

The Strategy of Rural Development: An Investigation into the Agrarian Reform in Assam

Dilip Kumar Rana

Assistant Professor, Department of Economics, Tripura University, Tripura

Manik Bhattacharya

Associate Professor, Department of Economics, Government Degree College, Dharmanagar, Tripura

Shimanta Gogoi

Research Scholar, Department of Economics, Tripura University, Tripura

Abstract

The present research analyzed the radical change of agrarian structure in Assam. The state is experienced to the outstanding development in the agrarian structure. The execution of various land modification acts and land policy are assumed to restructure the agrarian economy in the state. Generally, the redistribution of land and reduction of rural poverty are the key measures of changing agrarian structure. Consequently, the objective of the research is to analyze redistribution of land and rural poverty reduction in Assam. The research applied the Gini coefficient method to estimate the efficient land redistribution. The research applied the regression technique to find the relation between rural poverty and Gini coefficient. The study observed the significant development since 1970. The Gini coefficient of land redistribution and poverty in rural area declined on same direction during the study period. Finally, redistribution of land significantly affected to alleviate rural poverty in the state. The research concluded that the government initiatives have restructured the agrarian economy.

Keywords: *Redistribution of Land, Rural Poverty, Gini Coefficient, Operational Land Holdings.*

Introduction

Assam is experienced an extensive development in rural area since 1970. The rural area of the state is characterized by high population pressure, abject poverty, inequality, unemployment etc. These severe constraints act as the barrier to the development and alleviation of its especially poverty and disparity in the rural area are the key challenge of the state government. The reorganization of agrarian system is the significant strategy to eliminate these constraints in the state. The agrarian structure

significantly impacted on the development of rural economy especially the reduction of rural poverty and inequality in Assam.

The agrarian structure is a simple approach to redistribute the assets and rights among the rural population (Albertus, 2019). It is the sole source of income of the population in rural area. On the other hand, agrarian structure also defines poverty and inequality. So, it is hypothesized that changing agrarian structure is the conjecture of the efficient redistribution of assets and

rights and reduction of rural poverty and inequality. Land is a valuable asset used to generate income in rural area. Consequently, efficient distribution of land impacts on the reduction of rural poverty. The land inequality is a fundamental measure of efficient distribution of land and it is linked to the reduction of rural poverty.

The redistribution of land critically impacts on the labour market in the economy. For example, the accessibility of land of the small tenants leads to the increment of both employment as well as income in the economy (Bagi, 1981). Therefore, analysis of such issue still remains the key challenge of the development in the rural area.

A large proportion of people lives in the rural area and their principal source of income is agriculture. The agriculture sector facilitated to employment opportunities to the rural population. Since land is the principal factor of production, the distribution of land then remains the key approaches to the agricultural development. The redistribution of land leads to the higher agricultural production. It increases the income of the rural people. Therefore, equal distribution of land is a crucial strategy for the development of rural area in the developing countries such as India (Besley & Burgess, 2000).

The research on the redistribution of land is a special issue to the agrarian development. The equal distribution of land increases the welfare in the society. The access to land has the potential to increase the earnings of a special group of people in the economy. The procedure not only increases the earnings, but also increases the productivity of the agricultural sector. The redistribution of land generates the more income opportunities in the economy. It facilitated the strong economic strength among the poor agricultural farmers (Finan et al., 2005). It mitigates the problems of debt among the poor as well as landless workers. Such reforms reduce the inequality persisted in the economy. The large volume of inequality caused to the less degree of inclusive development. The less degree of inequality with the high level of rural development improves the economic strength of the people in the society. It significantly impacts on the reduction of rural poverty. Therefore, research on the land inequality is an important issue for the agrarian development.

The present research focused the changing scenario of the agrarian structure in Assam. Assam is one of the developing states in North East Region of India (NER) and introduced several strategies including land reform to develop the agrarian economy. The implementation of several land reform policies changed agrarian structure

of the state. Goswami (1969) studied the effects of the implementations of Adhikar act, 1948 on the agrarian structure in Assam and observed that it was inefficient. Again, people were against to the abolition of Zamindari system in Assam. Then, the state executed several land related acts to the development of agrarian economy.

The availability of land may use in different activities such as plantation, agricultural production etc. in Assam. The rural people of the state primarily engaged in the agriculture sector. The sector provides an income opportunity to the people. The land reforms policies have the significant impact on the change in agrarian structure in Assam. Land reforms agenda led to the redistribution of land among the people. The equal distribution of land is a source of income to the people especially in the rural area. Therefore, the present research explored the development of agrarian structure in the state since 1970 to 2019.

