

**The Pertinence of Dr. B.R. Ambedkar's Views on  
Agricultural Development in India with Special Reference to  
Uttar Pradesh**

**ABSTRACT OF THESIS**

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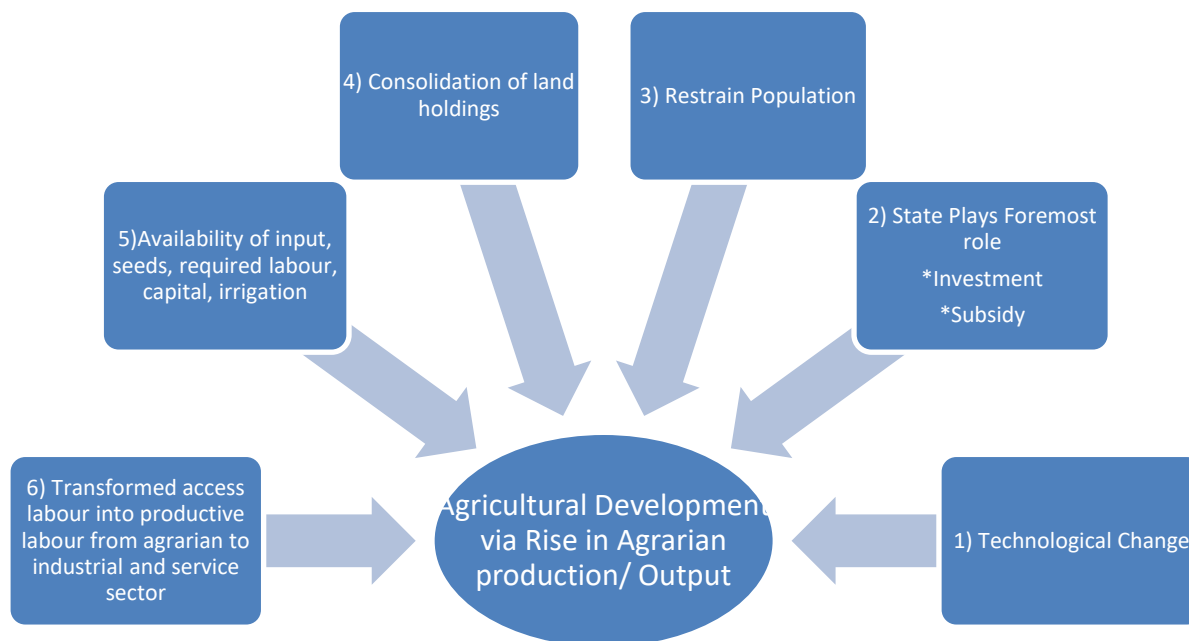
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## **Abstract**

It is true that most of the development strategies in an economy do foremost emphasize on multiple domains to realize the objective of inclusive development. Contextually, the most equitable approach suited to the Indian economy begins with the agriculture sector. The agriculture sector has gone through various changes since the independence. In early 1950s agriculture sector was contributed to more than 51 percent of the Gross Domestic Product and its share of employment was 70 percent. Nevertheless, presently the share of agriculture sector in Gross Domestic Product is sharply declined to the 16.2 percent with the reduced share of employment around 45.3 percent in 2016-17 (World Bank, 2016). Therefore, the focus on agriculture and rural economy is not a surprise despite the fact the sector has been suffering from a set of acute technological and institutional obstructions in India. But with the passage of time the priority has shifted from agrarian to the non-agrarian sectors in order to create more economic opportunities for poor populace. However, the transformation of the Indian economy from agriculture to non-agriculture economy has received a strong push after new economic reforms. Beside, the Indian economic performance flaunts the severe impediment prevailing in Indian agriculture such as small and fragmented land holdings, weakening of inputs delivery and local agricultural governance system, lesser scope for employment creation, mounting the risk factor in agriculture, inadequate arena of public investment and subsidy and lastly the widening of market inefficiency in India. These are the some fundamental impediments functioned as a blockage in agrarian development and farmers income generating capacity.

