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# Co-operative Credit and Farmers Livelihoods in Ariyalur and Tirunelveli of Tamil Nadu

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Abstract: India's agricultural credit system has made laudable decadal growth. The farm credit is utilized for the agricultural productive purpose or not, whether agricultural credits are given against the mortgage of jewels or disbursing loans under any subsidized schemes, if credit disbursed under the subsidized scheme, procedures target beneficiaries, the challenges in identifying the targeted groups, and the lacunas in accessing the institutional credit under the schemes by the clients of the banks. It is imperative to the nuances confining institutional credit operations, accomplishments, challenges, and impact on the intensity of indebtedness of the farmers in the selected area. The objective of the paper is to observe the availability and accessibility and determinant of bank credit in agriculture in Ariyalur and Tirunelveli districts of Tamil Nadu. The paper is divided into four sections. The first section is introductory in nature; which is the background, objectives of the study. The second section discusses the review of literature. The third section analyses the status of farm credit and co-operative bank in Tamil Nadu. Lastly provides the concluding remarks.

Key Words: Farmers, Co-operative Banks, Commercial Banks, Tamil Nadu

JEL Classification Code: G10; G20; G30

#### I. Introduction

India's agricultural credit system has made laudable decadal growth. The percentage share of institutional credit to farming has increased from 10 percent in 1951 to 63 percent in 1981. The share of agriculture-credit to total direct credit increased from 16 percent in 1982 to 42 percent in 2017. Of which the percentage share of direct short-term credit has increased from 22 percent in 1990-91 to 123 percent in 2015-16. It has revealed that the credit is fulfilling all the needs of the farmers (All India Debt and Investment Survey (AIDIS). During 2017, commercial banks have contributed to the main source of formal finance to farmers, account for 75 percent in 2017, followed by cooperatives at 13 percent and RRBs at 12 percent.

According to the Financial Inclusion Insights Survey (2015), about 43 percent of farmers do not have access to a bank account. In addition, it

reveals, the disparity between farmers and workers was 36 percent and 55 percent of them do not have a bank account. It is also worthy to note that Government of India has disbursed more loans for agriculture more than targeted level still the prevalence of non-institutional credit, which eventually imposed huge sufferings of the farmers. (Government of India Budget 2018-19, Agriculture). Outside of that, Lead Bank schemes, direct lending for the priority sector and the banking sector's linkage were covered. The decadal growth of branches of banks is growing up from 8,262 in 1969 to 64,608 in 2009 (RBI, 2009). About 60 percent (148 million) have not been received by institutional credit agencies. Furthermore, 50 percent (89 million farm households) have not those credit facilities. Within the indebted rural households, 43 percent have received from money lenders and other non-financial institutions (NSSO 70th Round, 2013). The disparity in the utility of share of institutional credit to total rural indebtedness has fallen from 64 percent in 1991 to 57 percent in 2002. But the share of money lenders increased from 17.5 percent to 29.6 percent. About 48 percent and 78 percent of rural and non-farm rural households have not availed of the banking services (EPW research foundation 2007).

#### Statement of the Problem

Studies pertaining to financial issues and institutional credit facilities of the farmers have the determinants, volume, demand, and operational constraints in accessing the institutional credits. On the other hand, significant studies have also dealt with the issues on constraints of indebtedness and the repercussions of the non-institutional credit facilities. The dearth of the studies confined to address the procedural issues followed in commercial banks and other co-operative banks in disbursing agricultural credit to the farming community, the credit utilized for the agricultural productive purpose, whether agricultural credits are given against the mortgage of jewels or disbursing loans under any subsidized schemes, if credit disbursed under the subsidized scheme, procedures target beneficiaries, the challenges in identifying the targeted groups, and the lacunas in accessing the institutional credit under the schemes by the clients of the banks. On the whole, it is imperative to the nuances confining institutional credit operations, accomplishments, challenges, and impact on the intensity of indebtedness of the farmers in the selected area.

#### II. Review of Literature

Various research studies have been noted about the credit facilities and farmer's development in international level. The conceptual link between finance and growth were highlighted number of research studies.

Sharma, et al., (2007) focused on the inadequate availability of rural credit which caused productivity in four agro-climatic zones in Himachal Pradesh. The indication is that more than 75 percent of the households borrowed credit from the institutional agencies, of which the contribution of banks is found 68 percent. It observed that the respective credit requirements for these four zones being 75 percent and need to provide adequate credit facilities in farms.

Snekalatha (2017) observed that agricultural loans are available for a multitude of farming purposes in the Tirupur district of Tamil Nadu. The study focused on SBI agricultural credit services provided to customers. There are factors influencing customer satisfaction for a particular bank is time, quality of service, and convenience to its customers.

Bhargavi Hrishikesh. T and Ramakrishna Reddy (2014) explore the commercial banks and their rural agriculture credit of Andre Pradesh. Andhra Pradesh has achieved the highest share of the commercial bank's advances in priority sectors. Umesh Gupta and Kamal Agrawal (2018) deal with the farmer's perception towards agricultural credit provided by the district Co-operative bank in Raipur city of Chhattisgarh. The study found credit disbursement; no confirm the time for loan sanctions. The accessibility of loan schemes was to the right people, the perceptions of farmers seeking a loan.

Ramasamy and Meskel (1988) have focused on commercial bank lending to agriculture. They found that the problems faced by borrowers were delays in the delivery of loans, insufficient time for repayment, inflexibility in the structure of repayment installments, and the lack of technical guidance. The study also revealed that large farmers had better access to commercial bank credit.