The objective of the study is to analyze the agrarian structure in Assam. The operational land holding and area operated by each size group is the key measure of agrarian structure. We investigated the changes of the two aspects in the rural area of the state viz. redistribution of land and rural poverty. Rural poverty is another measure of agrarian reorganization. We incorporated rural poverty in the study and finally we investigated the relationship between rural poverty and land inequality.

The entire paper is alienated as below. After the introduction of some theoretical concepts, we sited review of literature related to the present research followed by sources of data and methodological content of the paper, empirical evidences and discussion of the research and concluding remarks of the research.

Review of Literature

Carter and Mesbah (1993) discussed the radical change of agrarian structure in Chile. The land market reform policy is one of the key strategies of agrarian growth with poverty reduction of the Chile's democratized political agenda. The implementation of policies allowed to peasant in Chile to access to land market rapidly. The impressive of agro-export growth of Chile has been shifted to the growth of peasant economy. They briefly described the contextual phenomenon of reform of land market in the regime of agro-export growth since the mid-1960s. The land market reform policies were observed as modest in administration and politics. But these policies highly effected on the abolition of agro-export growth. Generally, the interaction of necessary informational imperfections in factor markets generated

economic pressure on displacement of farmers and also on the concentration of land in commercialized and competitive agricultural environments. It improved the competitiveness of small farm agriculture. They explained the difficulties of small and cheap-labor farms in the imperfect land market. It led to the reduction of participation of small-scale commercial farmers from the markets instead of resolving exclusionary growth issues. They argued that empirical analysis was important to examine the competitiveness gap and potentiality of land market reform policies, either solo or combined with the factor market policies, in reducing exclusionary growth. Finally, they observed that progressive land taxation among the components of land market reform policies closed the competitiveness gap and farm land mortgage banks declined the exclusionary features of growth in Chile.

Keswell and Carter (2014) studied the effectiveness of Land Redistribution for Agricultural Development (LRAD) programme on the households' land availability in South Africa. They observed that effect of land transfer among the beneficiary household on their economic well-being was time constraint. Their economic well-being was negligible if they futile to generate the income from the newly acquired land. They applied the binary treatment model and observed that beneficiary households achieved approximately 25 per cent increase in per capita consumption. Similarly, continuous treatment method shows that impact of transfer of land increased the per capita expenditure up to 50 per cent after a certain period. They argued that though initially both the models confirmed a decrease in living standard, after 3 to 4 years, living standard increased up to 50 per cent. They also argued that land transfer declined the poverty through improving the productivity of poor, access to market and mitigating the poverty traps. It was observed that LRAD programme transferred the land from wealthy farmer to poor farmer and declined the ownership of land inequality in South Africa. It improved the life style of vulnerable people compared to the other cash transfer programme in the long run.

Raj (1970) studied the impacts of land distribution on the agriculture sector in India. The research observed that the land reform programme has the potential impact on increasing the productivity of agricultural sector. The research estimated the average and marginal productivity of land after land distribution in India in 1954-55.

Vollrath (2007) studied the effects of redistribution of land on productivity of agriculture sector in the

developing countries. The research used Gini coefficient to measure the equality of redistribution of land and found the reverse association between Gini coefficient and agricultural yield. They observed the inverse relationship of each farm particularly operated by family workers. So, it concluded that distribution of ownership rights has the potential power to increase the productivity in the agriculture sector. However, it has not only the power to increases the productivity in the agricultural sector, but also leads to the social development in the rural economy.

Bakshi (2008) investigated the distribution of land holdings between Dalit, Adivasi, Muslims and other groups in West Bengal in India since 1993 to 2004. The study found that most of the Dalit has the ownership rights of land holdings in the state. The research also observed the potential impacts of land transformations on the deprived people in the rural area in the state. The land reforms such as redistribution of agricultural as well as homestead land accrued to the Dalit, Adivasi and Muslims people in the rural area.

Singla *et al.* (2016) analyzed the land distribution under the land reforms agenda across the state in India since 1992 to 2013. They used the Gini coefficient method to observe the efficient distribution of land. Using the NSSO data, the study observed the declined trend of the Gini coefficient of the operational holdings during the period. The study concluded that the efficient redistribution of lands leads to the reduction of inequality and it is occurred by the land reforms agenda in the country. The study found that Assam efficiently distributed land compared to the other states in India. On the other hand, law of inheritance transfers the property right of land to their inheritor in the country. It results in continuous transfer of ownership to the next generation and had led to the reduction of land inequality.

