014)
[11]. Rahman, Z.A. (2013). Financial inclusion in malaysia. Asian institute of finance, 12, 7-11
[12]. Gupte, R., Venkataramani, B., & Gupta, D. (2012). Computation of Financial Inclusion Index for India. Procedia - Social and Behavioral Sciences, 37, 133–149. https://doi.org/10.1016/j.sbspro.2012.03.281
[13]. Ambarkhane D, Singh A, Venkataramani BInternational Journal of Rural Management, vol. 12, issue 1 (2016) pp. 72-100 Published by Sage Publications India Pvt. Ltd
[14]. Kainth, S. Gursharan (2011) Developing an Index of Financial Inclusion, https://www.microfinancegateway.org/sites/default/files/mfg-en-paper-developing-an-index-of-financial-inclusion-dec-2011.pdf
[15]. Sarma, M. (2008) Index of Financial Inclusion. Working Paper No. 215. India: Indian Council for Research on International Economic Relations.
[16]. Dasgupta, R. (Jun. 27 - Jul. 10, 2009), "Two Approaches to Financial Inclusion", Economic and Political Weekly, Vol. 44, No. 26/27, pp. 41-44
[17]. Dev, S.M. (Oct. 14-20, 2006), "Financial Inclusion: Issues and Challenges", Economic and Political Weekly, Vol. 41, No. 41 pp. 4310-4313
[18]. IMF (2014), "Financial Access Survey", Available at: http://data.imf.org/?sk=41e672ac- 765b-4bc0-9960-fd93b53df8bd
[19]. Kumar, N. (2013), "Financial Inclusion and Its Determinants: Evidence from India", Journal of Financial Economic Policy, Vol.5, Issue 1, p. 4-19.

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