Patil, et al. (1990) stated that the credit requirement, availability in the Thane District of Maharashtra. The study reveals that a maximum number of cultivators had borrowed from institutional agencies and that too mainly from cooperative societies. Out of the total borrowing, about 98 percent was borrowed from institutional agencies. The share of land development banks in total borrowing was 34.49 percent. The credit gap was found to be associated with the adoption of recommended technology.

Kandasamy (1991) focused on the recovery performance of primary agriculture cooperatives in the Erode district of Tamil Nadu. He has pointed out that the accumulation of overdue loans will result in a shortage of credit and needy members may have to go without credit. Mounting overdue may bring society to the verge of liquidation. He has classified the borrowers into defaulters and non-defaulters based on certain socio-economic and physiological characteristics of borrowers.

The objective of the paper is to observe the availability and accessibility and determinant of bank credit in agriculture in Ariyalur and Tirunelveli districts of Tamil Nadu. The paper is divided into five sections. The first section is introductory in nature; which is the background, objectives of the study. The second section discusses the review of literature. The third section deals with research methods and data base. The fourth section analyses the status of farm credit and co-operative bank in Tamil Nadu. Lastly provides the concluding remarks.

# III. Research Methodology and Data Base

Primary data was collected from two districts in Tamil Nadu namely, Ariyalur and Tirunelveli districts in Tamil Nadu. From the selected districts, Sendurai Taluk of Ariyalur district was selected which has the lowest credit accessibility. Ambasamutharam, Tirunelveli and Palayamkotai Taluk of Tirunelveli district were selected which having highest credit accessibility. In this way, from each selected district in 154, 133 households have got agricultural credit for crop cultivation and other purposes. About 287 sample farmers were surveyed. Primary data was gathered through the field survey by conducting the face-to-face interview with the borrowers only those farmers have been considered as those who are getting to agriculture credit by banks and agencies for productive purposes. Samples from Primary Agriculture Co-op Societies from Ariyalur and Tirunelveli districts and sample farmers from SBI, Ariyalur and IOB, Tirunelveli from the list of crop loan borrowers were on the basis of their proportion in the universe.

Table 1: Village-wise Sample Distribution of Ariyalur District of Tamil Nadu

Village	Co-op Bank Users	Commercial Bank Users
Sendurai Taluk		
Anandavadi	30 (29.0)	9 (30.0)
Chinna Anandavadi	8 (8.0)	0
Periya Anandavadi	4 (4.0)	0
Kulumur	26 (24.0)	7 (23.0)
Marauvathur	31 (30.0)	6 (20.0)
Sirukadamboor	0	3 (10.0)
Sedakudikadu	0	2 (7.0)
Unjini	5 (5.0)	3 (10.0)
Total Sample Size	104 (100.0)	30 (100.0)

Source: Primary Data collected from Ariyalur

The village-wise sample distribution of the Ariyalur district of Tamil Nadu is presented in Table.1. The total samples in the district were 104 and 30 collected from Co-op bank users and Commercial bank users,

respectively. Out of that, 31 percent and 30 percent of samples from co-op bank users were collected from Maruvathur and Anandavadi villages. Followed by 26 percent of the samples collected from Kulumur village in the district. Among commercial bank users, 30 percent and 23 percent of samples were collected from Anandavadi and Kulumur villages in the district. This was followed by 20 percent of the samples collected from Maruvathur village.

Table 2: Village-wise Sample Distribution of Tirunelveli District of Tamil Nadu

Village	Co-op Bank Users	Commercial Bank Users
Ambasamudaram Taluk		
Adhikesanallur	1 (1.0)	4 (8.0)
Cheeramandevi	0	4 (8.0)
Harikesanallur	0	15 (30.0)
Nainarkalani	0	6 (12.0)
Palayamkottai Taluk		
Kammalankulam	18 (17.0)	0
Kunnathoor	20 (19.0)	0
Muneerpallam	17 (17.0)	5 (10.0)
Padakasaalai	6 (6.0)	0
Thachanallur	2 (2.0)	6 (12.0)
Tirunelveli Taluk	, ,	, ,
Rajavallipuram	6 (6.0)	0
Seedhabannallur	10 (10.0)	0
Sirukankurichi	23 (22.0)	8 (16.0)

The village-wise sample distribution of Tirunelveli District of Tamil Nadu is given in Table 2. Among the co-op bank users, 22 percent and 19 percent of the sample were collected from Sirukankurichi village of Tirunelveli Taluk and Kunnathoor village of Palayamkottai Taluk. Followed by 17 percent of the sample were collected from Muneerpallam and Kammalankulam village of Palayamkottai Taluk, respectively.

Among commercial bank users, 30 percent and 16 percent of samples were collected from Harikesanallur village of Ambasamudaram Taluk and Sirukankurichi village of Tirunelveli Taluk. Following that, 12 percent of the samples were collected from Nainarkalani village of Ambasamudaram Taluk and Thachanallur village of Palayamkottai Taluk, respectively.