Bhalla (1987) reviewed the varieties of labor absorption in the change of production structure, institutional policy, implementation of technology in Indian agriculture. The labour saving technology for individual crops deteriorated total labour absorption in the technologically developed states during the period 1971-72 to 1983-84. Again, labour absorption varied from crop to crop production. For example, paddy, sugarcane, cotton, jute etc. highly labour intensive crops. But, there were fewer instances of states India of this category of labour absorption. However, one of the characteristics of Indian agriculture is hiring labour and share of workers to all sorts was falling down during the period 1971-72 to 1983-84. Then, the question of asset distribution

including land for those who continue the means of production was the crucial strategy for the agricultural development in India. Land distribution remained the crucial strategy for labour absorption as well as agrarian development in India.

Materials and Methods

Sources of data: The operational land holding and area operated by several size group paradigms the agrarian structure. The change in agrarian structure depends on the variation of ownership of land and number of owners between the various size groups. Such kinds of the data used in the study are extracted from the several reports of Agriculture Census of India. The Agriculture Census of India published information on agriculture sector since 1970. The department accumulated statistics on different types of inputs especially on the number of operative land assets and area operated by various size groups. The research utilized the opportunities during the period from 1970 and 2015. The Planning Commission of India estimated and published poverty in rural, urban and total for the country and several states since 1970. The poverty data are available in two method – Lakdawala methodology (1973 to 2004) and Tendulkar method (1993 to 2011). The research utilized the opportunity to explore the objective of the research.

Methodology: The Gini coefficient of the redistribution of land is a key measure of agrarian structure. The land inequality is estimated using the operational land holding and area operated by various size groups. The method used to estimate issue changed from time to time. As time passes more advanced methods were developed. The technique of Lorenz curve analyses the inequality in the economy (Rajaraman, 1975). Recently, Gini coefficient technique applied for the estimation of inequality, viz., income inequality of a region (Takayama, 1979). We applied the following technique of Gini Coefficient to estimate the land inequality using grouped data –

$$G = 1 - \sum_{i=1}^n p_i (z_i + z_{i-1}), z_0 = 0$$

Let us discuss the method in a broader way. We need to find the Lorenz curve to analyze the formula. At first, to find the line of equality, one can easily find the Lorenz curve on the basis of data. On the basis of these two lines, we can estimate the Gini Coefficient. We estimate the areas below the Lorenz curve. The area below the Lorenz curve is –

$$\frac{1}{2} \sum_{i=1}^n p_i (z_i + z_{i-1}), z_0 = 0$$

Hence, the area between the line of equality and the Lorenz curve is –

$$\frac{1}{2} - \frac{1}{2} \sum_{i=1}^n p_i (z_i + z_{i-1}), z_0 = 0$$

Since there are half of the areas under the line of equality, therefore –

$$\frac{\left(\frac{1}{2} - \frac{1}{2} \sum_{i=1}^n p_i (z_i + z_{i-1}) \right)}{\frac{1}{2}}$$

$$= 1 - \sum_{i=1}^n p_i (z_i + z_{i-1}), z_0 = 0$$

In the proposed technique,

G = Land Gini

P_i = Percentage of no. of holdings of the i^{th} group

z_i = Cumulative % of area operated in the i^{th} group

i = No. of observations, 1, 2... n

The key advantage of the analysis of land Gini is that it facilitated to observe the variation in the distribution of land in a region. Initially the technique applied to estimate the income inequality. However, the technique reformulated to estimate the land inequality. The technique highlighted the judiciousness of redistribution of land in the society. The value of land inequality varies between zero and one. If the estimation found the value of one, it shows perfect land inequality in the region. Similarly, if the estimation found the value of zero, it shows the perfect equal distribution of land in the society.

Results

The following table 1 shows the individual share of ownership distribution and their occupied land area to total by several groups in Assam since 1970 to 2020. The Department of Agriculture Census classified the all holdings into five classes, viz., 'marginal', 'small', 'semi-medium', 'medium' and 'large'. We found that the 'marginal' class occupied largest share of operational holdings followed by small, semi-medium, medium and large size group. However, the semi-medium size group occupied the largest share of operated area followed by 'small', 'marginal', 'large' and 'medium' class. But the scenario has been changed since 1974. The share of both operational holdings (OH) and operated area (OA) of marginal group increased since 1974 to 2020. The share of OH of semi medium size group declined, but share of OA of this group increased during the period. The shares of all other groups declined.

