

## FINANCIAL INCLUSION IN ASSAM (INDIA): A STUDY WITH SPECIAL REFERENCE TO BODOLAND TERRITORIAL REGION (BTR)

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### Abstract

In order to achieve sustainable economic development, financial inclusion is inevitable. This is why financial inclusion has become a policy priority for the government. The Government of India has been strongly establishing its financial inclusion mandate. The Reserve Bank of India (RBI) and the Government of India has also been taken several measures to augment financial inclusion. However, despite these efforts marked sections of people are still outside the ambit of the formal financial system. The financial inclusion status of Assam is not very impressive in comparison to all India level. According to CRISIL Inclusix (2018), Assam is at 27<sup>th</sup> rank against all the states and union territories of the country. Similar is the situation of Bodoland Territorial Region (BTR) of Assam. Baksa district of BTR is at 632<sup>nd</sup> rank which is at the list of bottom 50 out of 666 districts of India. The present paper considers three dimensions of financial inclusion *viz.* number of bank branch per 1000 population, bank branch per 1,000 KM<sup>2</sup> and usage of banking services (C-D ratio) and studied the status of financial inclusion of Assam in general and BTR in particular. It is seen that the financial inclusion status in the state and in the BTR region is low. Kokrajhar district of BTR is the worst performer in the region.

**Keywords:** Development, Financial Inclusion, Reserve Bank of India, Assam, BTR

### 1. Introduction

In order to achieve sustainable economic development, financial inclusion is also equally important. This is why majority of researchers and policy makers are exercising the link between these two. The leaders of G20 countries considered financial inclusion as one of most prominent issues of development agenda (Park and Mercado, 2018). Financial inclusion plays a crucial role in stimulating economic activity as it facilitates enhanced accessibility for consumers as well as businesses to the necessary resources for financing consumption and investment (Omar & Inaba, 2020).

The term financial inclusion has been defined by various institutions though its facets have been changing from time to time. There is no universally accepted definition of financial inclusion/exclusion. The Rangarajan Committee (2008)<sup>1</sup> defines financial inclusion as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost.

In the Indian context, financial inclusion means the provision of affordable financial services, *viz.* access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to be excluded. Financial inclusion is delivery of banking services at an affordable cost to the vast sections of disadvantaged and low income groups (Leeladhar, 2005).

A large numbers of people are unemployed and are financially insecure. Therefore a huge group of population is still either underbanked or unbanked. A bank account is a primary

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<sup>1</sup>A committee on financial inclusion (Chairman: Dr. C. Rangarajan) has been constituted by the Government of India in June 2006 to recommend a strategy to achieve higher financial inclusion in the country. The Committee has submitted its report on January, 2008. The report is available at [http://www.nabard.org/report\\_comfinancial.asp](http://www.nabard.org/report_comfinancial.asp)

requirement which enables access to any of the banking services or products (Mahadeva, 2008). Around the world, for most people having an account at a financial institution serves as an entry point into the formal financial sector (Demirguc-Kunt and Klapper, 2013). A formal account can encourage saving for future and access to credit. But the people with no deposit bank account will keep their money either at home or in an informal financial institution. Savings in informal financial institution may give them higher return initially but this may be uncertain to get back their initial investment (Maity and Sahu, 2018).

A bank branch is a major intermediation between the bank and the public. Therefore, branch expansion is essential towards financial inclusion. Similarly the opening of a bank account is one of the key requirements towards financial inclusion. Access to and participation in the financial system through bank accounts can empower the disadvantaged people which in turn can contribute to their social and economic development. However, people must exercise and avail different financial services like credit, insurances, etc. after opening an account. Then only mission financial inclusion will be fruitful in true sense.

In Assam over 95% of households are excluded from formal financial sources (Das, 2015). Financial inclusion status in the state is lower than the national average (Maity and Sahu, 2022). Assam is in the below the average category of financial inclusion (score between 35.0 and 50.0) as per CRISIL Inclusix, 2018<sup>2</sup>. The State is at 27<sup>th</sup> rank against all the states and union territories of the country.

One of the largest autonomous councils in Assam is Bodoland Territorial Council (BTC). Under the Sixth Schedule of the Indian Constitution, BTC was formed on 10<sup>th</sup> February 2003. After 27 January 2020, it has been known as Bodoland Territorial Region (BTR). It was formed with enhanced executive and legislative powers. It comprises of five districts *viz.* Kokrajhar, Chirang, Baksa, and Udalguri and Tamulpur. In terms of financial inclusion, all the districts of BTR region are at very low rank in comparison to other districts of Assam (CRISIL Inclusix, 2018). Baksa district of BTR is at 632<sup>nd</sup> rank which is at the list of bottom 50 out of 666 districts of India.

