

# Determinants of Agriculture Growth to Small and Marginal Farmers in Selected Districts of Tamil Nadu

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## ABSTRACT

A field study was made with the sample size of 528 from selected districts of Tamil Nadu [Trichy, Karur and Erode]. Major objective of this study is to explore the determinants of small and marginal farmers which influence the agriculture growth and how demographic profile of farmers linked with determinants. The study handled with primary and secondary data. Under this study the methods used for sample is stratified random sample. Samples from population is stratified into zone of cauvery first, then stratified into soil of red, laterite and black, further stratified into districts and then finally stratified into blocks. Three blocks from each district were randomly selected [nine blocks] and sixty samples were taken out from each selected blocks.

Determinants of agriculture growth studied in this article are as follows: agriculture credit, land holdings, irrigated area, farm mechanization, electricity, storage infrastructure, transportation and agricultural market. Farmers' residence, location, gender, age, education, occupation, family type, members in family and vehicles owned are important demographic profiles which show significance relationship. Findings of the study reveal that there is significance relationship between demographic profile and determinants of agriculture growth. Without proper residence, education, family members, etc not possible to achieve better growth in agriculture to small and marginal farmers. So it is recommended that give importance to agriculture land owned by farmers, provide education to farmers and facilitate additional occupation of farming and so on.

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## 1. Determinants influence Agricultural growth

There are different views on determinants of agriculture growth. However in this paper few of them were analysed. Determinants of agriculture growth are as follows: agriculture credit, land holdings, irrigated area, farm mechanization, electricity, storage infrastructure, transportation and agricultural market. Institutional determinants includes: Agricultural credit and land holding. Infrastructural Determinants includes the Irrigated areas, farm mechanization, electricity, storage infrastructure, transportation and agriculture market.

The significance of the study is to study determinants in this modern days because either internally or externally determinants of agriculture determine the farmers output and income which is out from agriculture field.

A field study was made with the sample size of 528 from selected districts of Tamil Nadu [Trichy, Karur and Erode]. Major objective of this study is to explore the determinants of small and marginal farmers affect the agriculture growth and how demographic profile of farmers linked with determinants. The study handled with primary and secondary data. Under this study the methods used for sample is stratified random sample. Samples from population is stratified into zone of cauvery first, then stratified into soil of red, laterite and black, further stratified into districts and then finally stratified into blocks. Three blocks from each district were randomly selected [nine blocks] and sixty samples were taken out from each

selected blocks. Due to incomplete questionnaire twelve samples were rejected. Five hundred and twenty eight is the sample size for this study.

Different authors define the determinants of agriculture in different ways. Some among them are as follows: in Nowak [1987]'s classification agriculture determinants has grouped into informational, economic and ecological. According to Kebede et al. [1990] agricultural determinants have classified into: social, economic and physical factors; Mc Namara et al. [1991] categorized the factors as: farmer characteristics, farm structure, institutional characteristics and managerial structure. Adkudugu [2012] broadly classified the determinants of adoption of agricultural technology as economic, social and institutional factors; in views of Pavittar [2016] agricultural determinants measurement classified as: institutional, infrastructural, technological and socio-economic factors.

In this paper it is found that there is significance relationship between demographic profile and determinants of agriculture growth factors.

## 2. Significance of the study

Farmers' residence, location, gender, age, education, occupation, family type, members in family and vehicles owned are important for growing farmers in India. Most of the small and medium farmers are depending on agriculture for their subsistence. In this modern days stress on education to

farmers, involvements of all gender in agriculture for output, etc are vital factors to grow. Various aspects stress the determinants of agriculture in India. Some of the major aspects are: lack of periodical income to farmers, lack of awareness of new schemes on agriculture policy, lack of women employment in agriculture, non involvement and no idea about agriculture to nuclear family and so on.

Proposed study focus on determinants of agriculture to small and marginal farmers in selected districts of Tamil Nadu. It covers the determinants which influence the agriculture growth to farmers.