Table 1: Share (%) of Operational Holdings (OH) to Total Holdings and Area Operated (AO) to Total Area of Each Size Group in Assam Since 1970.

Year	Marginal		Small		Semi-medium		Medium		Large	
	OH	AO	OH	AO	OH	AO	OH	AO	OH	AO
1970	57.04	17.67	23.76	22.95	14.04	26.27	4.78	18.05	0.39	15.06
1975	58.19	18.18	23.26	23.49	13.86	26.92	4.38	16.80	0.32	14.62
1980	59.31	18.68	22.76	24.00	13.66	27.56	4.00	15.60	0.26	14.16
1985	59.98	18.98	22.57	24.07	13.39	27.65	3.80	15.22	0.25	14.08
1990	60.26	18.94	22.19	24.46	13.59	28.64	3.76	15.35	0.20	12.61
1995	62.22	19.80	20.91	24.52	13.09	29.45	3.59	15.76	0.19	10.47
2000	62.65	21.29	20.69	23.46	12.96	30.77	3.52	16.02	0.18	8.46
2005	63.74	24.93	21.51	23.56	11.56	27.75	3.02	13.95	0.18	9.80
2010	67.31	25.83	18.25	22.91	11.16	27.27	3.12	14.58	0.15	9.40
2015	68.15	26.38	18.06	23.39	10.76	27.08	2.88	13.78	0.15	9.38
2020	69.00	26.94	17.87	23.88	10.37	26.89	2.66	13.02	0.15	9.36

Source: Authors' Calculation.

From table 1, we observed that the percentage of small size group continuously decreases except in the year of 2005. In case of possession of land holdings, its share continuously increases except in the year of 2000 and 2010. In both the periods, its share slightly increased. Similarly, in 1990, semi-medium group slightly increase, but during the periods, its share decreased. The share of operational holdings increased till the year of 2000 while its share continuously decreased beyond that. The percentage of medium group continuously decreased except in the year of 2010. But in case of possession of land holdings its shares were waving during the whole period. The final column shows the share of large farmers in the state. The percentage of large farmers continuously decreased in the state. Though the share of holdings slightly increased in the year of 2005, but it is continuously decreased during the whole study periods. The following figure 1 represents the trend of share of different categories of operational holdings in the state since 1970 to 2020.

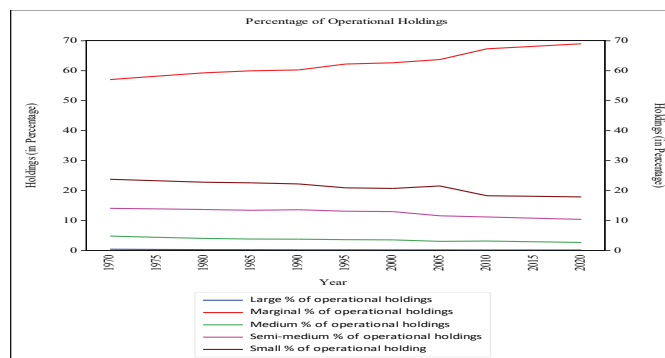


Figure 1: The Shares of Operational Holdings of the Various Size Groups.

Source: Authors' Calculation.

The line diagram of share of operational holdings of marginal size group is upward movement in the state during the study period. On the other hand, the line diagram of the share of the operational holdings of the small, semi-medium, medium and large size groups are in decreasing trend since 1970. The key point of the whole figure is that the share of operational holdings of marginal size group is highest and large operational holdings are lowest in Assam during the period since 1970 to 2020.

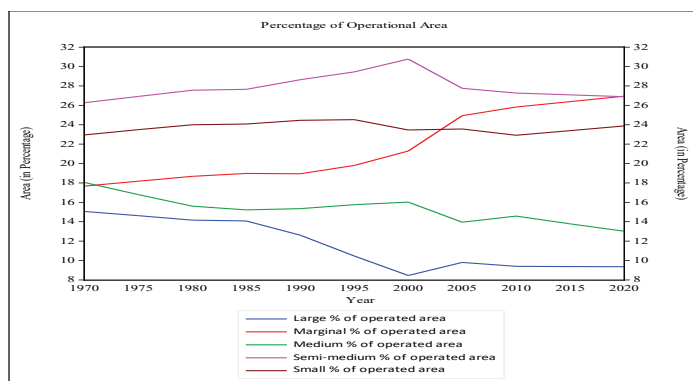


Figure 2: The Share of operated area of the various size groups.