## 2. Literature Review

Financial inclusion has assumed public policy relevance in recent years. A large body of empirical literature suggests that developing the financial sector and improving access to finance may accelerate economic growth along with a reduction in income inequality and poverty Kaur and Kapuria (2020). However, in India the second largest unbanked population with around 190 million people still has no access to formal financial services (Demirguc-Kunt et al., 2017). Various research work has been done in the national level (Gupte *et al.*, 2012; Chakravarty and Pal, 2013; Kumar, 2013) due to its growing importance. Studies have also been done in India's North-eastern regional level (Bhanot *et al.*, 2012; Maity and Sahu, 2022) and in the level of the state of Assam too (Ghosh and Sarma, 2020; Maity and Sahu, 2019).

In a study, Das and Guha (2015) seek to understand district-level banking coverage in village areas of Assam. According to their analysis, in comparison to other regions in India, NER is much lag behind. In the same line, Maity (2019) has also found that the status of financial inclusion in NER is comparatively lower than the national average.

Some other studies (Ghosh and Sarma, 2020; Borgohain, 2016), analysed financial inclusion status of Assam taking tree dimension *viz.* availability, accessibility and usage. They

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<sup>2</sup> CRISIL Inclusix is India's first comprehensive measure of financial inclusion in the form of an index. It is a relative index that has a scale of 0 to 100. CRISIL Inclusix assesses the degree of financial inclusion at the national, regional, state and district levels.

found no district doing well in all the dimensions and seen that districts have wide variations in their performances.

In another study Chakraborty and Barman (2013) have studied the challenges and opportunities of financial inclusion in Tripura with the primary data. The challenges of financial inclusion in Tripura are posed by visionary regulators, political involvement, limitations of information technology, particularly of internet, and inefficient project appraisal system.

Kaur and Kapuria (2020) have examined the determinants of accessing institutional and non-institutional finance across male- and female-headed households in rural India.

A few studies are there assessing financial inclusion of the state of Assam. But the study of BTAD especially on financial inclusion is very scarce indeed. But, in order to build an inclusive financial system to achieve inclusive growth in the region it becomes imperative to know more about the financial indicators of the region. The present study is an attempt to contribute in this area.

### 3. Objective

The prime objective of the present study is to assess the status of financial inclusion of the state of Assam in general and of BTR region in particular.

### 4. Methods

The present study is descriptive in nature. Statistical data for 33 districts of Assam are collected from the numbers of secondary sources like Census of India, the RBI Database on Indian Economy, the Reports of the State Level Bankers Committee (SLBC), Statistical Handbook of Assam. Different journals, periodicals and internet webs are also used as the sources of secondary data. The Kamrup Metro district is excluded from the analysis of this study due to the fact that all the banking and financial indicators are significantly higher than all other districts of the State despite having comparatively smaller geographical area. The present study is based on three dimensions of financial inclusion *viz.* number of bank branch per 1000 population (i.e. demographic penetration), bank branch per 1,000 KM<sup>2</sup> (i.e. geographic penetration) and usage of banking services (C-D ratio).

In order to convert raw data unit free, they are normalized (to keep values between 0 and 1) with the following method. For a particular indicator the highest value is treated as the best value and the lowest one as the worst value.

$$\text{Normalised Value of Indicator} = \left( \frac{\text{Observed } X_i - \text{Worst } X_i}{\text{Best } X_i - \text{Worst } X_i} \right)$$

An index of financial inclusion (IFI) is constructed by using Principal Component Analysis (PCA) technique and financial inclusion status of BTR region is discussed along with the other districts of Assam. Appropriate weights for each dimensions are derived based on the variance and correlation structure of the data set. The numerical weights are dataset-specific which are derived exclusively from the PCA of the Assam districts, and may differ in other regions or datasets. In order to construct multidimensional financial inclusion indices similar methodologies have been used in the study of Amidzic et al. (2014), Nguyen (2020).

### 5. Analysis and Finding

It is important to note that all the districts of Assam differ greatly in terms of topography along with culture, ethnicity, language, literacy, and religion. All the four districts of BTR region are attached with international borders with Bhutan. Kokrajhar district is located in interstate border. The districts also differ in basic infrastructures, including banking and financial services.