### 3. Review of the study

**Kaul and Sidhu [1971]** fitted "Acreage response to prices for major crops in Punjab" and found that the coefficient of variation [CV] as a variable in place of standard deviation had consistently given higher coefficient of determination. The improvements in results brought about by inclusion of CV as a variable was also reflected in the coefficient of adjustment in short and long run elasticity. It had also been demonstrated that maize, groundnut and desi cotton were a relatively high-risk crops whereas paddy and wheat were relatively low risk crops mentioned in the descending order of the risk.

**Pasha [1991]** examined the socio-economic conditions of small and marginal farmers in a drought-prone region of Karnataka and revealed these farmers were forced to exploit the available resources without caring sustainability of resources. Result is poverty.

**Waller et. al. [1998] and Ajewole [2010]** in his study education of the farmer has been assumed to have a positive influence on farmers' decision to adopt new technology. Education level of a farmer increases his ability to obtain; process and use information relevant to adoption of a new technology.

**Husain [2009]** discusses important issues for tribal development based on these three [health, education and income] determinants of development. Very serious efforts are needed for future development and welfare of tribal. There are number of areas in which we have to focus for their development in general. He also highlights that if we really want our nation to progress we have to give equal focus to all weaker sections of society in general, and tribes in particular. They constitute more than eight percent of nation population but 40 percent of displaced persons due to developmental projects are tribal, without any rehabilitation programs.

For instance a study by **Okunlola [2010]** on adoption of new technologies by fish farmers and **Millar [2010]** on adoption of organic fertilizers found that the level of education had a positive and significant influence on adoption of the technology. This is because higher education influences respondents' attitudes and thoughts making them more open, rational and able to analyze the benefits of the new technology **Green [2003]**. This tends the introduction of a new innovation which finally affects the adoption process **Zilberman [2010]**.

**Lavison R [2013], Barker R [2003] and Akinwalere B [2011]** are the most adoption studies have attempted to measure human capital through the farmer's education, age, gender, and household size.

**Kariuki S [2015]** says that Human capital of the farmer is assumed to have a significant influence on farmers' decision to adopt new technologies.

### 4. Research Question

Under this study the research was made with the following questions:

1. What are the determinants affecting small and marginal farmers in agriculture growth?
2. How does determinants affects small and marginal farmers in agriculture growth? Based on these questions the research was done with large sample of five hundred and twenty eight.

### 5. Research Objective

The main aim of the study is to know the demographic profile of small and marginal farmers in selected districts of Tamil Nadu and to explore the determinants of small and marginal farmers which affect the agriculture growth in selected districts of Tamil Nadu.

### 6. Hypothesis

H0: There is no significant relationship between demographic factors of small and marginal farmers and determinants of agricultural growth.

H1: There is a significant relationship between demographic factors of small and marginal farmers and determinants of agricultural growth.

### 7. Methodology

#### Sample Description

India's agriculture growth is behind the small and marginal farmers. Without small and marginal farmers growth agriculture cannot grow. Large, medium and semi medium farmers are not affecting much as like small and marginal farmers affected in agriculture. So sample in this study focused on small and marginal farmers in selected districts of Tamil Nadu.

#### Population

Under this study the population is small and marginal farmers in Tamil Nadu. More than half of the farmers are small and marginal. They are the determining factors for agriculture growth in all state. Varieties and major share of agriculture output is derived from small and marginal farmers.

#### Questionnaire Description

Demographic profile is studied in nine heads. They are residence, location, gender, age, education, occupation, family type, family members and vehicles owned.

Determinants of this study is studied in eight points such as Agriculture credit, land holdings, irrigated areas, farm

mechanization, electricity, storage infrastructure, transportation and agriculture marketing. This description is tabulated as below:

**Table: 1 Questionnaire Description**

Determinants which influence Agricultural growth	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Agricultural credit					
Land holding					
Irrigated areas					
Farm Mechanization					
Electricity					
Storage Infrastructure					
Transportation					
Agriculture Marketing					