Source: Authors' Calculation.

The above Figure 2 illustrates the share of operated area to total area of each size group since 1970 in Assam. The semi-medium size group holds the large share of operated area from 1970 to 2000. However, the share of the group decreased after 2000. The trend line of the share of small size group shows an upward sloping during the period from 1970 to 2020. It implies that share of operated area by the small size group increased during the period. We observe an upward sloping trend line of the share of operated area by marginal size group. It implies that the share of operated area is increased since 1970 to 2020 in the state.

We found a decreasing trend of the share of operated area by medium size group. Finally, we observed a rapid decrease in the share of operated area by the large size group. The key point of the figure is that trend of share of agricultural operational farm size are moved upward and downward in the state. It implies the agrarian structure of Assam has been changed.

The following table 2 shows the change of agrarian structure. We used Gini coefficient of the operational land holding by different size groups to measure it in Assam. So, the table 2 represents the Gini coefficient since 1970 to 2020.

Table 2: Gini Coefficient of Operated Land Holdings in Assam Since 1970 to 2020:

Year	Land Gini
1970	0.5300
1975	0.5288
1980	0.5279
1985	0.5296
1990	0.5270
1995	0.5259
2000	0.5119

2005	0.4854
2010	0.4958
2015	0.4954
2020	0.4949

Source: Authors' Calculation.

Table 2 shows that land inequality varied from 0.53 to 0.50 since 1970 to 2020 in Assam. Initially, the inequality of land was very high, but it is reduced. However, there is very low differences in the land inequality between initial periods and ending periods. The reduction of land inequality accrues to the implementation of land reforms in the state. The research observed the existence of high land inequality in the state during the analysis period since 1970 to 2020. Hence, government of Assam required to implement the land policy more efficiently in the state to minimize the land inequality in the state.

The Figure 3 shows the trend of land inequality in the state. Inequality rapidly decreased during the period 1970 to 2005, but it is increased from 2005 to 2010 and finally it is declined. Therefore, we may conclude that the impact of land distribution effected to change the agrarian structure during the period in the state.

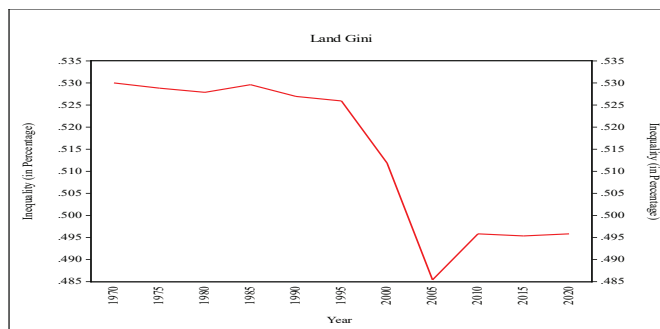


Figure 3: The Gini Coefficient of land in Assam since 1970 to 2020.

Rural Poverty in Assam

The various expert committees setup by Planning Commission, Government of India estimated the poverty for rural, urban and combination of rural and urban in India and states. However, Lakdawala committee and Tendulkar committee are used to estimate the poverty. Using the method of Lakdawala committee, the Planning Commission published the poverty separately for rural urban and total since 1973 to 2004. Similarly, using the method of Tendulkar Committee, the Commission published the same since 1993 to 2011. Figure 4 represents the rural poverty (HCR) of Lakdawala Methodology in Assam. According to this method, the rural poverty decreased from 52.67 per cent in 1973-74 to 22.3 per cent in 2004-05 in Assam.

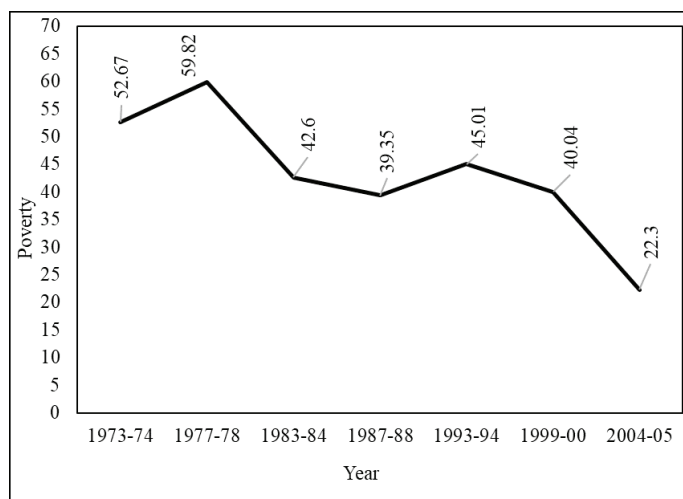


Figure 4: Rural Poverty in Assam since 1973-74 to 2004-05: Lakdawala Methodology

Figure 5 represents the rural poverty (HCR) using the Tendulkar Methodology in Assam. The study observed that the rural poverty decreased from 54.9 per cent in 1993-94 to 36.4 per cent in 2004-05 in Assam. It is increased from 36.4 per cent in 2004-05 to 39.9 per cent in 2009-10 and decreased again to 33.9 per cent in 2011-12.