Because of these differences, the progress of financial inclusion may also differ. Hence, it is desirable to look at financial inclusion at the district level.

To analyse the status of financial inclusion in the study area, three dimensions of financial inclusion are computed. Depending on the normalised values of Index of Financial Inclusion (IFI), districts are divided into three categories *viz.*

- (i)  $0.5 < IFI \leq 1$  – High financial inclusion
- (ii)  $0.3 \leq IFI < 0.5$  – Medium financial inclusion
- (iii)  $0 \leq IFI < 0.3$  – Low financial inclusion

### 5.1. Dimension I: Availability of Bank Branch per 1000 Population (Demographic Penetration)

From the supply side, the availability of banking services is one of the major components of financial inclusion. Higher demographic and geographic penetration indicates easier geographic access and smaller distance between bank branches and customers (Beck et al., 2007). Here in this study, total number of bank branches per 1000 population (i.e. demographic penetration) has been used as the indicator of financial inclusion.

Table: 1 District-wise Availability of Banking Service (Demographic Penetration)

District Name	Total Bank Branch*	Total Population**	Branch per 1000 population#	Dimension- I #
Baksa	57	950075	0.0600	0.3169
Barpeta	122	1693622	0.0720	0.4164
Biswanath	57	612491	0.0931	0.5900
Bongaigaon	59	738804	0.0799	0.4810
Cachar	163	1736617	0.0939	0.5966
Charaideo	35	458615	0.0763	0.4517
Chirang	35	482162	0.0726	0.4209
Darrang	69	928500	0.0743	0.4352
Dhemaji	45	686133	0.0656	0.3631
Dhubri	87	1394144	0.0624	0.3368
Dibrugarh	182	1326335	0.1372	0.9547
Dima Hasao	30	214102	0.1401	0.9786
Goalpara	69	1008183	0.0684	0.3867
Golaghat	120	1066888	0.1125	0.7503
Hailakandi	44	659296	0.0667	0.3726
Hojai	57	931218	0.0612	0.3270
Jorhat	132	924952	0.1427	1
Kamrup	172	1517542	0.1133	0.7575
Karbi Anglong	64	660955	0.0968	0.6211
Karimganj	88	1228686	0.0716	0.4129
Kokrajhar	51	887142	0.0575	0.2962
Lakhimpur	91	1042137	0.0873	0.5426
Majuli	16	167304	0.0956	0.6112
Morigaon	67	957423	0.0700	0.3994

Nagaon	152	1892550	0.0803	0.4847
Nalbari	84	771639	0.1089	0.7205
Sibsagar	97	692435	0.1401	0.9783
Sonitpur	125	1311619	0.0953	0.6085
South Salmara	12	555114	0.0216	0
Tinsukia	148	1327929	0.1115	0.7419
Udalguri	49	831668	0.0589	0.3080
West Karbi Anglong	22	295358	0.0745	0.4366

Source: \*Basic Statistical Returns of Scheduled Commercial Banks in India - March 2023

\*\*Statistical Handbook of Assam 2023 (Figures are provisionally estimated for 33 districts from Census of India, 2011 by Directorate of Economics and Statistics, Assam.)

# Researcher's own calculation

Table 1 expresses the availability of bank branch per 1000 population (i.e. demographic penetration) in Assam. It can be seen from the above table that Jorhat district has the highest number of branches per 1000 population among all the districts while South Salamara has the lowest number of branches per 1000 population. For the purpose of computation of the availability dimension in terms of demographic penetration, figure of Jorhat is taken as the best value and the figure of South Salmara as the worst value. Accordingly Jorhat has recorded the highest normalised value 1 and South Salamara has recorded the lowest normalised value 0 in this respect. The table reveals that 13 districts lie in the range of high financial inclusion. Among these, Dibrugarh, Dima Hasao and Sibsaagar districts show pretty high performance in this range. Again, 16 districts are in the range of medium financial inclusion. Only one district (Kokrajhar) is in the range of low financial inclusion. All the districts of BTR region except Kokrajhar lie in the medium value range between 0 and 0.3 in terms of their achievements in this particular dimension. But, the performance of Udalguri and Baksa is marginally high to enter into the range of medium performer of financial inclusion.

## 5.2. Dimension II: Availability of Bank Branch per 1000 KM<sup>2</sup> (Geographic Penetration)

The geographic availability of banking services is another component of financial inclusion. Higher geographic penetration implies easier reach of customers to their bank branches. This has a great impact on the access of banking products. In the following table bank branch per 1,000 KM<sup>2</sup> (i.e. geographic penetration) is shown and then normalized each values according to the formula given in methodology to find out the real status of financial inclusion under dimension- II.