**Sampling Technique:** Stratified Random sample

**Method of data collection:** Primary Data and Secondary Data

**Statistical Tools Used**

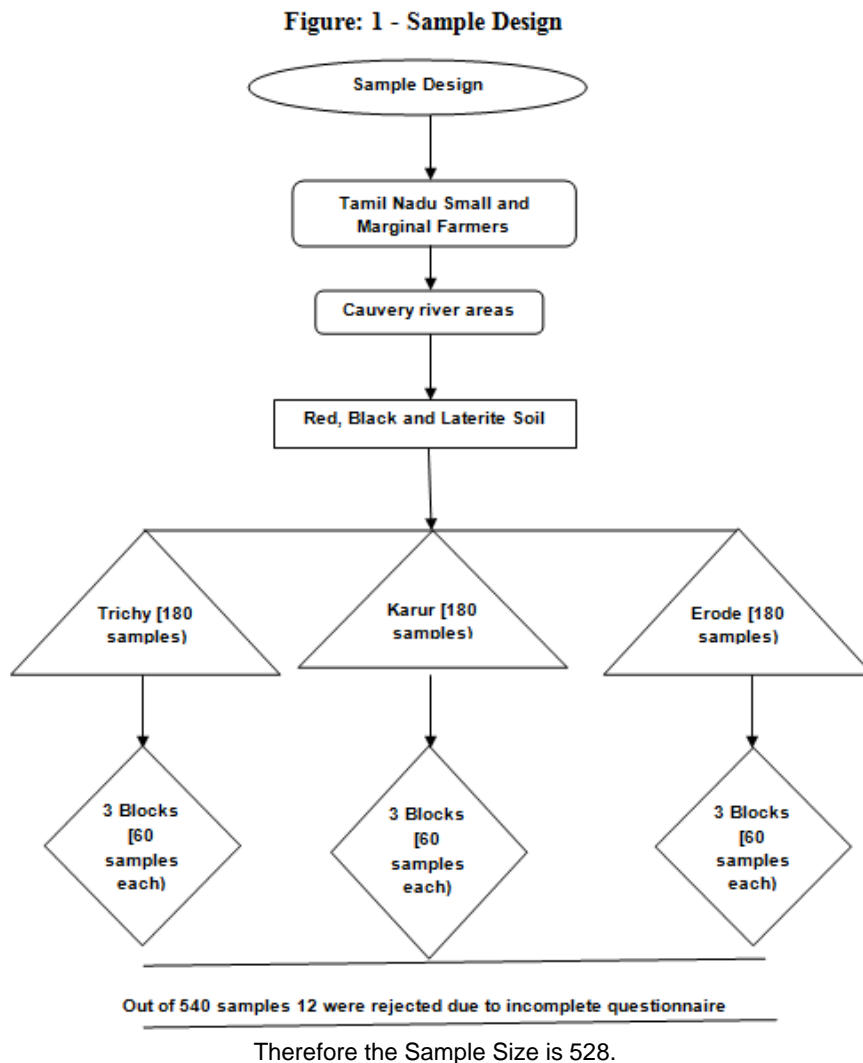
NPar Tests such as Kruskal-Wallis Test, Chi-Square Test, Mann-Whitney Test, Two-Sample Kolmogorov-Smirnov Test, One-Sample Kolmogorov-Smirnov Test, Friedman Test and Kendall's W Test.

**Sampling Technique:** Stratified Random sample

**Method of data collection:** Primary Data and Secondary Data

**Sample Design and Size: [528 Samples]**

**Figure: 1 - Sample Design**



**8. Reliability, Analysis and Interpretation of Data**

Questionnaire is one of the tools of the primary data collection. In these research farmers responses have collected through questionnaire. It is imperative to test the reliability of the tool used for the data collection. So, reliability analysis of the scale is done as mentioned below:

**Table: 2 Case Processing Summary**

		N	%
Cases	Valid	528	100.0
	Excluded <sup>a</sup>	0	.0
	Total	528	100.0

a. Listwise deletion based on all variables in the procedure.

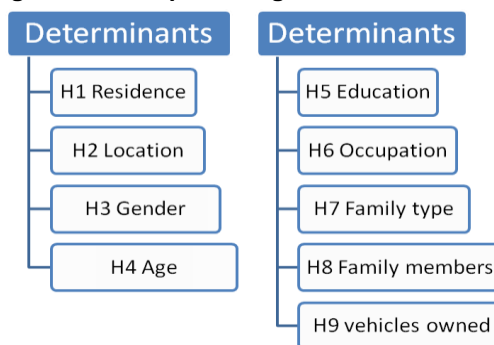
**Table: 3 Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.901	.903	14

Cronbach's Alpha based on standardized items is 0.903 which proves the reliability of the scale.

