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Statistical Analysis of Priority Sector Credit By Commercial Banks in India

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ABSTRACT
Statistical Methods for Social Research using SPSS takes a more applied approach to conventional statistics by focusing on more analytical approach. Instead of being purely theory-oriented, emphasis will be more on the practical application of a variety of statistical techniques to supplied datasets. Working with datasets, it will cover widely-used statistical methods including descriptive statistics, data visualization, statistical inference, categorical data, correlation and regression, analysis of variance and multivariate analysis.

In the present study an attempt is made to analysis of commercial Banks credit towards Priority Sector credit which is most prominent topic in economic development and eliminating disparities. The key focus is on calculation and application of Compound growth rates and t-test. Compound growth rated are calculated to know the extent of growth factor in commercial banks' lending and t- test values are calculated to test the validity of growth rates. Thus, Statistical calculations part and parcel of every research for analyzing data, interpreting data and implementing policy decision. The present study is an endeavor in this direction.

Keywords: *SPSS, Statistical Methods, t-test, commercial Banks, Compound growth*

1. INTRODUCTION
The priority sector lending is mainly intended to ensure that assistance from banks to those sectors which have not received adequate support. The attainment of socio economic priorities like growth of agriculture, promotion of small entrepreneurs, development of backward areas etc. is the major responsibility of government. Since 1970, Reserve Bank of India (RBI) and Government of India have stipulated guidelines for lending to priority sector lending by banks/ financial institutions. The same was revised during 2007 and overall priority sector lending target was fixed at 40 per cent for domestic banks and 32 per cent for foreign banks. The agricultural advances should be 18 per cent and weaker sections advances should be 10 per cent of total advances.

However, the banks are not able reach the prescribed target of lending to priority sector due to over dues mounting and non-performing assets (NPAs). Agricultural sector is the most important sector in India. The demand for agriculture arises due to increase in demand for agriculture produce, high yielding varieties, modernization, green revolution etc.

Moreover the demand for and supply of credit varies from region to region due to irrigation, nature and fertility of land climate etc. With this back drop the present study is an attempt to present the various lacunae of priority sector lending faced by commercial banks.

2. COMMERCIAL BANKS ADVANCES TO PRIORITY SECTOR INCLUDING AGRICULTURE

Agricultural advances by commercial banks are direct and indirect. Development envisages transformation traditional subsistence farming into modernized activity. In view of this, commercial banks progressively entered into financing agriculture directly, which can be considered as a novel feature. Commercial banks have provided direct finance to farmers in the form of short-term crop loans for agricultural production and medium and long-term loan for increasing productivity of the land.

Short-term crop loans are usually given to farmers for periods ranging from six to twelve months and are mainly used for meeting seasonal requirements like seeds, manures, fertilizers and insecticides. Such advances are expected to be repaid at the time of the harvest.

The period of medium-term credit generally varies from one year to five years and is given for purposes such as purchase of tractors, power tillers, pump sets and bullocks. These loans are to be repaid by half-years or annual instalment which usually coincides with the period of harvesting crop.

Long- term credit is generally for periods larger than five years against mortgage of immovable property.

Apart from supplying direct finance to farmers, commercial banks also provide finance to farmers indirectly through agencies and individuals, farmers' development agency. The commercial banks advances to agriculture (direct and indirect) and priority sector were shown in Table 1.

Table 1: Commercial Banks Advances to Priority Sector including Agriculture during 2008-17.

(Rs. Billion)

Year	Agricultural advances			Priority sector advances	Total advances
	Direct	Indirect	Total		
2008	5148.4 (10.6)	1901.7 (3.9)	7050.1 (14.5)	25098.9 (52)	8908.66 (100)
2009	6217.0 (7.2)	2226.5 (2.6)	8443.5 (9.8)	31133.6 (36)	11578.07 (100)
2010	8303.8 (7.4)	2687.9 (2.4)	10991.7 (9.8)	40077.5 (35.6)	15174.97 (100)
2011	11212.6 (7.4)	4309.3 (2.9)	15521.7 (10.3)	54677.3 (36.2)	19470.96 (100)
2012	14437.2 (7.5)	5824.2 (3.0)	20261.4 (10.5)	70375.6 (36.4)	24170.04 (100)
2013	17613.6 (7.5)	7326.1 (3.1)	24939.7 (10.5)	82477.2 (35)	28575.25 (100)
2014	21563.5 (7.8)	8378.0 (3.0)	29941.5 (10.8)	96574.3 (34.8)	33456.19 (100)
2015	26507.1 (8.2)	10565.9 (3.3)	37073 (11.5)	114040.6 (35.1)	40741.68 (100)
2016	36025.3 (9.1)	14692.3 (3.77)	50717.6 (12.87)	133886.0 (34)	47908.74 (100)
2017	44075.80 (9.6)	14258.53 (3.1)	58344.33 (12.65)	149697.1 (32.5)	55064.95 (100)
Mean	19110.4300	7217.0430	26328.4530	79803.810	28504.9010

Source: RBI, Relevant issues of Report on Trend Progress of Banking in India

Note: Figures in the parentheses are percentage to total.