Table: 2 District-wise Availability of Banking Service (Geographic Penetration)

District	Total Bank Branch*	Total Area (Sq. KM)**	Bank Branch Per 1000 KM <sup>2</sup> #	Dimension-II#
Baksa	57	2457	23.1990	0.2315
Barpeta	122	2282	53.4619	0.6420
Biswanath	57	1796	31.7372	0.3473
Bongaigaon	59	1093	53.9799	0.6491
Cachar	163	3786	43.0534	0.5008
Charaideo	35	1087	32.1987	0.3536
Chirang	35	1923	18.2007	0.1637
Darrang	69	1585	43.5331	0.5073
Dhemaji	45	3237	13.9018	0.1053
Dhubri	87	1511	57.5778	0.6979
Dibrugarh	182	3381	53.8302	0.6470

Dima Hasao	30	4888	6.1375	0.0000
Goalpara	69	1824	37.8289	0.4299
Golaghat	120	3502	34.2661	0.3816
Hailakandi	44	1327	33.1575	0.3666
Hojai	57	1422	40.0844	0.4605
Jorhat	132	1758	75.0853	0.9354
Kamrup	172	3105	55.3945	0.6683
Karbi Anglong	64	7366	8.6886	0.0346
Karimganj	88	1809	48.6457	0.5767
Kokrajhar	51	3296	15.4733	0.1267
Lakhimpur	91	2277	39.9649	0.4589
Majuli	16	1093	14.6386	0.1153
Morigaon	67	1551	43.1979	0.5028
Nagaon	152	2550	59.6078	0.7254
Nalbari	84	1052	79.8479	1.0000
Sivasagar	97	1581	61.3536	0.7491
Sonitpur	125	3409	36.6676	0.4142
South Salmara	12	665	18.0451	0.1615
Tinsukia	148	3790	39.0501	0.4465
Udalguri	49	2012	24.3539	0.2471
West Karbi Anglong	22	3068	7.1708	0.0140

Source: \* Basic Statistical Returns of Scheduled Commercial Banks in India - March 2023

\*\* Statistical Handbook of Assam 2023

# Researcher's own calculation

It is evident from the Table 2 that in terms of bank branch per 1,000 KM<sup>2</sup> (i.e. geographic penetration), Nalbari district is the best performer and Dima Hasao district is the worst performer in terms of bank branch per 1,000 KM<sup>2</sup>. Among the districts under study West Karbi Anglong and Karbi Anglong district have only almost 7 and 9 bank branches per KM<sup>2</sup> respectively. This may be due to the geographical location of the districts as both the districts fall in hilly area. Majuli district has also shown very low performance in this dimension. A total of 9 districts are in the low and medium ranges of financial inclusion in terms of geographical penetration. 12 districts are in the range of high performer. Among those Jorhat district is showing quite high geographical penetration of financial inclusion. All the districts of BTR region are in low range of financial inclusion under this dimension. Kokrajhar district among those is the worst performer. Thus, Kokrajhar district is in low range of financial inclusion indicator in both the dimensions (dimension –I and II)

### 5.3. Dimension III: Usage of Banking Services (Credit-Deposit Ratio)

Simply having a bank account is not sufficient for successful financial inclusion. Effective utilization of banking services is the must. Utilisation can take several forms, including credits, deposits, payments, remittances, transfers and so on. However, due to a lack of available data only two essential banking services *viz.* credit and deposit is incorporated to calculate the usage dimension in the current study. Accordingly, credit-deposit ratio has been calculated to measure this dimension. In order to capture the usage dimension, credit-deposit ratio of the scheduled commercial banks of all the 33 districts of Assam have been calculated in Table 3.

Table: 3 District-wise Availability of Banking Service in Assam in the FY2022-2023  
(Amount in Rs. Lakhs)