#### IV. Results and Discussion

# The Determinants of Credit to Farmers in Ariyalur and Tirunelveli of Tamil Nadu

The percentage share of agricultural credit by the banking sector in India from 1951 to 2013 is shown in Table 3. The percentage share of institutional

to the agriculture sector increased from 10.2 percent in 1951 to 64 percent in 2013. In midterm of 1991, it slightly increased to 66 percent. On the other hand, the percentage share of non-institutional to these sectors was a decline from 90 percent in 1951 to 36 percent in 2013. In 1991, it further declined to 34 percent. For the institutional and non-institutional sources of agricultural credit, the share of non-institutional sources of credit (90 percent) was almost 13 times of institutional sources (10 percent). Among institutional credit, like the cooperatives banks was insignificant with 6 percent during 1951. During 2013, among instructional credit, commercial banks and cooperative banks were contributing more than 31 percent and 26 percent, respectively nearly 60 percent of contributions by commercial and cooperative banks.

Table 3: Institutional and Non-Institutional Agricultural Credit in India (in Percent)

Sources of Credit	1951	1961	1971	1981	1991	2002	2013
Institutional	10.2	20.9	32	56.2	66.3	61.1	64
Government	0	6.2	4	5.7	1.7	1.3	1.3
Co-operative Societies	6.2	12.5	27.6	23.6	30.2	28.9	25.8
Commercial Banks	4	2.2	23.8	35.2	26.3	30.7	30.7
Insurance, PF	0	0	0.8	0.7	0.5	0.1	0.1
Other Agencies*	0	0	0	1.1	2.4	3	3
Non-Institutional	89.8	79.1	68	43.8	33.7	38.9	36
Moneylenders	39.8	25.3	17.2	17.5	26.8	29.6	29.6
Relatives, Friends	0	0	11.5	4.6	6.2	4.3	4.3
Traders, Comm. Agents	0	0	0	5.8	2.2	2.6	0
Landlords	21.4	15	3.6	3.7	0.9	0.4	0.4
Others	28.6	38.8	5.7	5.7	2.4	1.7	1.7
Total	100	100	100	100	100	100	100

Source: All India Debt & Investment Surveys, Various Issues, NSSO

Note: Breakup of the share of each source is taken from RBI Working Paper Series, Persistence of Informal Credit in Rural India: Evidence from 'All India Debt and Investment Survey' and beyond.

Among non-institutional credit, money, lenders were contributing 30 percent, which declined from 40 percent to 30 percent over seven decades. Among non-institutional credit, borrowings from money lenders followed by relatives were as high as 30 percent and 4.3 percent respectively. It witnessed a clear shift, and commercial and cooperative banks have emerged as the major source of such credit to agriculture in three decades.

Direct institutional credit for agriculture and allied activities in India is presented in Table 4. The percentage share by cooperative societies and commercial banks was 57.70 percent and 35 percent in 1981-82. The share of commercial banks in total direct institutional credit increased sharply

<sup>\*</sup>includes financial corporation's/institutions, financial companies.

Table 4: Direct Institutional Credit for Agriculture and Allied Activities in India: (Short-term and Long-term) (Amount in Billion)

Year		Loans Issued	lssued				Loans Outstanding	tstanding	
	Co-opera-	State	SCBs	RRBs	Total	Co-	SCBs	RRBs	Total
	tives	Govern-ments				operatives			
1981-82	24.79	1.53	14.96	1.68	42.96	48.21	35.41	2.73	86.35
1991-92	57.97	3.39	48.06	5.96	115.38	121.76	169.81	19.84	311.42
2001-02	305.69	4.43	186.38	45.46	541.95	521.10	451.06	82.86	1055.02
2010-11	781.21	0	2227.92	439.65	3448.78	766.74	3575.84	550.67	4893.25
2011-12	879.63	0	3128.77	544.50	4552.90	725.45	4432.98	703.84	5862.27
2012-13	1112.03	0	4844.99	636.81	6593.83	1197.75	5224.78	794.99	7217.52
2013-14	1199.64	0	0	826.52	0	1352.45	5035.32	982.06	7369.83
2014-15	1384.69	0	0	1024.82	0	1542.86	6936.69	1126.03	9508.58
2015-16	1532.94	0	0	1192.60	0	1561.20	8148.41	1334.01	11043.62
2016-17	1427.58	0	0	1232.16	0	2266.97	6681.09	1534.16	10482.22
2017-18	1503.89	0	0	1409.59	0	2466.99	0	1710.62	0

Source: National Bank for Agriculture and Rural Development, National Federation of State Co-operative Banks

1. Data for 2017-18 are provisional., 2. Data up to 1990-91 pertain to the period July-June and April-March thereafter. In case of Scheduled Commercial Banks. RRBs: Regional Rural Banks SCBs: Notes:

SCBs, data for all the years pertain to July-June period.

3. RRBs came into existence in 1975-76., 4. The data since 1999-2000 are strictly not comparable with the earlier years as it covers not only PACS but also SCARDBs and PCARDBs, while the earlier period covers PACs only.

from 35 percent in 1981-82 to 73.48 percent in 2012-13 and completely replaced cooperative banks' lending; with a corresponding fall in the share from 57 percent in 1981-82 to 17 percent in 2012-13.

The short and long-term loans issued by banks were increased from Rs. 46.92 billion in 1981-82 to Rs. 6594 billion in 2012-13. Of which, cooperative banks have been increasing from Rs.25 billion in 1981-82 to Rs.1504 billion in 2017-18. Commercial banks have been increasing from Rs. 15 billion to Rs. 4845 billion in 2012-13. RRBs issued the loan, which has been increasing from Rs. 1.68 billion to Rs. 1410 billion. During 2017-18, commercial banks and RRBs were contributing Rs. 1504 billion and Rs. 1410 billion, respectively.