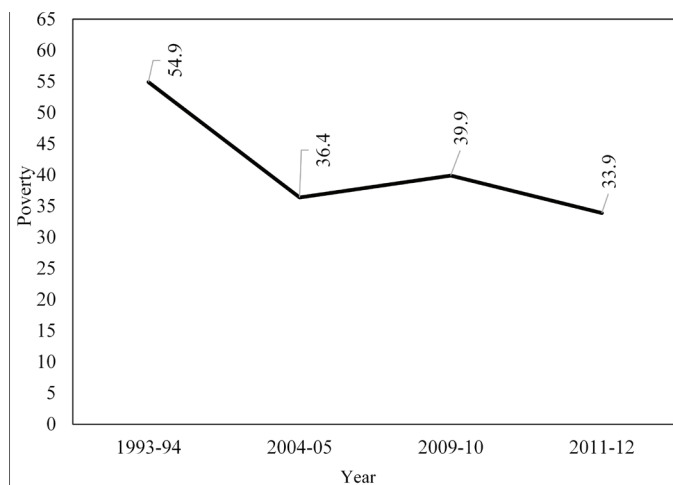


Figure 5: Rural Poverty in Assam since 1993-94 to 2011-12: Tendulkar Methodology

The rural poverty reduction is closely related to the redistribution of land. The Gini coefficient is the common measure of land distribution and the lowest value of it implies the equal distribution. The decreasing value of Gini coefficient of land again signifies the transformation of land from largest group to the comparatively lowest group. The following estimated result shows the impact of land distribution on rural poverty since 1973 to 2004. The dependent variable 'LNRPOV' indicates the

natural logarithm of rural poverty using Lakdawala methodology. Similarly, the independent variable 'LNLGINI' indicates the natural logarithm of land Gini coefficient. The sign of the coefficient of the independent variable 'LNLGINI' specifies the direction of the relation to the dependent variable 'LNRPOV'. The positive sign implies the movement of change of the variables in the same direction, while the negative sign shows the inverse relation. The coefficient of the variable 'LNLGINI' has the positive sign and significant at one per cent level of significance. This implies rural poverty and land inequality moved in the same direction. Figure 3 and Figure 4 represented the downward movement of both land inequality and rural poverty since 1973 to 2004. Then, if we investigate the impact of land inequality on rural poverty we must observe that the decreasing inequality contributed to decrease rural poverty. Finally we conclude from the estimated result (Table 6) that one per cent decrease in land inequality the rural poverty declined by 10.21 per cent in Assam during the period 1973 to 2004.

Table 6: Estimated Results of Regression Analysis – I

Dependent Variable: LNRPOV				
Method: ARMA Maximum Likelihood (OPG - BHHH)				
Time Period: 1973 2004				
n = 32				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-36.63697	5.536443	-6.617421	0.0000
LNLGINI	10.20481	1.404409	7.266269	0.0000
AR(1)	1.592873	0.241063	6.607715	0.0000
AR(2)	-0.702970	0.269547	-2.607965	0.0147
SIGMASQ	0.000805	0.000279	2.891480	0.0075
R ² = 0.9820; Adjusted R ² = 0.979387; F-statistic = 369.22; Prob (F-statistics) = 0.0000				

Source: own estimated results.

Similarly, we observe the same evidence of rural poverty using Tendulkar methodology and land inequality during the period 1993 to 2011 from Figure 3 and Figure 5. The estimated results in Table 7 show the direct relation between rural poverty and land inequality. The coefficient of the independent variable 'LNLGINI' is significant at one percent level of significance and we conclude that one per cent decrease in land inequality contributed to decrease in rural poverty by 4.60 per cent.