Table:1.1Compound growth rates and T-calculated values of commercial banks advances during 2008-17

Calculated Element	Direct Agricultural Advances	Indirect Agricultural Advances	Total Advanced	Priority Sector Advances	Total Advances
Compound growth rate	26.94 %	25.09 %	26.47 %	21.95 %	22.43 %
t - value	4.6281*	4.8161*	4.6947*	5.8185*	5.7591**

Source: Computed from Table 1

Note: *Significant at both 1 per cent and 5 per cent levels
Table 1 reveals the advances to agriculture and priority sector advances. It can be seen from the table that both the percentages of advances to agriculture and priority sectors are below prescribed norms due to inclusion of foreign banks. As segregations of advances bank-wise are not available only total advances are considered. The annual compound growth rates are impressive and significant both at 1 and 5 per cent levels.

3. BANK CATEGORY WISE SHARE OF PRIORITY SECTOR ADVANCES

To present a clear picture of priority sector advances bank wise share is presented in Table 2.

Table 2: Bank Category- wise Priority Sector Advances of Commercial Banks in India during 2008-17
(Rs. Crores)

ending 31st March	Priority sector advances of commercial Bank in India		
	Public sector Banks	**Private sector Banks**	**Foreign Banks**
2008	199786 (41.2)	36648 (44.1)	11835 (34.0)
2009	244456 (43.6)	48920 (47.3)	17960 (34.4)
2010	307046 (43.6)	69886 (43.6)	23843 (35.3)
2011	409748 (40.3)	106586 (42.8)	30439 (34.4)
2012	521376 (39.7)	144549 (47.8)	37831 (33.4)
2013	610450 (44.7)	164068 (46.8)	50254 (39.5)
2014	720083 (42.5)	190207 (46.8)	55453 (34.3)
2015	864564 (41.7)	215552 (46.0)	60290 (35.1)
2016	1022925 (41.0)	249139 (46.7)	66796 (39.1)
2017	1129993 (37.4)	280419 (39.4)	80559 (40.9)
Mean	603042.70 (41.57)	150597.40 (45.13)	43526 (36.04)

Sources: 1. RBI, Relevant issues of **Report on Trend and progress of banking in India**
2. RBI, Relevant issues of **Report on Currency and Finance**

Note: Figures in brackets are percentage to Net Bank credit (NBC) up to 2017; there offer they are percentages to Adjusted Net Bank credit (NABC) or credit equivalent to off balance sheet exposure which is higher in the respective groups.

Table; 2.1 Compound growth rates and T-calculated values of Scheduled of by bank category wise during 2008-17

Calculated Element	Public Sector Banks	Private Sector Banks	Foreign Banks
Compound growth rate (%)	21.23	25.37	23.75
t-value	4.8946*	5.6323*	6.0681*

Source: Computed from table 2
Note : *Significant at both1 per cent and 5 per cent levels

It is clear from table 2 that public sector banks in India achieved the prescribed norm (40 per cent) by RBI all the years except in 2012 and in 2017.The share of priority sector advances fell short of only 0.3 in 2012 and 2.6 per cent in 2017. Private sector banks also achieved the targets (40 per cent) of lending except in 2017, the share of priority sector advances fell short of only 0.6 percent. Foreign banks have exceeded their target of 32 per cent prescribed by RBI in all the years. The Compound annual growth rates are impressive and significant both at 1 and 5 per cent levels.