The miserable realism is that these impediments have been anguishing the Indian agriculture for the last several decades and Dr. Ambedkar is one of the eminent economists who had realized the core obstruction of Indian agriculture and rendered the economy with the preventive measures for the farmers' welfare. Dr. Ambedkar's economic conception for the development of Indian agriculture follows the two pincers approach i.e. agrarian sector development and second is the farmers' development. Dr. Ambedkar's economic notion for the agricultural development comprises the six key mainstays mentioned in the below chart.

## Comprehensive Model for Agricultural Development



### Linkage of Dr. Ambedkar's Economic Conception with the Extant Agrarian Economy:

The extant research utterly emphasizes on agrarian fundamental bottlenecks associated with input-output and its imperativeness for expanding the economies of scale in farming. As it is well-known fact, that the majority of farmers in India are marginal having a very tiny piece of land to cultivate the land will be further fragmented with the passage of time. Hence, the profitability and income-generating capacity of the marginal & small farmers has been declining in states such as Kerala, Madhya Pradesh, Uttar Pradesh, Himachal Pradesh and Tamil Nadu (S.M.Dev, 2012). This declining trend in the operations of scale of small and marginal farmers is promoting the exploitation of inputs that raises the productivity in the short period. However, the harmful aspect might be seen in the long run endangered the steady growth of agriculture (Jules Pretty, 2007 & M.L.Jalan, 1987). Therefore, the present study envisage the probable solution to Indian agriculture in present scenario as per the accordance of Dr. Ambedkar's agrarian views According to Dr. Ambedkar's theoretical approach, land is a basic

input factor that is utilized in agrarian production and other remaining inputs have their utility next to it. Further, contextually he laid the stress on collective farming and consolidation of the marginal & small farms for the betterment of Indian agriculture. He was the first prominent Indian economist of nineteenth century who emphasized the attention towards fragmented agrarian land and its deleterious spread effect. Thus, the present study is validating Dr. Ambedkar's views, by bringing his theoretical foresightedness, in today's dynamic world for the overall development of the agrarian economy of India.

The major flaws affecting and deteriorating agrarian growth are rapid fragmentation, shrinking land base, dwindling water resources causing weak irrigation, adverse impact of climate change and increasing costs and uncertainties associated with volatility in the market structure. Therefore, this study absolutely deals with the key drawback of fragmented land holdings as it is a prime factor for agriculture production and other inputs are utilized only with the readiness and accessibility of that prime factor. Further, the study has reexamined Dr. Ambedkar's agricultural theoretical approach within the purview of the above statement, as he observed and prognosticated the datum that marginal land holding will become a key failure for deteriorating agrarian production and inflate farmers' poor socio-economic stature as well agrarian distress among them. Hence, this study scrutinizes Dr. Ambedkar's views in the present Indian agronomy context. Moreover, the implication of Collectivized farming has been analyzed at India level with the help of secondary data. Secondly, the harmful diminution of the farm sizes has been evaluated with the help of primary survey executed in Uttar Pradesh. Some of the sagacious studies have been reviewed on the Ambedkar's economic conception for agrarian development along with the set of reviews on agrarian impediments exists in India. The following objectives of the study are:

### **Objectives of the Study**

1. To examine and integrate Dr. B. R. Ambedkar's views of agricultural development in the light of contemporary Indian economy.
2. Comparative Analysis of the small and large band foodgrain production in India.

3. To evaluate the farmers' potential in terms of land fragmentation Index, returns on investment, income, expenditure and savings and participation of farmers in Agricultural programs in Uttar Pradesh.
4. To analyse the technical inefficiency of farming with reference to wheat production.

The study has been conducted to test the following hypotheses formulated on the bases of the key objectives of the study. The major hypotheses of the study are following:

### **Hypotheses**

**H<sub>01</sub>:** The views of Dr. Ambedkar on agricultural development are pertinent for Indian Economic Development.

**H<sub>02</sub>:** There is no similarity in the foodgrain production of small & large farmers in India.

**H<sub>03</sub>:** The potential of the farmers in terms of Land Fragmentation Index, Returns on Investment, Income, expenditure, savings, and participation in agricultural program is similar among different farms.