District Name	Total Deposit*	Total Advances*	CD Ratio#	Usage Dimension#
Baksa	139718.66	103452.96	0.7404	0.7425
Barpeta	563416.91	384790	0.6830	0.6367
Biswanath	205363.73	125873.17	0.6129	0.5079
Bongaigaon	370620.01	232925.51	0.6285	0.5365
Cachar	1041074.29	489718.79	0.4704	0.2456
Charaideo	139370.75	64157.19	0.4603	0.2271
Chirang	167007.24	86251.91	0.5165	0.3303
Darrang	291272.69	201949.37	0.6933	0.6558
Dhemaji	187434.18	159603.31	0.8515	0.9469
Dhubri	379666.09	214812.89	0.5658	0.4211
Dibrugarh	1246564.53	656559.72	0.5267	0.3492
Dima Hasao	125828.27	49478.35	0.3932	0.1036
Goalpara	272443.18	163020.74	0.5984	0.4811
Golaghat	433014.91	316247.32	0.7303	0.7239
Hailakandi	202016.72	95527.2	0.4729	0.2501
Hojai	322532.68	143975.65	0.4464	0.2014
Jorhat	846146.08	513446.74	0.6068	0.4966
Kamrup	755333.59	551629.4	0.7303	0.7239
Karbi Anglong	226534.19	169057.6	0.7463	0.7532
Karimganj	463335.53	156116.66	0.3369	0.0000
Kokrajhar	382250.48	174985.83	0.4578	0.2224
Lakhimpur	343544.02	302449.96	0.8804	1.0000
Majuli	58381.45	34762.12	0.5954	0.4757
Morigaon	217417.07	156993.99	0.7221	0.7087
Nagaon	687566.47	491011.69	0.7141	0.6941
Nalbari	362345.42	237709.36	0.6560	0.5872
Sibsagar	564399.34	352345.13	0.6243	0.5287
Sonitpur	666032.28	428851.42	0.6439	0.5648
South Salmara	37584.1	19447.56	0.5174	0.3321
Tinsukia	838449.51	471208.84	0.5620	0.4141
Udalguri	182289.48	128994.24	0.7076	0.6821
West Karbi Anglong	36683.72	32061.49	0.8740	0.9883

Source: \*Basic Statistical Returns of Scheduled Commercial Banks in India (March, 2023)  
# Researcher's own calculation

In Table 3 it can be seen that among all the districts Lakhimpur district has the highest value in terms of credit-deposit ratio and Karimganj district has the lowest value in this respect. Thus Lakhimpur has recorded the highest value 1 in respect of its achievement in the usage dimension while Karimganj has recorded the lowest value 0. Apart from Karimganj, other states which have recorded low values after normalisation in respect of their achievements in the usage dimension are Dima Hasao, Kokrajhar, Kamrup Metro, Cachar, Charaideo and Hailakandi. Even

after being the district of capital city, Kamrup Metro’s performance is very low in terms of credit-deposit ratio. While 8 districts show medium value, other 16 districts recorded high value of usage dimension of financial inclusion. In the BTR region, 2 districts viz. Baksa and Udalguri lies in the high value of usage dimension. But, Kokrajhar and Chirang fall in the lower value range of the same.

#### 5.4. District-Wise Index of Financial Inclusion

In order to construct an Index of Financial Inclusion (IFI), multidimensional analysis of the approaches of financial inclusion is necessary. Therefore, present study rests upon three dimensions viz. number of bank branch per 1000 population (i.e. demographic penetration), bank branch per 1,000 KM<sup>2</sup> (i.e. geographic penetration) and usage of banking services (C-D ratio). The statistical package STATA is used to construct IFI with Principal Component Analysis. After normalization of all three dimensions, weights for each of them are calculated.

Table: 4 Initial Eigenvalues

Component	Eigen value	% Variance	Cumulative %
Component-1	1.557	51.9%	51.9%
Component-2	0.999	33.3%	85.2%
Component-3	0.444	14.8%	100.0%

The principal component analysis (PCA) shows that the first Principal Component (PC1) has the Eigen value equals to more than one. It explains almost 52% of the total variance of the included variables in the study making the construction of the IFI suitable.

Table: 5 Component Loadings (Unrotated)

Variable	PC1	PC2	PC3
Bank Branch per 1000 Population (BBPOP)	0.819	0.313	0.480
Bank Branch per 1,000 KM <sup>2</sup> (BBKM)	0.801	0.368	-0.473
Usage of Banking Services (CDR)	0.103	0.876	0.469

Table 5 of the unrotated component loadings shows that BBPOP (0.819) and BBKM (0.801) have strong influence on PC1, while CDR has minimum influence (0.103). After varimax rotation (Table 6), each variable loads more cleanly on distinct components, with CDR defining Rotated PC1 (0.981) and BBPOP and BBKM primarily defining Rotated PC2 (0.959). This rotation expresses the underlying structure of the data showing the contributions of each variable to each dimensions of financial inclusion. The weights (score coefficients) to calculate IFI shows that BBPOP and BBKM have positive and almost equal contributions, whereas CDR has a small negative weight indicating its weaker or inverse contribution in PC1.