**Methods of group framing:**

**Figure: 2 - Group Framing**



**Hypothesis 1: Residence - NPar Tests: Kruskal-Wallis Test**

Residence is one of the basic necessities for a human being's survival. The nature of residence viz., owned house and rented house depends on economic strata. Out of 528 respondents, it is found that 336[63.6%] respondents are in their own house, 192[36.4%] respondents reside in rented house.

H0: There is no significant relationship between demographic factors of residence and determinants of agricultural growth.

**Table: 4 - Test Statistics<sup>a,b</sup>**

	agricultural credit	land holding	irrigated area	farm mechnization	electricity	storage infrastructure	transportation	agricultural market
Chi-Square	354.217	357.487	338.360	340.375	393.493	370.928	368.543	347.582
Df	1	1	1	1	1	1	1	1
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000

a. Kruskal Wallis Test

b. Grouping Variable: Residence

Here, at 5 % level of significance the value of the Kruskal-Wallis Test statistics are lesser than 0.05 [0.000 < 0.05, respectively]. So the Null Hypotheses rejected and concluded that there is significant difference between demographic factors of residence and determinants of agricultural growth.

close to farm he/she has more area, opportunities and time for subsidiary activities. Out of 528 respondents 96 [18.2%] respondents reside within the farm land. 316 [59.8%] respondents reside in villages close to farm lands, 116 [22%] respondents reside in towns that are a little away from their farm lands.

**Hypothesis 2: Location - Chi-Square Test**

Location is a geographical place or a site that is occupied by people. It can be urban, suburban or rural but it should provide the basic amenities and ensure safety to the dwellers. If the respondent's residence belongs to a rural locality and

H0: There is no significant relationship between demographic factors of location and determinants of agricultural growth.

**Table: 5 - Test Statistics**

	Location	agricultural credit	land holding	irrigated area	farm mechnization	electricity	storage infrastructure	transportation	agricultural market
Chi-Square	168.182 <sup>a</sup>	181.091 <sup>b</sup>	290.182 <sup>b</sup>	249.273 <sup>b</sup>	208.364 <sup>b</sup>	126.545 <sup>b</sup>	156.545 <sup>b</sup>	312.000 <sup>b</sup>	200.182 <sup>b</sup>
Df	2	4	4	4	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000

- a. 0 cells [.0%] have expected frequencies less than 5. The minimum expected cell frequency is 176.0.
- b. 0 cells [.0%] have expected frequencies less than 5. The minimum expected cell frequency is 105.6.

From the Test of Pearson Chi-Square, it is observed that the significance value is  $0.000 < 0.05$ . So the Null Hypotheses rejected and concluded that there is significant difference between demographic factors of location and determinants of agricultural growth.

**Hypothesis 3: Gender - NPar Tests: Mann-Whitney Test**

In the modern era, the discrimination based on gender is slowly receding. Today women compete equally with men in all aspects including decision making. In farming and other related activities, since time in memorial women have stood with men

and support them in all their endeavours. Out of 528 respondents 432 [81.8%] are male respondents and 96[18.2%] are female respondents.

H0: There is no significant relationship between demographic factors of gender and determinants of agricultural growth.

**Table: 6 - Test Statistics<sup>a</sup>**

	agricultural credit	land holding	irrigated area	farm mechanization	electricity	storage infrastructure	transportation	agricultural market
Mann-Whitney U	4032.000	6912.000	5760.000	4608.000	3456.000	2880.000	7488.000	2304.000
Wilcoxon W	8688.000	11568.000	10416.000	9264.000	8112.000	7536.000	12144.000	6960.000
Z	-12.905	-10.884	-11.696	-12.510	-13.254	-13.758	-10.490	-14.309
Asymp. Sig. [2-tailed]	.000	.000	.000	.000	.000	.000	.000	.000

a. Grouping Variable: Gender

Here, at 5 % level of significance the value of the Mann Whitney and Kolmogorov-Smirnov tests are lesser than 0.05 [ $0.000 < 0.05$ , respectively]. So the Null Hypotheses is rejected and concluded that there is significant difference between demographic factors of gender and determinants of agricultural growth.