**H<sub>04</sub>:** Technical inefficiency of farming in wheat production is not significant.

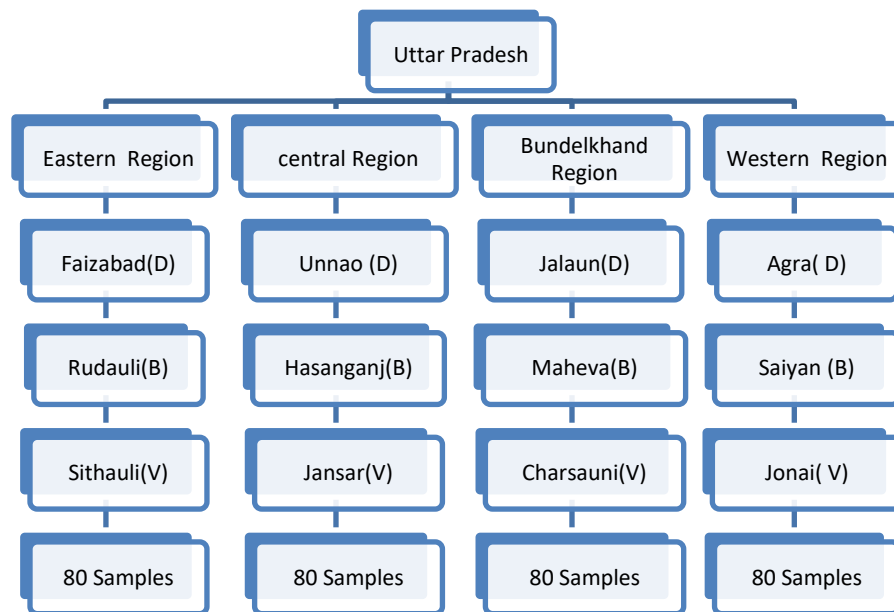
### **Research Methodology**

This study has conducted with a supportive methodology designed to fulfill the mentioned objectives. The main aim of the study is to realize the validation of Dr. Ambedkar's agricultural thoughts on agrarian advancement. The study is based on both secondary as well as primary data to accomplish the predetermined objectives. To achieve the first objective of the study various agricultural theories have been reviewed and compared with the Dr. Ambedkar's agrarian ideology. For the second objective, data from agriculture census has been collected for the period of 1971 to 2015. At last to achieve the third and fourth objectives of the study, primary data is collected from the sample of farmers from four villages of each economic region of Uttar Pradesh. Further, the farmers' potential to obtain the sustainable income has been investigated through field survey. Besides, farm wise returns on investment with land fragmentation Index analysis have been exercised. Lastly, the farm size and productivity relations also have been examined with the help of stochastic production frontier analysis.

**Sampling Design-** The method of sampling adopted for the study is the multi-stage random sampling and total sample size determined for study is 320. Multistage random Sampling is a method of sampling in which large clusters of population are divided into smaller clusters in several stages in order to make primary data collection more manageable. This method refers to the plan where the sampling is carried out in the stages along with the property of randomness. Performa of the multistage random sampling is:



Data has been gathered from chosen village comes under the economic region of Uttar Pradesh. The State is divided into four economic regions. In the first stage, firstly the state is clustered into four regions and after that in the same order one district randomly has been chosen from that each economic region. Therefore, the next stage is the random selection of the blocks from each district and it will further make us unable to select the village from each block randomly. Lastly the 80 samples from each village have been picked randomly by chance. Sampling design has been given below:



(D=district, B=Block, V=Village)

## **Analytical Tools**

Some of the statistical & econometric tools and techniques have been utilized in order to accomplish the determined objectives. This mainly covers, weighted average method, times series analysis, Trend and Regression Analysis- Auto-regressive Moving Average (ARMA Model), Land fragmentation Index, Return on Investment analysis and stochastic production frontier analysis. The execution of these techniques at different echelon of the study has been done. Furthermore, SPSS, E-views and Stata software is exercised on part of detailed analysis and interpretation of the primary data in the study.