Loan outstanding has been increasing from Rs. 86.35 billion in 1981-82 to Rs. 10482 billion in 2016-17. Out of that, commercial banking outstanding advances in agriculture and allied activities have grown significantly to Rs. 6681 billion in 2017-18 which formed approximately 64 percent of total bank credit, followed by cooperative banks outstanding were Rs. 2267 billion and 22 percent. RRB's share was Rs. 1534 billion and 15 percent.

The demographic profiles of the Ariyalur and Tirunelveli districts of Tamil Nadu are presented in Table 5. A majority of the sample farmers in both districts were male-dominated and only a fraction of female farmers were engaged. About less than 10 percent of co-op bank users and commercial bank users in the Ariyalur District have a female as the head.

Table 5: Demographic Profile in Ariyalur and Tirunelveli Districts of Tamil Nadu (in Percent)

Particulars	Ariyalur District Tirunelve		veli District	
	Co-op Banks	Com. Banks	Co-op Banks	Com. Banks
Sample Size	104	30	103	50
Gender (Percent)				
Male	94 (90.0)	27 (90.0)	102 (99.0)	49 (98.0)
Female	10 (10.0)	3 (10.0)	1 (1.0)	1 (2.0)
Family Type (Percent)				
Joint Family	43 (41.0)	11 (37.0)	29 (28.0)	23 (46.0)
Nuclear Family	61 (59.0)	19 (63.0)	74 (72.0)	27 (54.0)
Social Groups (Percent)				
SC/ST	6 (6.0)	4 (13.0)	58 (56.0)	12 (24.0)
BC	43 (41.0)	8 (27.0)	34 (33.0)	23 (46.0)
MBC	49 (47.0)	18 (60.0)	6 (6.0)	15 (30.0)
General	6 (6.0)	0	5 (5.0)	0
Religion (Percent)				
Hindu	100 (96.0)	27 (90.0)	100	49 (98.0)
Muslim	4 (4.0)	3 (10.0)	0	1 (2.0)
Christian	0	0	0	0

contd. table 5

Particulars	Ariyaluı	Ariyalur District Tirunelvelu		i District	
	Co-op Banks	Com. Banks	Co-op Banks	Com. Banks	
Others	0	0	0	0	
Location of the Farmers					
Within Village	100	100	100	100	
Outside Village	0	0	0	0	
Others	0	0	0	0	
Education Status (Percent)					
Illiterate	18 (17.0)	3 (10.0)	14 (11.)	8 (16.0)	
Upto Primary	25 (24.0)	11 (37.0)	34 (33.0)	18 (36.0)	
Up to Higher secondary	33 (32.0)	8 (27.0)	40 (39.0)	16 (32.0)	
Upto Graduate	15 (14.0)	7 (23.0)	4 (4.0)	6 (12.0)	
PĜ	13 (13.0)	1 (3.0)	11 (11.0)	2 (4.0)	

Source: Primary Survey Data collected from Ariyalur and Tirunnelveli Districts of Tamil Nadu

Note: HH stands for Households. Similarly, SC, ST and BC and MBC represent Schedule Caste, Schedule Tribe, Backward Class and Most Backward Class respectively. (In bracket is represents as percentage of total)

Of the total sample farmers, about 47 percent and 60 percent of co-op bank users and commercial bank users belonged to MBC in Ariyalur District. In Tirunelveli, 56 percent of the co-op bank users belonged to SC/ST categories. Followed by 46 percent of commercial bank users was belonging to the BC category. In both districts, farming is the major occupation by the sample farmers in the study area. The majority of them by religion was Hindu in Ariyalur and Tirunelveli districts of Tamil Nadu. A small fraction of the Muslims is there.

In Ariyalur district, 32 percent and 27 percent of co-op bank and commercial bank users have completed higher secondary education. In Tirunelveli district, 39 percent and 36 percent of co-op bank and commercial bank users have completed higher secondary school education. About the majority of them completed primary education among the co-op bank and commercial bank users. About one-tenth of them were illiterate. A minimum level of them has attained higher education. It indicated that a low level of education has been shown in farming activities in the study area.

Table 6: Sample Distribution of Land Size in Ariyalur and Tirunelveli in Tamil Nadu

Land Size (Percent)	Ariyaluı	Ariyalur District		i District
	Co-op Banks	Co-op Banks Com. Banks		Com. Banks
Marginal Farm	22 (21.0)	13 (43.0)	52 (50.0)	19 (38.0)
Small Farm	60 (58.0)	13 (43.0)	40 (39.0)	22 (44.0)
Medium Farm	19 (18.0)	4 (14.0)	11 (11.0)	8 (16.0)
Large Farm	3 (3.0)	0	0	1 (2.0)

Source: Primary Survey Data

Farm category-wise under different banks is provided in Table 6. Small farms grew the highest share of 58 percent, followed by marginal farms (21 percent) among co-op bank users in Ariyalur district. In Tirunelveli district, 50 percent and 44 percent of marginal and small farmers were among co-op bank and commercial bank users, respectively. It is indicated that the majority of them belong to marginal farmers and small farmers in Ariyalur district. But in Tirunelveli district, about 90 percent of farmers constitute marginal and small farmers among co-op bank users. Followed by 82 percent of the same category were occupied by commercial bank users. On the other hand, a small fraction of landholding is withheld by the large size of farmers.