Table: 6 Rotated Component Matrix (Varimax) and Weights of Variables for IFI

Variable	Rotated Component Matrix (Varimax)			Score Coefficients
	PC1	PC2	PC3	Weight (PC1)
BBPOP	0.173	0.959	0.222	0.703
BBKM	0.169	0.950	-0.263	0.705
CDR	0.981	0.144	0.127	-0.090

Following formula is used to calculate IFI for different districts (d)

$$IFI_d = 0.703 \cdot BBPOP_d + 0.705 \cdot BBKM_d - 0.090 \cdot CDR$$

Where BBPOP, BBKM, and CDR are indicators representing number of bank branch per 1000 population (i.e. demographic penetration), bank branch per 1,000 KM<sup>2</sup> (i.e. geographic penetration) and usage of banking services (C-D ratio) respectively

It is notable that CDR has a negative weight, which occurs because, in the PCA of this dataset, higher CDR values tend to appear in districts with lower overall financial inclusion (as captured by BBPOP and BBKM). The negative weight ensures that the IFI accurately reflects the dominant patterns of financial inclusion in the study area. The numerical weights (0.703, 0.705, –

0.090) are dataset-specific and exclusively derived from the PCA of the Assam districts. With this formula, the district-wise IFI values are constructed and further rescaled between 0 and 1 to know the level of inclusiveness. This may be helpful for the policy makers in policy formulations for the districts especially for the low performers.

Table: 7 District-Wise Index of Financial Inclusion and Financial Inclusion Status

District	BBPOP	BBKM	CDR	IFI (Raw)	IFI (Rescaled)	Rank	FI Status
<b>Baksa</b>	<b>0.3169</b>	<b>0.2315</b>	<b>0.7425</b>	<b>0.3192</b>	<b>0.1906</b>	<b>28</b>	<b>Low</b>
Barpeta	0.4164	0.642	0.6367	0.6880	0.4896	13	Medium
Biswanath	0.59	0.3473	0.5079	0.6139	0.4295	17	Medium
Bongaigaon	0.481	0.6491	0.5365	0.7475	0.5378	9	High
Cachar	0.5966	0.5008	0.2456	0.7504	0.5401	8	High
Charaideo	0.4517	0.3536	0.2271	0.5464	0.3748	20	Medium
<b>Chirang</b>	<b>0.4209</b>	<b>0.1637</b>	<b>0.3303</b>	<b>0.3816</b>	<b>0.2412</b>	<b>26</b>	<b>Low</b>
Darrang	0.4352	0.5073	0.6558	0.6046	0.4220	18	Medium
Dhemaji	0.3631	0.1053	0.9469	0.2443	0.1299	30	Low
Dhubri	0.3368	0.6979	0.4211	0.6909	0.4919	12	Medium
Dibrugarh	0.9547	0.647	0.3492	1.0959	0.8201	4	High
Dima Hasao	0.9786	0	0.1036	0.6786	0.4820	14	Medium
Goalpara	0.3867	0.4299	0.4811	0.5316	0.3628	22	Medium
Golaghat	0.7503	0.3816	0.7239	0.7313	0.5247	10	High
Hailakandi	0.3726	0.3666	0.2501	0.4979	0.3355	23	Medium
Hojai	0.327	0.4605	0.2014	0.5364	0.3667	21	Medium
Jorhat	1	0.9354	0.4966	1.3178	1.0000	1	High
Kamrup	0.7575	0.6683	0.7239	0.9385	0.6926	5	High
Karbi Anglong	0.6211	0.0346	0.7532	0.3932	0.2507	25	Low
Karimganj	0.4129	0.5767	0	0.6968	0.4967	11	Medium
<b>Kokrajhar</b>	<b>0.2962</b>	<b>0.1267</b>	<b>0.2224</b>	<b>0.2775</b>	<b>0.1569</b>	<b>29</b>	<b>Low</b>
Lakhimpur	0.5426	0.4589	1	0.6150	0.4304	16	Medium
Majuli	0.6112	0.1153	0.4757	0.4681	0.3114	24	Medium
Morigaon	0.3994	0.5028	0.7087	0.5715	0.3951	19	Medium
Nagaon	0.4847	0.7254	0.6941	0.7897	0.5720	7	High
Nalbari	0.7205	1	0.5872	1.1587	0.8710	3	High
Sibsagar	0.9783	0.7491	0.5287	1.1683	0.8788	2	High
Sonitpur	0.6085	0.4142	0.5648	0.6690	0.4741	15	Medium
South Salmarā	0	0.1615	0.3321	0.0840	0.0000	32	Low
Tinsukia	0.7419	0.4465	0.4141	0.7991	0.5796	6	High
<b>Udalguri</b>	<b>0.308</b>	<b>0.2471</b>	<b>0.6821</b>	<b>0.3293</b>	<b>0.1989</b>	<b>27</b>	<b>Low</b>
West Karbi Anglong	0.4366	0.014	0.9883	0.2279	0.1166	31	Low