Table 7: Estimated Results of Regression Analysis – II

Dependent Variable: LNRPOV				
Method: ARMA Maximum Likelihood (OPG - BHHH)				
Time period: 1993 to 2011				
n = 19				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14.33868	3.161214	-4.535813	0.0005
LNLGINI	4.607334	0.806819	5.710494	0.0001
AR(1)	1.386261	0.317457	4.366762	0.0006
AR(2)	-0.728417	0.366264	-1.988775	0.0666
SIGMASQ	0.000769	0.000465	1.654133	0.1203
R ² = 0.9585; Adjusted R ² = 0.9466; F-statistic = 80.8288; Prob(F-statistic) = 0.0000				

Source: own estimated results.

Discussion

The study perceived an amazing evolution in the agrarian structure in Assam since 1970. The implementation of various land reforms acts contributed to this development. The implementation of land reforms had led to reduce the share of large landholders in ownership in terms of numbers and areas during the period due to the successfully introduction of the land reforms policies (Land Policy 1958; Land Policy 1968; Land Policy 1972; Land Policy 1989 and Land Policy 2019) by the Government of Assam since 1950. Thereafter, the state government implemented the various act (The Assam State Acquisition of Zamindaries Act, 1951; The Assam Fixation of Ceiling on Land Holdings Act, 1956; The Assam State Acquisition of Lands belonging to Religious or Charitable Institutions of Public Nature Act, 1959; The Assam Consolidation of Holdings Act 1960; The Assam Gramdan Act 1961; The Assam Boodan Act 1965; Tenancy Act, 1971). The various land policies transferred the land from large size group to comparatively small size groups and contributed to the change in agrarian structure in Assam.

The government implemented the law time to time as per requirements. The effect of the land reforms is positive in the state. The reforms redistributed the land from rich landlords to poor tenants. As discussed earlier, the ownerships rights transferred to the poor tenants from the rich landlords, it leads to the reduction of land inequality in the state. Land is the primary source of agricultural production and acts as the key factor of agricultural production. However, large proportion of people in the state depends on the agricultural sector. Hence, redistribution of land has led to the improvement in the economic strength of these poor tenants. The procedures work as an incentive to tenants to work more

and more on their own agricultural farm. It significantly impacts on productivity of sector in the economy. For example, the state implemented the Zamindari act to initiate the redistribution system of land in the state. The act facilitated the permanent legal transfer of ownerships rights to the tenants i.e., it transfer the land from rich Zamindars to poor farmers. It helped to the reduction of land inequality in the society. The land reform act, 1968 focused the redistribution of land among landless people. The act contributed to the rural homeless family to possess maximum of two bighas of land. It also notified that the persons holding less than ten bighas of operational lands are eligible to ask for the cultivation on new Government land. The policy restricts the transfer of agricultural land to non-agriculture purposes. It significantly helped in the reduction of land inequality in the state. Similarly, other land reforms also led to the tenurial securities, transfer of ownerships to poor tenants, improvements of the conditions of the poor tenants etc. All these measures led to the redistribution of land in the state that caused to the reduction of inequality in the rural economy of Assam. The ceiling of land such as extreme limits of land holdings of an individual is implemented by the 1989 land policy. The policy restricted the maximum seven bighas as agricultural land and one bigha as homestead land to a particular individual. The policy suggested different measures of land reforms to deal with the redistribution of land holdings. The act suggested different policies to ST/SC category as well as transfer of agricultural land for non-agricultural purposes.

In the state the implementations of land reforms reduces the share of large landholders in the operational holdings both in terms of numbers as well as areas during the whole periods. It is the effect of implementation of land reforms in the state. We noticed the numbers of marginal farmers continuously increases in the society over time beings. The one of the key causes of increasing trend of these marginal farmers associated with the fragmentation of land holdings. Since traditional periods most of the people were rural in the state, hence they possess very small plots of land. Therefore, division of these small lands leads to the generation of more small plots of lands in the society. It is one of the key causes of continuous increasing trend of new marginal farmers in the society over the time periods. Except the marginal farmers, the share of all categories of agricultural producers reduces in the society.

The research observed that the number of marginal farmers continuously increased in state. One of the causes of the increasing trend of such marginal farmers is associated with the fragmentation of land holdings in the state. However, natural resources such as land

cannot be increased frequently. So, it is a fixed factor in agricultural production. Again, the existence of the law of inheritance offered the properties to its inheritor. Since the land has been considered wealthy property, each inheritor may get the land as their right. It leads to the continuous fragmentation of land. Therefore, the division of lands leads to the generation of more small plots of land in the state. It is one of the critical causes of the continuous increasing trend of new farmers in the state during the period. Except for the marginal farmers, the share of all categories of agricultural farmers was reduced in Assam from 1970 to 2019.