# **Availability of Agricultural Credit**

Table 7: Purpose of Agricultural Credit Availed by Ariyalur and Tirunelyeli in Tamil Nadu

Purposes		Ar	iyalur		Tirun		nelveli	
	Co-op Bank Users			Com. Bank Users		p Bank Isers	Com. Us	
	Actual	Percent	Actual	Percent	Actual	Percent	Actual	Percent
Crop Development	94	90	23	77	92	89	44	88
Land Development	10	10	7	23	11	11	6	12
Total	104	100	30	100	103	100	50	100
1. Crop Development	58	56	16	53	62	60	33	66
2. Land Development	22	21	6	20	5	5	7	14
3. Farm Equipments	11	11	0	0	7	7	4	8
4. Medical Expenses	5	5	1	3	7	7	0	0
5. Education Expenses	3	3	0	0	4	4	1	2
6. Construction of House	3	3	1	3	3	3	2	4
7. Repaying Debt	0	0	0	0	13	13	1	2
8. Household Expenses	0	0	6	20	2	2	2	4
9. Others	2	2	0	0	0	0	0	0
Total	104	100	30	100	103	100	50	100

Source: Primary Survey Data

The purpose of agricultural credit availed by Ariyalur and Tirunelveli Farmers is shown in Table: 7. In Ariyalur, the crop loan was accorded top priority with 90 percent and 77 percent of credit extended to the co-op bank and the commercial bank users, respectively, followed by land development (10 percent and 11 percent of both banks). The farm equipment, medical, education, and house construction were borrowed with a small fraction.

The percentage share of loans borrowed from co-op banks and commercial banks was 56 percent and 53 percent respectively. Sample farmers were borrowed from both banking institutions, a small fraction of them diverted into non-agricultural uses in Anandavadi, Maruvathur, and Kulumoor village of Sendurai Taluk. The remaining farmers were reported to use medical and educational expenses with a small faction. In Sendurai Taluk, farmers from co-op bank borrowers got the loan during the start of cultivation in farming activities. The farmer's needs were fulfilled by the co-op society.

In Tirunelveli, the crop loan was accorded top priority with 88 percent and 89 percent of credit extended to the co-op bank users and commercial bank users, respectively, followed by 11 percent and 12 percent of both types of borrowers were stated for land development purposes. About 13 percent and 2 percent of both borrowers were reported to use repayment of debt in co-op societies and other money lenders in Tirunelveli. It is adjusted the existing loan from the new borrowing loan to the farmers from co-op societies. This kind of method was only adopted in co-op societies. A small fraction of farmers were reported to medical uses.

# **Growth Trends in Credit Flow**

Table 8: Farming Credit Availed from Co-op Bank and Commercial Bank in Ariyalur

Ariyalur Co-op Banks	Mean	Std. Deviation	Kurtosis	Skewness
Crop Loan	66476	34297	2.45	1.37
Land Development	72360	38285	2.24	1.45
Crop Loan-Com. Banks	57991	92672	9.10	2.65
Land Development- Com. Banks	85000	79824	-1.13	0.46
Farm Equipment	150833	139118	2.83	1.57
Medical Expenses	130000	155563	3.87	1.91
Education Expenses	84333	100530	0.00	1.68
House Constructions	63333	75222	0.00	1.70
Marriage Ceremonies	65000	21213	0.00	0.00
Ariyalur Commercial Bank				
Crop Development	67435	23096	-0.50	0.10
Land Development	53857	20497	0.23	0.83
Crop Development-Co-op Banks	45333	47438	0	1.70
Land Development-Co-op Banks	67158	27807	-0.54	-0.19
Farm Development	47833	14120	-1.60	0.28
Medical Expenses	200000	0	0	0
House Construction	245000	0	0	0
Household Expense	13333	3204	-1.34	0.31

Source: Primary Survey Data

The descriptive statistics of Co-op Banks and Commercial Bank Borrowers in Ariyalur are presented in Table 8. According to Ariyalur, the average per household crop loan was issued Rs. 66476, followed by land development purposes (Rs. 72360). The crop loan issued by commercial banks to the sample farmers were Rs. 57900. The co-op banks were issued loans for farm equipment (Rs. 150833). It is indicated that the majority of them among the co-op banks borrowed a crop loan predominately, because of the cultivation of various crops.

Among co-op bank users, farmers have borrowed loans, but they are used for medical purposes (Rs. 130000), followed by education spending (Rs. 84333). A small fraction of the sample farmers constructs a house, which is an immediate need of the family. The spending on house construction was Rs. 63333. Sample farmers were using their loans for marriage purposes. The spending on marriage ceremonies was Rs. 65000. It is noted that the majority of them were using their crop loans for farming activities. But sample farmers in the village of Sendurai block were used for diversified to other uses like medical uses, education purposes, construction of houses, and marriage of their children.

It is noted that the majority of them from commercial banks were used as crop loans in Ariyalur. The remaining portion of their credit was transferred to some other purposes like farm equipment. But sometimes, they divert for other non-agricultural purposes in Maruvahur, Kulumoor, Ujani, and Anandavadi and that includes urgent needs like medical and educational needs.

The crop loan availed by the co-op banks and the commercial bank users of Tirunelveli is presented in Table 9. In Tirunelveli, among the co-op bank borrowers, the majority of them have availed the crop loan (Rs. 72828), followed by land development purposes (Rs. 71644). Sample farmers borrowed crop development uses (Rs. 81000), followed by farming equipment (Rs. 163857). The sample farmers were drawing crop loans but used them for non-agricultural purposes like medical, education, house construction, and household expenses. Out of that, the farmers borrowed loans for medical uses (Rs. 157000) and house construction (Rs. 63667). The sample farmer used the loan (Rs. 51762) for repayment of a debt from SBI, other urban co-op banks, and money lenders in Sendurai block.