Source: Author's calculation based on PCA

### 5.5. Financial Inclusion Status in BTR Region

From the above it is clear that the financial inclusion status of the BTR region reveals significant variation. Overall, these districts viz. Baksa, Chirang, Kokrajhar, and Udalguri, are standing in the lower layer of Assam's financial inclusion index notably trailing behind the State's top performing districts like Jorhat and Sibsaagar. Based on the calculated IFI, Baksa (0.3192) and Udalguri (0.3293) districts demonstrate almost similar levels of financial inclusion. On the other

hand, Kokrajhar (0.2775) records the lowest IFI among the four, reflecting weak performance in the field of financial inclusion. Chirang (0.3816) performs slightly better due to relatively higher demographic penetration. Collectively, these findings highlight that the districts of Bodoland Territorial Region (BTR) lag behind the state average in financial inclusion where particularly Baksa and Kokrajhar has been remaining underprivileged (Figure 7). Their relatively low IFI values indicate inadequate banking penetration and underdeveloped financial infrastructure.

## 6. Conclusion

To bring the financially excluded people under the umbrella of financial inclusion, regulators have been taking number of initiatives. Some of these may be mentioned from the nationalization of banks in 1969 to the present initiatives like Jan Dhan Yojana in 2014, PMJDY, PMJJBY, PMSBY and the *Orunodoi* Scheme of the Government of Assam. However, certain barriers continue to impede the state's progress towards financial inclusion. Lower savings due to low income, low financial literacy, and a lack of adequate banking facilities especially in rural and remote areas are some amongst them. In the BTR region some districts have achieved little success, while others are still lagging behind. It has to keep in mind that most of the people of BTR region live in rural area. Problem of low literacy is another threat to financial inclusion. In such cases people in the region may not be aware of different financial products and services. The facilities of bank branches, ATMs are also inadequate in these areas of the state. Hence, appropriate policies should be implemented to address these issues to foster a more inclusive financial system in those areas. Policy attention should be toward expanding banking infrastructure, digital financial services, and credit outreach in these areas to bridge regional disparities in financial inclusion within Assam. Number of CSPs has to be increased. Of course people's participation is the utmost necessity.

## Reference

- Amidzic, G., Massara, A., & Mialou, A. (2014). *Measuring financial inclusion: A multidimensional index*. BBVA Research. Available at: [https://www.bbva.com/wp-content/uploads/2014/09/WP14-26\\_Financial\\_Inclusion1.pdf](https://www.bbva.com/wp-content/uploads/2014/09/WP14-26_Financial_Inclusion1.pdf)
- Beck, T., Demirguc-Kunt, A. and Peria, M.S.M. (2007). Reaching out: access to and use of banking services across countries, *Journal of Financial Economics*, Vol. 85 No. 1, pp. 234-266.
- Bhanot, D., Bapat, V. and Bera, S. (2012). Studying financial inclusion in North-East India, *International Journal of Bank Marketing*, Vol. 30 No. 6, pp. 465-484.
- Borgohain, N. (2016). Financial Inclusion in Assam- An Overview. *Research Journal of Humanities and Social Sciences*, 7(2), 111-120.
- Chakravarty, S.R. and Pal, R. (2013). Financial inclusion in India: an axiomatic approach, *Journal of Policy Modeling*, Vol. 35 No. 5, pp. 813-837.
- CRISIL Inclusix (2018). Financial Inclusion Surges, Driven by Jan-Dhan Yojana. Volume 4. CRISIL Ltd.
- Das, T. (2015). Informal finance- A case study of North East India. *Journal of Rural Development*, 34(1), pp. 17-30. <https://nirdprojms.in/index.php/jrd/article/view/93231/69084>
- Das, T. and Guha, P. (2015). A study on the differences in the banking parameters between pre- and post-financial inclusion periods: some evidence for India, *The IUP Journal of Bank Management*, Vol. 14 No. 1, pp. 39-56.
- Demirguc-Kunt, A. and Klapper, L. (2013). Measuring Financial Inclusion: Explaining Variation in Use of Financial Services Across and Within Countries, *Brookings Papers on Economic Activity*, Vol. 2013 No. 1, pp. 279-340.
- Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S. and Hess, J. (2017). The Global Findex Database: Measuring Financial Inclusion and the Fintech Revolution, World Bank Group.