## **Significance & Rationale of the Study**

As per to the Agriculture Census, In India, 121 million agricultural holdings exist and among it small and marginal holding together accounted for 99 million holdings. The average size of land holding has decreased from 2.3 hectares in 1970–71 to 1.37 hectares in 2000–01. There is further fall in the average size of land holdings is witnessed and reached to 1.08 hectares in 2015(Agriculture Census). In case of Uttar Pradesh state, the average size of different farms shows the discrepancies such as average size of marginal farms in UP is 0.38 hectares whereas the average size of small farm is 1.39 hectares. In case of semi-medium medium and large farms, the average size of farm stood at 2.71 hectares and 5.51 hectares and 14.98 respectively. Thus, there are significant land inequalities prevailing in Uttar Pradesh. Moreover, small and marginal farmers have been facing several challenges from access to inputs to marketing of agricultural produce. They are usually dependent on other large farmers to access land, water, credit and technology and markets infrastructure. They find extreme difficulties in adapting to climatic changes and face modern technological challenges and its effect, integration of value chains, market volatility and other risks. Therefore, mainly marginal and small landholders encounter with this obstructions. Hence, these are the major constraints in front of agrarian development in general and for poor farmers in particular. Reviews express that the countries like Zambia, Pakistan, Africa and Philippines also have been distressing with these major agrarian impediment along with the persistence of small and marginal farmers. Further, India is Agricultural dominated country and since 1980s, hardly any study has been carried out to address the agrarian land issues

in the light of Dr. Ambedkar theoretical conception of agricultural development. Dr. Ambedkar, famously derided the village as —a sink of localism, a den of ignorance, narrow mindedness and communalism, he was perhaps on to a deeper truth— an Indian social complement to the Lewisian economic insight— that in the long run people need to move and be moved out of agriculture. Dr. Ambedkar was warning about the patronization of agriculture masquerading as a romanticization of rural India. So the irony is that we must care deeply about farmers and agriculture today because we want there to be fewer but more productive and prosperous farms and farmers tomorrow (Arvind Subramanian, 2018). So, this research work, in this new dimension aims to strengthen agrarian sector in India and to empower the actual tiller of the soil i.e. farmers. Therefore, Dr. Ambedkar’s conception empirically has been probed in the study.

### **Layout of the study**

The study is catalogued in to seven chapters on the basis of the objectives of the work.

Chapter *one* of the study is entitled “**Introduction**” is an effort to highlight the problem of the study. This chapter outlines the entire review of literature, major objectives and hypotheses of the study, research methodology and chapter plan along-with the significance of the study. Further, the reviews have been framed in to two segments. First deals with the agrarian impediments such as land, other inputs and technological issues & second is dealt with the Dr. Ambedkar economic conceptions and its relevance in contemporary India.

Chapter *two* titled “**Theoretical Framework of Agricultural Development**” frames the linkages between Dr. Ambedkar agrarian development theory and other agricultural development theories in order to evaluate its applicability in India for the advancement of Indian agrarian sector.

Chapter *three* titled “**Dr. Ambedkar and Agricultural Production in India: A Technical Analysis**” explains Dr. Ambedkar theoretical notion of collective farming for agrarian development in India. Empirical evaluation has been exercised for validating his theoretical line of approach with the help of the secondary data analysis. The data has been gathered for the period of 1970-71 to 2015-16.

Chapter *four* titled “**Profile of the Field Study Area**” portrays the profile of the chosen area in the state of Uttar Pradesh. Performa of the sampling design is explained in this chapter. Further, the brief profile of four randomly chosen villages *i.e.* Jansar, Sithauli, Charsoni and Jonai has been presented in the chapter.