Among commercial banks in Tirunelveli, a large majority of them availed crop loans (Rs. 81082), followed by land development (Rs.180073). The sample farmers availed the loan from the commercial banks at a time within their Tirunelveli block and Palayamkottai block. They avail of a crop loan (Rs. 82685), followed by a farm equipment loan (Rs. 287500). The sample farmers were purchasing tractors for farm equipment loans, which

Table 9: Farming Credit Availed from Co-op Bank and Commercial Bank in Tirunelveli

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Co-op Bank Borrowers	Mean	Std. Deviation	Kurtosis	Skewness
Crop Development	72828	43766	2.14	1.38
Land Development	71644	32124	4.40	1.80
Land Development-Com. Banks	81000	67491	4.41	2.09
Farm Development	162857	204203	4.67	2.08
Medical Expenses	200714	94667	-1.57	0.00
Education Expenses	157000	118586	-1.55	0.27
House Constructions	63667	83441	0	1.73
Repayment of Debt	51762	49245	7.62	2.67
Household Expenses	112500	123744	0	0
Commercial Bank Borrowers				
Crop Development	81082	50250	2.45	1.56
Land Development	181073	163591	4.20	2.00
Crop Loan-Co-op Banks	82685	55236	1.68	1.43
Land Loan-Co-op Banks	88919	40273	4.96	1.97
Farm Development	287500	193111	-4.41	0.17
Education Expenses	154000	0	0	0
House Constructions	108000	130108	0	0
Repayment of Debt	100000	0	0	0
Household Expenses	14000	1414	0	0

Source: Primary Survey Data

it uses to plough their land. The sample size of farmers was used for educational purposes (Rs. 154000), house constructions (Rs.108000). Sample farmers were borrowing loans from commercial banks in Tirunelveli and Palayamkottai Taluk. This is used for repayment of debt Rs. 1 Lakh, followed by household expenses (Rs. 14000).

The majority of them borrowed crop development activities and land development and farming equipment purposes in Tirunelveli. They borrowed the crop loan and agricultural loan from commercial banks and

Table 10: Farmers Category-wise Distribution of Crop Loan in the Study Area

Sources	Ariyaluı	· District	Tirunelveli District		
	Co-op Banks	Com. Banks	Co-op Banks	Com. Banks	
Crop Loans from co-op banks	66476	67435	72828	81082	
Crop Loans from Com. Banks	57991	45333	81000	82685	
Crop Loans from Money lenders	58468	0	61125	0	
Land Development	72360	53857	71644	88919	
Agriculture Equipment	150833	47833	162857	287500	
Medical Expenses	130000	200000	200714	0	
Education Expenses	84333	0	157000	154000	
House Construction	63333	245000	63667	108000	
Home Expenses	0	13333	112500	14000	

Source: Primary Survey Data

used their money for the cultivation of paddy, corn, cotton, and banana. The crop loan was availed by the sample farmers if the starting of their cultivation crop. For commercial banks, the application is a process based on a regular basis. In Tirunelveli, farmers borrow from paddy, banana, pulses, and cash crops cotton and plantations. Farmers borrow a maximum loan amount from both the commercial banks and the co-operative banks for crop loans, followed by the purchase of tractors and land development.

The agricultural credit availed by sample farmers is presented in Table 10. Co-op banks and commercial banks in Ariyalur, co-op bank borrowers were issued a low rate of Rs. 66476 as against Rs. 67435. In the comparative study of farm equipment among both types of farmers, co-op bank borrowers were issued more credit of Rs. 150833 as against Rs. 47833. It is indicated that the co-op banks were issued the number of credit loans to their members with the scale of finance in an easy manner. But in commercial banks were issuing loan is taken so much process.

In Tirunelveli, co-op bank borrowers received a less sizable loan amount (Rs. 72828) when compared to commercial banks in Tirunelveli (Rs. 81082). The same types of farmers have received the crop loan from co-op bank borrowed less (Rs. 81000) as against commercial banks (Rs. 82685). In the comparative analysis of land development loans, co-op bank borrowers can get a low amount (Rs. 71644) when compared to commercial banks in Tirunelveli (Rs. 88919).

### Outstanding Loans at Co-op Banks and Commercial Banks

The outstanding agricultural loans from co-op banks and commercial banks in Ariyalur are given in Table 11. In Ariyalur, the co-op bank borrowers cannot repay the amount of Rs. 54713 as crop loan outstanding, followed by commercial banks (Rs. 55205). The outstanding loan for farm equipment is Rs. 155833, followed by medical purposes (Rs. 104000). The sample farmers had outstanding education loans (Rs. 82667). The repayment is due for house construction purposes by the co-op banks used (Rs. 13333).

A majority of them could not repay their crop loans on the due date within one year. The main reason behind that the sample farmers were got the less production of cashew, cotton, corn, and paddy crop in Sendurai block. During the last year, there is a low rain rate, the cost of cultivation is very high, and it is increased huge sizable cost in the market. The farmers could not get profit while, hard-working in their farming, because the price of agricultural produce is very low. The basic price for their agricultural produce is a fundamental problem. The commission agents and intermediates were getting the agricultural produce from farmers in

Sendurai block. They did not get adequate price leads to repay the outstanding amount of the loan.

Among commercial banks, the farmers could not repay their outstanding crop loan (Rs. 57085), followed by land development (Rs. 53857). Sample farmers could not settle the education loan period (Rs. 47833). The farmer's children have used the loan for their educational purposes. Non-payment of medical loans is another type by the sample farmers (Rs. 2 Lakh). The huge size of the medical loan that is repayable is not an easy one without income.