- Department of Economics and Statistics (2018). Statistical Handbook of BTC 2017-18. Office of the Joint Director, Economics and Statistics, BTC, Kokrajhar
- Ghosh, M. and Sarma, K. (2020). Financial Inclusion Status: An Appraisal with Special Reference to the State of Assam, *International Journal of Management*, Vol. 11 No. 10, pp. 841-847.
- Government of Assam (2023). Statistical Handbook of Assam 2023. Directorate of Economics and Statistics, Government of Assam, Guwahati-28
- Goyal, C. (2008). Financial inclusion in the northeastern region of India with special reference to Assam, *The Icfai Journal of Applied Finance*, Vol. 14 No. 12, pp. 54-64.
- Gupte, R., B. Venkataramani and Gupta, D. (2012). Computation of financial inclusion index for India, *Procedia-Social and Behavioral Sciences*, 37: pp. 133-149. Available at: <https://doi.org/10.1016/j.sbspro.2012.03.281>.
- Kaur, S. and Kapuria, C. (2020). Determinants of financial inclusion in rural India: does gender matter?, *International Journal of Social Economics*, Vol. 47 No. 6.
- Kumar, N. (2013). Financial inclusion and its determinants: Evidence from India. *Journal of Financial Economic Policy*, 5(1): pp. 4-19. Available at: <https://doi.org/10.1108/17576381311317754>.
- Leeladhar, V. (2005). Taking Banking Services to the Common Man – Financial Inclusion. Commemorative. Lecture by Deputy Governor, Reserve Bank of India at the Fedbank Hormis Memorial Foundation at Ernakulam on December 2, 2005. Available at: <https://www.bis.org/review/r051214e.pdf>. Accessed on 16-08-2021
- Mahadeva, M. (2008). Financial growth in India: whither financial inclusion?, *Margin: The Journal of Applied Economic Research*, Vol. 2 No. 2, pp. 177-197.
- Maity, S. and Sahu, T.N. (2018). Bank Branch Expansion and Financial Inclusion: Evidence from Selected Commercial Banks in India, *Al-Barkaat Journal of Finance and Management*, Vol. 10 No. 1, pp. 48-65.
- Maity, S. and Sahu, T.N. (2019). A study on regional disparity of bank performance towards financial inclusion, management today, *International Journal of Business Studies*, Vol. 9 No. 1, pp. 24-31.
- Maity, S., & Sahu, T. N. (2022). Financial inclusion in north-eastern region: An investigation in the state of Assam, *Vilakshan - XIMB Journal of Management*, 19(2), pp. 206-221. doi.org/10.1108/XJM-09-2020-0118
- Nguyen, T. T. H. (2020). Measuring financial inclusion: A composite financial inclusion index for developing countries. *Qualitative Research in Financial Markets*, 87(3), 257–265. <https://doi.org/10.1108/QREF-01-2023-0029>
- Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A Panel Data Analysis. *Journal of Economic Structures*, 9(1), pp. 1–25
- Park, C.Y. and Mercado, R. (2015). Financial Inclusion, Poverty and Income Inequality in Developing Asia, Asian Development Bank Economics Working Paper Series, No. 426
- Sharma, A. (2011). An exploratory study on traditional financial institutions of Lower Assam. Centre for Microfinance Research, Bankers' Institute of Rural Development and Indian Institute of Bank Management, Guwahati. Available at: [https://birdlucknow.nabard.org/sdm\\_downloads/an-exploratory-study-on-traditional-financial-institutions-of-lower-assam/](https://birdlucknow.nabard.org/sdm_downloads/an-exploratory-study-on-traditional-financial-institutions-of-lower-assam/)
- Singh, W. C. (2009). Informal financial sector: the case of the state of Manipur. *International Review of Business Research Papers*, 5(5), pp. 160-168. Available at: <https://zantworldpress.com/journals/?j=international-review-of-business-research-papers>
- Swamy, V. (2011). Financial inclusion in India: an evaluation of the coverage, progress and trends, *The IUP Journal of Financial Economics*, Vol. 9 No. 2, pp. 7-26.

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