**Hypothesis 4: Age - NPar Tests: Two-Sample Kolmogorov-Smirnov Test**

Age is one of the stages or phases in the life of a person measured in terms of years. When the age increases, the experience of an individual makes him/her to be more selective in his/ her choices. Thus, age plays an important role in decision making, because of experience and exposure. Out of

528 respondents, 312[59.1%] respondents are in the age group between 25-50 years and 216[40.9%] respondents are in the age group of above 50 years.

H0: There is no significant relationship between demographic factors of age and determinants of agricultural growth.

**Table: 7 - Test Statistics<sup>a</sup>**

	agricultural credit	land holding	irrigated area	farm mechanization	electricity	storage infrastructure	transportation	agricultural market
Most Extreme Absolute Differences	.778	.769	.692	.722	.889	.833	.808	.778
Positive	.778	.769	.692	.722	.889	.833	.808	.778
Negative	.000	.000	.000	.000	.000	.000	.000	.000
Kolmogorov-Smirnov Z	8.787	8.690	7.821	8.159	10.042	9.415	9.125	8.787
Asymp. Sig. [2-tailed]	.000	.000	.000	.000	.000	.000	.000	.000

a. Grouping Variable: Age

Here, at 5 % level of significance the value of the Two-sample Kolmogorov-Smirnov tests are lesser than 0.05 [ $0.000 < 0.05$ , respectively] it is concluded that there is significant

difference between demographic factors of age and determinants of agricultural growth.

**Hypothesis 5: Education - NPar Tests: One-Sample Kolmogorov-Smirnov Test**

Education plays a crucial role in sharpening the personality and wisdom of an individual. If a farmer is educated he/she gets connected to the improvements and innovations in the field of agronomy that provide ample scope to improve one's income. The sample consists of 384 [72.7%]

respondents who are Primary Education and 144 [27.3%] respondents are Secondary Education.

H0: There is no significant relationship between demographic factors of education and determinants of agricultural growth.

**Table: 8 - One-Sample Kolmogorov-Smirnov Test**

	Education	agricultural credit	land holding	irrigated area	farm mechnization	Electricity	storage infrastructure	transportation	agricultural market
N	528	528	528	528	528	528	528	528	528
Normal Mean	1.2727	2.2273	2.0455	2.0909	2.1818	2.3636	2.4318	2.1364	2.3636
Parameter Std. Deviation <sup>s a,b</sup>	.44578	1.22337	1.22506	1.22252	1.23096	1.29967	1.37306	1.42503	1.28203
Most Extreme Difference	.457	.256	.258	.257	.263	.247	.283	.265	.293
Positive	.457	.256	.258	.257	.263	.247	.283	.265	.293
Negative	-.270	-.158	-.197	-.186	-.169	-.147	-.149	-.213	-.144
Kolmogorov-Smirnov Z	10.500	5.871	5.924	5.903	6.049	5.665	6.492	6.098	6.744
Asymp. Sig. [2-tailed]	.000	.000	.000	.000	.000	.000	.000	.000	.000

a. Test distribution is Normal.

Running the normality test it is found that the sample distribution is not the normal [0.000 < 0.005] distribution. Hence Normality of the sample does not validate the Z test for testing the hypothesis. Therefore, to test the hypothesis Non Parametric test is used. And More clearly, there is any significance difference between demographic factors of education and determinants of agricultural growth.

demographic factors of occupation and determinants of agricultural growth.

**Hypothesis 6: Occupation - NPar Tests: Friedman Test**

Occupation is a job or profession by which an individual earns a living. It is an activity that serves an individual's regular source of livelihood, and it is imperative for running one's life. Some farmers have more than one occupation, and they are able to pull on efficiently as they feel they have more time to juggle between farming and the other occupations. The sample consists of 408 [77.3%] respondents in farming alone and 120 [22.7%] respondents in Farming & employment.