Table 11: Outstanding Loan in Co-op banks and Commercial Bank Borrowers in Ariyalur

Ariyalur Coop banks	Mean	Std. Deviation	Kurtosis	Skewness
Crop Loan	54713	43311	0.72	0.79
Land Development	60540	43487	2.66	1.32
Crop -Com. Banks	55205	92670	9.44	2.73
Land-Com. Banks	73235	76484	-0.63	0.71
Farm Equipment	155833	146874	-0.49	0.85
Medical Expenses	104000	170529	3.77	1.94
Education Expenses	82667	101791	0.00	1.71
House Constructions	13333	12583	0.00	-0.59
Marriage Expenses	65000	21213	0.00	0.00
Commercial Bank Borrowers				
Crop Loan	57085	34738	-0.79	-0.43
Land development	53857	20497	0.23	0.83
Crop Co-op Banks	45333	47438	0	1.70
Land- Co-op Banks	56735	37435	-1.17	-0.23
Farm Equipment	47833	14120	-1.60366	0.28
Medical Expenses	200000	0	0	0
House Constructions	200000	0	0	0
Household	13333	3204	-1.34	0.31

Source: Primary Survey Data

The agricultural loans outstanding by co-op banks and commercial banks in Tirunelveli are presented in Table 12. In Tirunelveli, the average outstanding crop loan was due (Rs. 68389), followed by land development (Rs.72553). The average outstanding amount of crop loans from commercial banks was due (Rs. 81000), followed by farm equipment (Rs. 146486), medical outstanding (Rs. 181000), and house construction (Rs. 68667), respectively.

A majority of them got crop loans and they could not repay the amount on the date because the crops are not giving profit to the farmers in Tirunelveli. The agricultural income has been used for various family maintenance purposes like the survival of the family. Running their livelihood, children's education, social choice of ceremonies, and festival functions in the village are incurring more cost.

Table 12: Outstanding Loan from Co-op Bank and Commercial Bank Borrowers in Tirunelveli

Co-op Bank Borrowers	Mean	Std. Deviation	Kurtosis	Skewness
Crop Loan	68389	40930	2.35	1.23
Land Development	72553	31902	4.33	1.74
Land from com banks	81000	67491	4.41	2.09
Farm Development	146486	163939	3.52	1.80
Medical Expenses	181000	74735	-0.69	0.33
Education Expenses	157000	118586	-1.55	0.27
House Construction	68667	92100	0	1.73
Repay Debt	41508	52890	7.45	2.70
Household Expenses	106200	132654	0	0
Commercial Bank Borrowers				
Crop Loan	76682	49985	3.11	1.66
Land Development	178573	162519	4.72	2.13
Crop-Co-op banks	76200	53649	2.76	1.60
Land- Co-op banks	90776	39658	4.86	1.89
Farm Development	250000	173205	-6.00	0.00
Education Expenses	154000	0	0	0
House Constructions	108000	130108	0	0
Repayment of Debt	100000	0	0	0
Household Expanses	11500	2121	0	0

Source: Primary Survey Data

Among commercial banks, the average outstanding crop loan from commercial banks was Rs. 76682, followed by land development (Rs. 178573). Farmers can borrow the crop loan from co-op banks by using the jewel loan (Rs.76200), followed by farm equipment like the purchase of tractors, other tools (Rs. 250000). The farmers availed the education loan and it's outstanding due (Rs. 154000), house construction (Rs. 108000), and other households (Rs.11500), respectively.

It was found that the majority of them in Tirunelveli was non-payment of crop loan and farm equipment, educational, medical and house construction, because of earnings of the farming is very less. The farming income is only used for the survival of family expenses, not for repayment of the loans is a great challenge to the farmers. In Tirunelveli, the soil conditions, production of agricultural commodities, irrigation facilities are available in an easy way. But the earnings of the farming activities are very low income when compared to other allied activities of income.

Table 13: Agricultural Credit Outstanding by Sample Farmers in Study Area Rs./Household)

Sources	Ariyaluı	· District	Tirunelveli District		
	Co-op Banks	Com. Banks	Co-op Banks	Com. Banks	
Crop Loans from co-op banks	54713	57085	68389	76682	
Crop Loans from Com. Banks	55205	45333	81000	76200	
Crop Loans from Money lenders	66692	0	61125	28150	
Land Development	60540	56735	72533	178573	
Agriculture Equipment	155833	0	146486	250000	
Medical Expenses	104000	47833	181000	0	
Education Expenses	82667	200000	157000	154000	
House Construction	13333	20000	68667	108000	
Others Expenses	0	13333	0	11500	

Source: Primary Survey Data

The agricultural credit outstanding by sample farmers in Ariyalur and Tirunelveli of Tamil Nadu is presented in Table 13. The non-payment of crop loans by commercial banks in Ariyalur is more than that of co-op bank borrowers. The second choice of non-payment of crop loans by the co-op bank borrowers is more than that of commercial bank borrowers in Ariyalur. The non-payment for land development purposes by co-op bank borrowers (Rs. 605000) is more than that of commercial banks in the same block (Rs. 56735).