4. DIFFERENTIAL INTEREST RATE SCHEME (DRI)

This is one of the constituents of priority sector comes under tertiary sector. The Differential Rate of Interest Scheme (DRI Scheme) was introduced during 1972, following the ecommendations of the committee under the Chairman of DR.R.K. Hazari[2]. The scheme was meant to ensure and provide access to institutional credit for certain sections of the poor. The eligible persons obtain loans at a uniform concessional interest rate of 4 per cent. At present 1 per cent of the total advances of commercial banks should earmark under DRI scheme. A Formal obligation was also laid on the private sector banks in December, 1978 to implement the scheme and to achieve the target of lending at least one per cent of their aggregate advances outstanding at the end. The progress achieved under DRI scheme is presented in Table 3

Table 3: Commercial Banks' Lending under DRI scheme during 2008-17
(Number of accounts in million and amount in billion)

Year	Number of accounts	Amount outstanding for DRI	Advances	DRI percentage to total advances
2008	0.37	3.85	8908.66	0.04
2009	0.33	3.37	11578.07	0.03
2010	0.39	4.90	15174.97	0.03
2011	0.26	6.34	19470.99	0.03
2012	0.26	6.69	24170.04	0.03
2013	0.31	7.53	28575.25	0.03
2014	0.37	7.52	33456.19	0.02
2015	0.42	7.15	40741.68	0.02
2016	0.43	8.02	47908.74	0.02
2017	NA	NA	55064.95	-
Mean	0.3489	6.1522	28504.9540	0.02

Source: RBI: Relevant issues of **Statistical Tables relating to Banking**
NA= Not available

Table; 3.1 Compound growth rates and t-calculated values of commercial banks advances under DRI Scheme during 2008-17

Calculated Element	Number of Accounts	Amount out standing	Advances
Compound growth rate (%)	1.90	9.61	22.43
t- value	16.5781*	10.8412*	5.7591

Source: Computed from table 3
Note: *Significant at both1 per cent and 5 per cent levels

It is evident from Table 3, the number of borrowed accounts under DRI scheme increased from 0.37 million in 2008 to 0.43 million in 2017.The amount outstanding against these accounts also increased from Rs.3.85 billion in 2008 to Rs.8.02 billion in 2017 though there is a setback in the amount outstanding. Despite this increase, however, the share of the DRI advances to total advances was below stipulated norm (1 per cent) by RBI for the study years. The compound annual growth rates are significant at both 1 and 5 per cent levels. This is quite understandable that there is no obligation for foreign exchange banks and the other reason is the mounting over dues.

5. ADVANCES TO WEAKER SECTIONS

This is also one of the constituents of priority sector comes under tertiary sector.
As per the RBI norm, commercial banks advances to weaker sections should be 10 per cent of total advances[3]. Commercial banks advances to weaker section was presented in Table 4

Table 4: Commercial Banks' Advances to Weaker Sections during 2008-17(Number of accounts in million and amount in billion)

Year	Number of accounts	Amount outstanding for weaker sections	Total advances	Percentage of weaker sections advances to total
2008	29.20	271.9	8908.66	3.05
2009	38.34	291.8	11578.07	2.52
2010	21.19	398.2	15174.97	2.62
2011	39.67	129.9	19470.99	2.62
2012	22.33	1269.35	24170.04	5.25
2013	24.10	1670.41	28575.25	5.85
2014	26.13	2095.62	33456.19	6.26
2015	28.79	2463.15	40741.68	6.05
2016	32.97	2939.60	47908.74	6.13
2017	NA	NA	55064.95	NA
Mean	29.1911	1281.1033	28504.9540	5.01

Source:RBI: Relevant issues of **Statistical Tables relating to Banking**
Note: NA= not available

Table:4.1 Compound growth rates and t-calculated values of commercial banks advances under DRI Scheme during 2008-17

Calculated Element	Number of Accounts	Amount outstanding for weaker sections	Advances
Compound growth rate(%)	1.53	34.66	22.43
t -value	13.1586*	3.6105*	5.7591*

Source: Computed from table 4

Note: *Significant at both1 per cent and 5 per cent levels

It is evident from table 4 that the number of borrowed accounts under weaker section advances increased from 29.20 million in 2008 to 32.97 million in 2017. The amount outstanding against these accounts also increased from Rs.271.9 billion in 2008 to Rs.2939.60 billion in 2017.

Although both number of accounts and amount outstanding on them increased, the commercial banks failed to meet the norm (10 per cent of total advances) set up by RBI. This is due several reasons like i) mounting of overdues and non-performingassets (NPA) ii) foreign banks have no obligation iii) weaker section finance is not profitable avenue for commercial banks. The compound annual growth rate is significant at 1 per cent level.

6. COMMERCIAL BANKS CREDIT TO SMALL SCALE INDUSTRIES

Small scale industries constitute secondary sector of priority sector. These units satisfy the criteria for investment in plant and machinery and equipment as per Micro Small and Medium Enterprises development act 2006(MSMED). Investment in plant and machinery should not exceed twenty-five lakhs rupees for Micro enterprises for Small enterprises it should be more than twenty-five lakhs rupees but should not exceed five crore rupees. For the investment the criteria are; it should not exceed ten lakh rupees for Micro enterprises for Small enterprises more than ten lakh rupees but should not exceed two crore rupees[4]. Commercial banks advances to Small scale industries were shown in Table 5.