**Hypothesis 7: Family Type - NPar Tests: Kendall's W Test**

Family means group of persons who consolidate under a head including parents, children and relations etc., and nuclear family means only one couple forming a separate family, with their children alone. If there is more than a family residing under the same roof it is considered joint family. Depending upon the size of family the financial requirement would be more. In order to meet out such requirements, their reliance on subsidiary activities will also be more. Out of 528 respondents 204 [38.6%] respondents have Nuclear family and 324[61.4%] respondents have Joint family.

H0: There is no significant relationship between demographic factors of occupation and determinants of agricultural growth.

H0: There is no significant relationship between demographic factors of family type and determinants of agricultural growth.

**Table: 9 - Test Statistics<sup>a</sup>**

N	528
Chi-Square	1750.296
Df	8
Asymp. Sig.	.000

a. Friedman Test

Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [0.000 < 0.05, respectively] it is concluded that there is significant difference between

**Table: 10 - Test Statistics**

N	528
Kendall's W <sup>a</sup>	.207
Chi-Square	875.725
Df	8
Asymp. Sig.	.000

a. Kendall's Coefficient of Concordance

Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [0.000 < 0.05, respectively] it is concluded that there is significant difference between

demographic factors of family type and determinants of agricultural growth.

**Hypothesis 8: Family Members - NPar Tests: Friedman Test**

The number of family members plays a vital role in generating income through the subsidiary activities of agriculture for their family. When there are more members in a family, they lend a helping hand in subsidiary activities. Out of 528 respondents 338[64%] respondents have 4-5 members and 190 [36%] respondents have above 5 members.

H0: There is no significant relationship between demographic factors of family members and determinants of agricultural growth.

**Table: 11 - Test Statistics<sup>a</sup>**

N	528
Chi-Square	1242.887
Df	8
Asymp. Sig.	.000

a. Friedman Test

Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [0.000 < 0.05, respectively] it is concluded that there is significant difference between demographic factors of family members and determinants of agricultural growth.

**Hypothesis 9: Vehicles - NPar Tests: Kruskal-Wallis Test**

Vehicles are important and also necessary for the day to day mobility of human beings. Today the number and type of vehicles owned by an individual shows his/her financial status. Owning a vehicle is a must for a farmer since he/she has to move his/her produce to the market and bring in farm requirements. For speedy mobility it is a dire need. Out of the 528 sample respondents, 480 [90.9%] respondents owned two wheeler and 48 [9.1%] respondents owned Four wheeler.

H0: There is no significant relationship between demographic factors of vehicle owned and determinants of agricultural growth.

**Table: 12 - Test Statistics<sup>a,b</sup>**

	agricultural credit	land holding	irrigated area	farm mechnization	Electricity	storage infrastructure	transportation	agricultural market
Chi-Square	135.535	133.635	140.287	136.638	140.533	127.985	135.156	136.860
Df	1	1	1	1	1	1	1	1
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000

a. Kruskal Wallis Test

b. Grouping Variable: Vehicles owned

Here, at 5 % level of significance the value of the Kruskal-Wallis Test statistics are lesser than 0.05 [0.000 < 0.05, respectively]. So the Null Hypotheses is rejected and concluded that there is significant difference between demographic factors of vehicle owned and determinants of agricultural growth.

**9. Findings**

- Out of 528 respondents, it is found that 336[63.6%] respondents are in their own house, 192[36.4%] respondents reside in rented house. Here, at 5 % level of significance the value of the Kruskal-Wallis Test statistics are lesser than 0.05 [0.000 < 0.05, respectively]. So the Null Hypotheses rejected and concluded that there is significant difference between demographic factors of residence and determinants of agricultural growth. It shows that there is relationship between residence and the various determinants of agriculture.
- Out of 528 respondents 96 [18.2%] respondents reside within the farm land. 316 [59.8%] respondents reside in villages close to farm lands, 116 [22%] respondents reside in towns that are a little away from their farm lands. From the Test of Pearson Chi-Square, it is observed that the significance value is

0.000< 0.05. So the Null Hypotheses rejected and concluded that there is significant difference between demographic factors of location and determinants of agricultural growth. It is observed that there is relationship between location and the various determinants of agriculture.