On the other hand, the possession of land is the key factor of production in rural Assam. The holdings of large size of land facilitated extra income opportunities to these rural people. Similarly, lack of operational holdings forced the rural poor people to work as a daily wage earner or leasing in the land. The leasing in the land is depending upon the various institutional factors. Though the proper legal land market offer the landless people to leasing in the land, but due to the lack of it most of the tenants has the possibilities of being exploit. Therefore, the development of the rural poor people depends on the redistribution of land from richer section to lower section in the state. The equal distribution of land leads to the reduction of inequality as well as rural poverty in the state.

Conclusion

The discussion shows the decreasing trend of land inequality as well as restructured the agrarian system in Assam. This is due to the implementation of land reform policy in the state. Land reform policy remains the fundamental issue for the development of agrarian structure in the developing countries such as India. The present research found that the land reforms have a significant impact on the change in agrarian structure in Assam. The redistribution of land from the richer section of agricultural land holders to the poor land holders leads to the change of agrarian structure. However, the reduction of land inequality is very less. The efficient land distribution has the potential role to improve the economic strength of rural poor people. The state faced severe rate of inequality since 1970 to 2020. Though the rate of inequality decreased as compared to the initial years in the state, but the state still faced a high rate of inequality. It may not be beneficial for the development of the agrarian economy in the state. Such a high inequality also stands as an impediment to the reduction of rural poverty in the developing economies. Nonetheless, the high level of land inequality significant contributed to the reduction of rural poverty. The research suggests restructuring the agrarian economy through the

continuous redistribution of land. It is a prerequisite of reduction of rural poverty as well as inequality in the state. Therefore, the government of Assam requires an active role to the efficient distribution of the land for the agrarian development in the state.

References

- Bagi, F. (1981). Relationship Between Farm Size and Economic Efficiency: An Analysis of Farm-Level Data from Haryana (India). *Canadian Journal of Agricultural Economics*, 29(3), 317-326.
- Bakshi, A. (2008). Social Inequality in Land Ownership in India: A Study with Particular Reference to West Bengal. *Social Scientist*, 36(9/10), 95-116.
- Besley, T., & Burgess, R. (2000). Land Reform, Poverty Reduction, and Growth: Evidence from India. *The Quarterly Journal of Economics*, 115(2), 389-430.
- Finan, F., Sadoulet, E., & Janvry, A. (2005). Measuring the poverty reduction potential of land in rural Mexico. *Journal of Development Economics*, 77(1), 27-51.
- Keswell, M. & Carter, M. R. (2014). Poverty and land redistribution. *Journal of Development Economics*, 110, 250-261.
- Raj, K. N. (1970). Ownership and Distribution of Land. *Indian Economic Review*, 5(1), 1-37, 41-42.
- Rajaraman, I. (1975) Poverty, inequality and economic growth: Rural Punjab, 1960/61 -1970/1971. *The Journal of Development Studies*, 11(4), 278-290.
- Series of Land Policy, Govt. of Assam, 1951, 1962, 1966, 1971, 1972, 1975, 1999, 2019.
- Singla, N., Kaur, P., & Ahmed, M. (2016). Role of Land Reforms in Eradicating Land Inequalities in Rural India. *Indian Journal of Economics and Development*, 12(1a), 413-418.
- Takayama, N. (1979). Poverty, Income Inequality, and Their Measures: Professor Sen's Axiomatic Approach Reconsidered. *Econometrica*, 47(3), 747-759.
- Government of Assam. (1956, 1959). *The Handbook of Land Reforms, Assam*.
- Vollrath, D. (2007). Land Distribution and International Agricultural Productivity. *American Journal of Agricultural Economics*, 89(1), 202-216.
- Albertus, M. (2019). *Agrarian Structure in Latin America. 2030 – Food, Agriculture and Rural Development in Latin America in the Caribbean*. Santiago, Document No.17. FAO.
- Goswami, P.C. (1969). Land Reform in Assam. *Economic and Political Weekly*, 4 (42), 1662-1664.
- Carter, M. R., & Mesbah, D. (1993). Can Land Market Reform Mitigate Exclusionary Aspects of Rapid Agro-Export Growth? *World Development*, 21(7), 1085-1100.
- Bhalla, S. (1987). Trends in Employment in Indian Agriculture, Land and Asset Distribution. *Indian Journal of Agricultural Economics*, 42(4), 537-560.