Table 5: Commercial Banks' Advances to Small Scale Industries during 2008-17

(Rs. billion)

Year	Amount outstanding for Small scale industries	Total advances	Percentage of small scale industries advances to total advances
2008	712.09	8908.66	8.0
2009	834.99	11578.07	7.2
2010	1012.85	15174.97	6.68
2011	1273.22	19470.99	6.53
2012	2643.2	24170.04	10.93
2013	NA	28575.25	-
2014	3622.91	33456.19	10.83
2015	4785.27	40741.68	11.75
2016	5275.85	47908.74	11.01
2017	7297.00	55064.95	13.25
Mean	3050.8200	28504.9540	10.70

Sources: 1**.** RBI, Relevant issues of **Statistical Tables relating to Banking**

2. RBI, Relevant issues of **Report Trend and Progress of Banking in India**

Note: *Significant at 1 level**,** NA= not available

Table:5.1 Compound growth rates and t-calculated values of commercial banks advances under DRI Scheme during 2008-17

Calculated Element	Amount outstanding for small scale industries	Total Advances
Compound growth rate (%)	33.76	22.43
t – value	3.8949*	5.7591*

Source: Computed from table 4

Note: *Significant at both1 per cent and 5 per cent levels

Table 5 reveals that the amount outstanding of small scale industries advances increased from Rs.712.09 billion in 2008 to Rs.7297. billion in 2017. The increase rate is 10.24 times. The percentage of outstanding advances for small enterprises was increased from 8 per cent in 2008 to 13.25 per cent in 2017.The compound annual growth rates are impressive and significant at both 1 and 5 per cent levels.

7. RECOVERY PERFORMANCE OF COMMERCIAL BANKS

The problem of overdues has been quite challenging task to credit institutions in the country. Poor recovery of overdues cripples the capacity of credit institutions to draw refinance from NABARD. Recycling of funds becomes an impossible task, when the overdues reach the danger level. The banking sector is expected to achieve some of the socio-economic objectives of planned development. However, they perform the role when banks are financially sound. Because of the phenomenon of mounting overdues, banks are very much affected. There will be always some bad and doubtful debts. But with greater attention to priority sector the problem of overdues has assumed greater proportions stated.[5] the recovery performance of commercial banks was shown in Table 6.

Table 6: Recovery Position of Commercial Banks during 2009-17 (Rs. Crores)

Year	Demand	Recovery	Percentage of Recovery to Demand
2009	33544	25002	74.5
2010	45454	45733	84
2011	46567	37298	80
2012	73802	58840	79.7
2013	95100	71739	75.4
2014	119084	90660	76.1
2015	124400	92000	74.09
2016	182200	138300	75.9
2017	191800	142900	74.51
Mean	101327.89	78052.44	77.03

Sources: 1. RBI, Relevant issues of **Report on Currency and Finance**

2. RBI, Relevant issues of **Report Trend and Progress of Banking in India**

Table: 6.1 Compound growth rates and t-calculated values of commercial banks advances under DRI Scheme during 2008-17

Calculated Element	Demand	Recovery
Compound growth rate(%)	24.35	24.35
t – value	*5.2243	*5.5741

Source: Computed from table 4

Note: *Significant at both1 per cent and 5 per cent levels

Table 6 reveals the recovery position of commercial banks. The recovery rate is 74.5 per cent in 2008. It is 84 per cent in 2005 which best performance in terms of recovery when compared with that of other years. But in 2010 the recovery rate decrease to 80.1 per cent. In 2011 it is 79.7 per cent again it is decreased to 75.4 per cent in 2016. There is minor improvement of recovery in 2013 with the per cent of 76.1 where as it is decreased to 74.09 per cent in 2017 It is slightly improved in 2015 with the percentage of 75.9 percent and it is decreased to 74.51 per cent in 2017.

CONCLUSION:

The percentage of agricultural advances by commercial banks below stipulated norm due to inclusion of foreign banks. Public sector banks failed to achieve the norm during 2012 and 2017 but for the rest years their achievement is good while private sector banks achieved the target except in 2017 whereas foreign banks reached the norm for all the years. The percentage of Commercial banks' lending under DRI scheme is below the stipulated norm for all the years. The share of weaker section advances by commercial banks is also below the norm. It is due to mounting of over dues and Non-Performing Assets(NPAs).Commercial banks' advances to small scale industries are satisfactory. The overall average recovery rate of commercial banks is 77.03 per cent.

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