Chapter *five* titled “**Economic analysis of Potential of the Farmers for Agrarian Development in Uttar Pradesh**” elaborates and flaunts the primary details of the filed survey along with the analysis of land fragmentation index and returns on investment for each category of farmers in the selected villages. Beside, the chapter also explains the farm wise production yields, sources of income & expenditure and savings of the farmers in the surveyed area. Lastly, the chapter also laid stresses on evaluating the farmers’ participation in the agricultural program along with the descriptive analysis of basic amenities availed by the farmers in the chosen villages.

Chapter *six* titled “**Economics Analysis of Technical Inefficiency of Farming**” explores and compares the technical inefficiency of the farms persisting in the wheat production in the selected villages. In order to assess the technical inefficiency the Stochastic Production Frontier techniques has been utilized with the help of pre-determined variables. Stochastic Production Frontier technique bestows the best technological relationship between the set of inputs and output along with the estimation of inefficiency for the pre specified variables. The chosen inefficiency variables reflect the role of the state or institutions in order to augment the agricultural production in the village. The specified variable for the inefficiency estimation are Farm Size, Soil Fertility Problem, Awareness Spread by Panchayat, inaccessibility to Certified Seeds. Further, the Simmons Land Fragmentation Index is also considered as inefficacy driven factor in agriculture.

Chapter *seven* titled “**Summary & Conclusions**” presents the summary of the entire chapter with the key findings and inferences of the study. Further, the effort has been made in order to link these key findings with Dr. Ambedkar’s economic conception formulated for agrarian development.

## **Key Inferences & Recommendations**

Study flaunts that marginal and small farmers are relatively less benefitted by agricultural operations as compared to the medium and large farmers. It is evident from the study that there is a significant discrepancy existing in the small band production and large band production. The land size of above the 2 hectares has relatively higher production as compared to the small band production. Thus, the landholding above 2 hectares can be called as true economic holdings. Therefore it also implies that production may augment with an increase in the size of land as the large land band production is higher than the small band production. The key inferences from the primary study concludes that there are significant discrepancies observed between the marginal, small, semi-medium and medium group farms in terms of the agricultural productivity, income and savings. Similarly, the returns on investment have been found to be more for semi-medium and medium farmers as compared to the marginal and small farms.

Land fragmentation index analysis resolved that majority of the farms are fragmented but as the marginal farms are tiny so, there detection in the high fragmented range couldn't get possible. Farmers possess the fragmented holdings with the tiny piece of each parcel. Consequently, it influences the agricultural production and yields in the surveyed area. It is also inferential that the inequality in the land distribution is witnessed with the depiction of Lorenz curve for each farm size. Study also expounds that the farmers' sustainability and un-sustainability rate in order to continue the agriculture and the datum flaunts that sustainability rate for semi-medium and medium farmers is relatively higher than marginal and small farmers. Moreover, range of inefficiency for marginal and small farms is also observed to be relatively greater than semi-medium and medium farms. Further, Stochastic Production Frontier approach explicates the positive coefficient of Land, seeds, equipments, pesticides and human labour in order to reach at the best fit frontier of the agrarian production.

The low wage rate prevailing in the agriculture sector might be the reason that allows for incurring expenditure positively. In simple words, there is a sufficient scope for raising farm production by increasing the area of farm and expenditure on pesticide, seeds, equipment and human labor. It may also resolved that inputs such as area, seeds, pesticides, equipment and human labor are under-utilized in order to reach at the best-fit farm production frontier. Besides this fertilizer and irrigation expenditure coefficients expounds the scope to raise the production

by reducing the expenditure on these inputs. However it doesn't imply the absolute reduction in the irrigation. But the expenditure incurred on these inputs is required to minimize in order to obtain the best fit frontier. This kind of phenomenon is observed in the study because marginal farmers are usually preferred the custom hiring for irrigation as they don't have their own source of irrigation on the contrary semi-medium and medium farmers have their own source of irrigation. Hence, they are able to gain economies on input expenditure. However in case of fertilizer input usage, farmers have opinion of higher the use of fertilizer, higher will be the production. This misconception pushes them to raise the use of fertilizer which finally reflects in the expenditure of the particular input.