- Out of 528 respondents 432 [81.8%] are male respondents and 96 [18.2%] are female respondents. Here, at 5 % level of significance the value of the Mann Whitney and Kolmogorov-Smirnov tests are lesser than 0.05 [0.000 < 0.05, respectively]. So the Null Hypotheses is rejected and concluded that there is significant difference between demographic factors of gender and determinants of agricultural growth. Thus the Mann Whitney test shows that there is relationship between gender and the various determinants of agriculture.
- Out of 528 respondents, 312[59.1%] respondents are in the age group between 25-50 years and 216[40.9%] respondents are in the age group of above 50 years. Here, at 5 % level of significance the value of the Two-sample Kolmogorov-Smirnov tests are lesser than 0.05 [0.000 < 0.05, respectively] it is concluded that there is significant difference between demographic factors of age and determinants of agricultural growth.

- The sample consists of 384 [72.7%] respondents who are Primary Education and 144 [27.3%] respondents are Secondary Education. Running the normality test it is found that the sample distribution is not the normal [ $0.000 < 0.005$ ] distribution. Hence Normality of the sample does not validate the Z test for testing the hypothesis. Therefore, to test the hypothesis Non Parametric test is used. And more clearly, there is any significance difference between demographic factors of education and determinants of agricultural growth. It is experiential that there is relationship between education and the various determinants of agriculture.
- The sample consists of 408 [77.3%] respondents in farming alone and 120 [22.7%] respondents in Farming & employment. Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [ $0.000 < 0.05$ , respectively] it is concluded that there is significant difference between demographic factors of occupation and determinants of agricultural growth. It is prominent that there is relationship between occupation and the various determinants of agriculture.
- Out of 528 respondents 204 [38.6%] respondents have Nuclear family and 324[61.4%] respondents have Joint family. Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [ $0.000 < 0.05$ , respectively] it is concluded that there is significant difference between demographic factors of family type and determinants of agricultural growth. It is well-known that there is relationship between family type and the various determinants of agriculture.
- Out of 528 respondents 338[64%] respondents have 4-5 members and 190 [36%] respondents have above 5 members. Here, at 5 % level of significance the value of the Friedman tests are lesser than 0.05 [ $0.000 < 0.05$ , respectively] it is concluded that there is significant difference between demographic factors of family members and determinants of agricultural growth. From the above test it is observed that there is relationship between family members and the various determinants of agriculture.
- Out of the 528 sample respondents, 480 [90.9%] respondents owned two wheeler and 48 [9.1%] respondents owned Four wheeler. Here, at 5 % level of significance the value of the Kruskal-Wallis Test statistics are lesser than 0.05 [ $0.000 < 0.05$ , respectively]. So the Null Hypotheses is rejected and concluded that there is significant difference between

demographic factors of vehicle owned and determinants of agricultural growth. It shows that there is relationship between vehicles owned and the various determinants of agriculture.

## 10. Recommendation

Farmers' residence, location, gender, age, education, occupation, family type, family members and vehicles owned are vital for the agriculture growth. All these said demographic factors affect the output of agriculture in the field. So it is recommended that give importance to agriculture land owned by farmers, provide education to farmers and facilitate additional occupation of farming and so on.

## 11. Limitation

1. The study is confined to Tamil Nadu State only
2. Due to time and money savings sample size is limited only 528
3. The study is only about small and marginal farmers
4. The study is limited only to demographic profile factors
5. The study is limited to determinants of small and marginal farmers

## 12. Conclusion

Under this study we begins from the determinants of Small and marginal farmers and ends with demographic profile factors of them. It is evident that demographic factors of small and marginal farmers are the engine to move next step of growth in agriculture. Without proper residence, education, family members, etc not possible to achieve better growth in agriculture to small and marginal farmers. Government of India is also focusing on women employment, farmers' education on new technologies, schemes, etc. All these steps are focusing on determinants influencing agriculture growth. Hence it is better to enhance the demographic profile of small and marginal farmers before enhancing other factors surrounds them.

## 13. Further Study

Researcher can further study demographic factors with farm diversification, challenges and prospects of small and marginal farmer's agricultural growth.

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