In Tirunelveli, the non-payment of crop loans by commercial banks (Rs.76882) is higher than that of co-op bank borrowers (Rs. 68389). The repayment of crop loans to money lenders by co-op bank users is higher than that of commercial bank borrowers. The outstanding amount of land development loans by commercial bank users in Tirunelveli is higher than that of co-op bank users. The non-repayment of agricultural equipment by commercial bank users is more than that of co-op bank users. The majority of them are to purchase tractors, small agricultural tools etc. from the market. The non-repayment of education spending by both types of bank users is more or less the same.

The non-repayment of loans for various farming activities is in the unique nature of the entire village. The main reason behind that the farming activities are not providing any profit to the farmers. There is fluctuation in their income used for some other borrowings, consumption and again starting another crop cultivation and labour wages included.

The majority of the sample respondents were most vulnerable in terms of accessibility of agricultural credit in the area. They have a small piece of land for the cultivation is not enough. That income cannot solve the minimum needs of their family in the village. The saving habits of these

farmers are very poor. At the critical time, money lenders exploited their weakness: they are providing loans to the farmers with a high rate of interest.

# Impact of Agricultural Credit on Indebtedness and Production in Tamil Nadu

Table 14: Impact of Agricultural Credit on Indebtedness and Production in Tamil Nadu (Percent)

Particulars	Answer	Ariyalur District		Tirunelveli District	
		Co-op Bank	Com. Bank	Co-op Bank	Com. Bank
Crop Loan to Development of Farming	Yes	100.0	100.0	99.0	100.0
1	No	0.0	0.0	1.0	0.0
Credit is enough to Farming Activities	Yes	0.0	0.0	54.4	12.0
	No	100.0	100.0	45.6	88.0
Credit Used Indebtedness of Loan	Yes	0.0	0.0	55.3	8.0
	No	100.0	100.0	44.7	92.0
Credit Improve the Production	Yes	100.0	100.0	98.1	98.0
•	No	0.0	0.0	1.9	2.0
Credit Improve Income of Family	Yes	100.0	100.0	97.1	98.0
•	No	0.0	0.0	2.9	2.0
Credit Income Generation of Livelihood	Yes	100.0	100.0	98.1	98.0
	No	0.0	0.0	1.9	2.0

Source: Primary Survey Data

The impact of agricultural credit on indebtedness and production in Tamil Nadu were given in Table. 14. All the farmers' opinion that crop loan was very much useful to the development of farming activities in Ariyalur and Tirunelveli. According to Ariyalur, 100 percent reported the crop loan is not enough to meet the needs of farming activities. In Tirunelveli, 46 percent and 88 percent of co-op bank borrowers and commercial bank borrowers reported that the crop loan is not enough to meet the needs of farming activities. It found that the majority of co-op banks and commercial bank borrowers in both districts were not enough the crop loan.

# V. Summary and Conclusions

In Ariyalur, it is indicated that the majority of the co-op bank borrowers were borrowed a crop loan predominately for the cultivation of various crops. Famers in the village of Sendurai block were used for diversified to other uses like medical uses, education purposes, construction of houses, and marriage of their children. Among the commercial banks, the majority were used as crop loans, followed by land development.

The average loan amount received from the commercial banks was higher than the co-op banks. It was mainly used for the cultivation of cash crops cashew, paddy, corn, and cotton. Crop loans constituted 90 percent of the total loan borrowed and followed by land development, purchase of a tractor, pipeline, and dairying. The co-op banks have given more importance to crop production, land development, while commercial banks were a high priority to tractor loans.

In Tirunelveli, the co-op bank borrowers, the majority have availed the crop loan followed by land development. They borrowed crop uses from commercial banks, followed by farming equipment. They are used for non-agricultural purposes like medical, education, house construction, and household expenses. It is noted that the majority borrowed their crop development and land uses and farming equipment. Farmers borrowed for paddy, banana, pulses, and cash crops cotton, plantations.

In Ariyalur, the co-op bank borrowers have received a low rate. Farm equipment among both types of farmers, the co-op bank borrowers were issued more credit. It is indicated that the co-op banks were issued a credit to their members in an easy manner. But in commercial banks were issued loans are taken many processes. In Tirunelveli, the co-op bank borrowers have received a less sizable loan compared to commercial banks. Regarding land development loans, the co-op bank borrowers get a low amount against commercial banks.

The majority could not repay their crop loans on the due date within one year. The reason is the low production of cashew, cotton, corn, and paddy crop in Sendurai block. During the last year, there is a flow of low rain, and the cost of cultivation is very high. The price for their agricultural produce is a fundamental problem. The commission agents are fixed low prices in the Sendurai block. The majority were could not repay crop loans in SBI, Sendurai block on time, because of vigorous seasonal conditions.

In Tirunelveli, the average outstanding crop loan from co-op banks was due, followed by land uses and farm equipment. The majority could not repay the amount on the date because; the agricultural produce is not given profit. Agricultural income has been used for family maintenance. Running their livelihood, children's education, social choice of ceremonies, and festival functions in the village are incurring more cost. But, in the commercial banks, the outstanding crop loan and land uses. The majority were non-payment of crop loan and farm equipment, educational, medical and house construction, because earning of the farm is very low, which only used for the survival of family expenses, not for repayment of the loans is a great challenge to the farmers.

The non-payment of crop loans by commercial banks in Ariyalur is more than that of co-op bank borrowers. In Tirunelveli, the non-payment of crop loans by commercial banks is higher than that of co-op bank borrowers. The non-repayment of loans for various farming activities is in the unique nature of the entire village. The main reason behind that the farming activities are not providing any profit to the farmers. There is fluctuation in their income, used for some other own borrowed, consumption and again starting another crop cultivation and labor wages included.

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