Moreover, the specified parameters of inefficiency are taken in the model explains the technical inefficiency in the wheat production. From the estimated coefficients of the inefficiency variables, such as soil fertility problem (SFP) and inaccessibility to certified seeds (ICS) are statistically significant and divulging the positive relation with technical inefficiency. On the other hand, farm-size (FS), awareness spread by Panchayat (ASP) and land fragmentation index (LFI) are statistically significant and revealing negative or inverse association with the technical inefficiency in the frontier model. A possible reason is that the static conditions of traditional agriculture and minimal learning will have little profound effect in order to improve productivity by mitigating inefficiency. There is a significant differences in the technical inefficiencies have been observed. Application of the SPF approach clears that land is the most crucial factor for augmenting the agrarian production and as well as for determining the economies of scale in production. Direct association of inefficiency with the fragmentation and inverse association with absolute farm size clearly reflect the pertinence of Dr. Ambedkar Conception that "the land holdings in India are not only small but they are also diminutive and this character of Indian agriculture has caused great anxiety among the farmers concerning the agricultural development in the last several decades as well as in the present era." Hence, the consolidation of marginal and small farmers is the need of hour as Dr. Ambedkar said. It may feasible and attainable through collective action of farmers to pool the input agrarian resources. It requires the appropriate and viable farming system as per the new agricultural policy of India. Currently, cooperative, contract and corporate farming system are emerging in the eventual form of consolidation of small and marginal farms. These farming systems requires structural framework under the land ceiling act. Hence, Dr. Ambedkar's theoretical approach with other

agriculture development theories has been divulging that theoretical approach of Dr. Ambedkar is most suitable and appropriate in present Indian agriculture scenario. It comprises all essential instruments that trigger the agricultural advancement. Therefore Dr. Ambedkar's comprehensive approach is well fitted in India. Therefore, the collective farming approach of Dr. Ambedkar is observed to be pertinent and may implement with the certain modification in it. Presently, Farmers' Producer Organizations are functioning in various states and this model of farming is nothing but the modified version of collective farming.

Dr. Ambedkar's economic notions have found to be germane in the present time. Therefore, it calls for immediate measures on the part of state to prevent the increasing trend of the number of marginal farms and further diminution of the cultivated land. Further, the accessibility and awareness regarding various agricultural programs have been also witnessed to be very poor and the basic amenities availed by the farmers are also showing their substandard. Hence, the role of state is essential in order to build the comprehensive development of the farmers and agriculture sector as well.

### **Recommendations**

A set of recommendations is urged in order to augment the scale of economies for the different farm sizes. The size of the land is affecting the usage of land as well as the profitability of the farmers. Hence, there is an urgent need to implement some suggestions for making Indian agriculture a more versatile and growth driven sector.

1. There is a need to increase the input-output ratio. It states that farming requires adequate capital supported by the state to increase the technical farm support.
2. There is a need to reduce the technical inefficiency of factors to obtain maximum attainable agriculture produce.
3. The economic holdings are to be redefined in the lines of Dr. Ambedkar's theoretical approach in current scenario of India.
4. The Consolidation of land holdings is a viable solution to wipe-out the stumbling-block of diminutive land holdings.

5. A suitable farming system that allows for large scale of operation will help in mitigating the ill-effects of fragmented land holdings.
6. The concept of “Doubling Income Farmers” may be realized by an implementation of suitable farming system along with the sagacious modifications as per the need of farmers.
7. There is an urgent need to bring the efficacious and dedicated role of state government in practice, in order to deliver the programs based facilities to the farmers without any loopholes such as asymmetric information.
8. The state has to play the Major role for the development of agriculture and betterment of farmers as Dr. Ambedkar suggested.
9. The state has to play the key role in shifting the agricultural surplus labour by the establishment of small & cottage industries and food processing units in the villages.